TEACHER INTERACTION FROM THE PERSPECTIVE OF HIGH SCHOOL STUDENTS

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Abstract

Based on Leary's interpersonal model (Interpersonal Circumplex), Wubbels elaborated the scheme of interpersonal behavior that was completed by questionnaires (Questionnaire on Teacher Interaction (QTI)). Our research involved 110 high school students. The aim of our present research was to determine the teacher's interaction style from the high school students' perspective using the QTI measurement tool. The purpose of the research was to assess how students see the teacher's classroom activities and how the teachers see themselves, and also to see whether there is a difference between the teacher's point of view and that of the students'. The questionnaire contains 48 items. The QTI measurement tool can serve as a valuable source

of information for teachers in comparing their self-assessment with the student's view, which can obviously enhance their professional development.

Keywords

QTI, Survey, Teacher Interaction, Interpersonal Behaviour

1. Introduction

The goal of our previous study (Szabó, 2023) was to investigate whether the methodology of teaching History can change. The research revealed that teachers play a significant role in the career choice of their students, and contribute to securing the next generation of teachers, since many students choose teaching as their profession because of their personal experience during their studies. The research was conducted among teacher trainees majoring in History at J. Selye University in Slovakia. The total number of students in the History Teachers' Programme is 89. The total number of students completing the questionnaire was 83 (44 male and 39 female respondents). In the case of 58% of the examined sample, a specific teacher of History influenced the students to choose History Teachers' Programme at the university. Since the influence of teachers in choosing profession has been proven, we addressed to examine the interaction between the students and teachers in the classroom. The effectiveness of teaching and educational work depends largely on the teacher's activities, especially on their interpersonal behavior, interaction skills, and proficiency (Tóth & Horváth, 2022). The present study examines the interaction style and interpersonal behavior of two English teachers at a high school in Hungary from the perspective of students. The Hungarian version of the QTI questionnaire was applied.

2. Theoretical Background

In our study, we relied on previous research examining the impact of teacher behavior on student performance in classroom environment. The papers focused on two research areas: on teacher effectiveness (Gordon, 1974; Zrinszky, 2002) and on the investigation of interactions between individuals and their environment (Moos, 1979; Walberg, 1979). "The interpersonal approach to the teaching process is an area that is examined in psychology concerning the perception of the teacher's interaction style, its factors, and correlations for both students and

teachers." (Tóth & Horváth, 2022, 71) The development of the Model of Interpersonal Teacher Behavior (MITB model) is attributed to Wubbels (Wubbels et al., 1985). The MITB model by Wubbels is essentially based on the Leary model of interpersonal behavior. The Leary model of interpersonal behavior (circumplex model) later became famous for Leary's experiments related to LSD and his support for LSD (Leary, 1957; LaForge & Suczek, 1955; LaForge et al., 1954). However, following Leary, many other researchers developed their own interpersonal (circumplex) models (Carson, 1969; Gurtman, 2001; Plutchik & Conte 1197; Strong et al., 1988; Wiggins, 1979).

The Leary Model of Interpersonal Behavior provides us with the opportunity to measure the motives behind human behavior. Leary's (1957) work served as the starting point to elaborate the general model of interpersonal communication, which was applied by Wubbels et al. (1987) to describe students' perceptions of their teacher's activities. Wubbels et al. (1987) provided eight personality variables of interpersonal behavior. Following the circumplex logic, Wubbels et al. (1987) arranged these eight variables along the circumference of a circle, giving rise to the Model for Interpersonal Teacher Behavior (MITB). The MITB model is built upon Leary's model of interpersonal personality (Leary, 1957), and it is through the adaptation of this model to an educational context that Wubbels created the MTIB which defines eight categories (Table 1).

Table 1: *Categories of the Wubbels Model for Teacher Interpersonal Behavior*

Acronym	8 categories of Wubbel
ADM	Admonishing Behavior
DIS	Dissatisfied Behavior
HFr	Helpful/Friendly Behavior
LEA	Leadership Behavior
STR	Strict Behavior
SRE	Student Responsibility and Freedom Behavior
UNC	Uncertain Behavior
UND	Understanding Behavior

(Source: Authors' Own Table)

The QTI questionnaire is a method used to assess the interactional teacher beahavior. It is based on the QUIT (Questionnaire for Interactional Teacher Behavior) questionnaire created by Wubbels et al. in 1985. The QUIT questionnaire originated from Leary's ICL (Interpersonal Check List) questionnaire, contained 77 questions, and was developed for Dutch high school

students (Wubbels & Brekelmans, 1998; Wubbels et al., 1991; Wubbels et al., 1985; Wubbels & Levy, 1991). Consequently, the original 77-item QUIT questionnaire was elaborated in Dutch, with the aim of observing the teacher's classroom activities from the students' perspective. The Dutch version was followed by the development of an English-language version of the questionnaire, which was first used in the United States (Wubbels & Levy, 1991; Wubbels & Levy, 1993). Subsequently, the questionnaire was tested in Australia as well (Wubbels et al., 1993). Wubbels and colleagues concluded that the best teachers have strong leadership personality, are more friendly and understanding, while being less uncertain, dissatisfied, and rejecting in behavior than teachers in general (Tóth & Horváth, 2022). The questionnaire was applied in Turkey (Telli et al., 2007) with high school students, as well as in Singapore, Malaysia, Greece, China, and Slovakia (Fisher et al., 1995; Passini et al., 2015; Sun et al., 2018; Mareš & Gavora, 2004). In our current research, we aimed to apply the Wubbels QTI questionnaire to determine the characteristics of teacher interpersonal behavior. The interpretation of the Wubbels octants can be seen in Figure 1 (Sivan, 2022):

Figure 1: *Interpretation of Wubbels Octants*
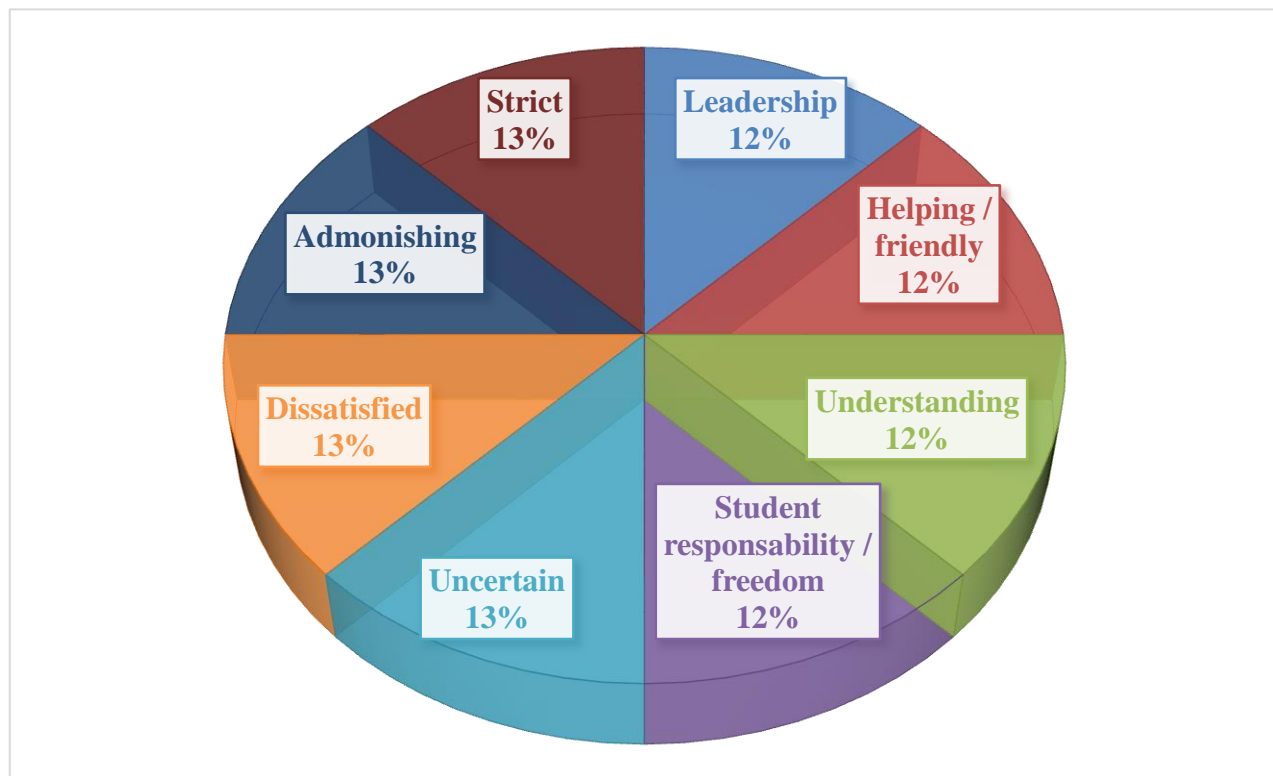
(Source: Based on Sivan, 2022 Authors' Own Illustration)

The meanings of the octants are the following (Sivan, 2022, 9): These kind of teachers…

- Leadership: notice what's happening, lead, organize, give orders, set tasks, determine, procedure, structure the classromm situation, explain, hold the attention

- Helping / friendly: assist, show interest in students' problem, involved, behave friendly and politely, sense of humor

- Understainding: listen with interest, empathic behavior, show confidence and understanding, initiate conflict resolution, patient, open

- Student responsibility / freedom: provide opportunity for independent work; wait for class to let off steam; give freedom and responsibility; take the proposals of the students into consideration

- Uncertain: no intervention in happenings, stay in background, apologize, wait and see how the wind blow, admit one is in the wrong

- Dissatisfied: wait for silence, consider pros and cons, keep quiet, express dissatisfaction, eyes are angry, always ask questions, criticize

- Admonishing: get angry, short-tempered, forbid, warn for mistakes, punish

- Strict: control of students, strict exams, strict evaluation, demand/achieve class silent, maintain silence, set rules and norms, exercise rules

The teacher's interactive behavior (Figure 1) can be interpreted along two axes. The vertical axis encompasses two extreme qualities: dominance and control, and its opposite, submission and obedience. This expresses the extent to which the teacher would like to maintain their power position within the classroom or, conversely, how much they delegate this role to their students. The horizontal axis includes two extreme qualities: resistance and opposition, and its opposite, cooperation. This reflects how distant or rejecting a teacher is, or conversely, how helpful and understanding they are towards their students.

3. Research Objectives, Questions and Hypotheses

In total, 8 classes and 110 students were involved in the research. The surveys were conducted during English classes. Two female teachers were responsible for teaching English to the 8 classes, with one teacher teaching in 5 classes and the other teaching in 3 classes. In our study, we aimed (C1) to understand the interpersonal styles of the teachers from the students' perspective, and (C2) to compare the results based on background variables. Additionally, we

wanted to find out (C3) how the teachers perceived themselves and (C4) the extent to which their self-assessment aligns with the students' perception. Considering these objectives, the following study questions were formulated before the research:

Q1. How can the interaction style of the two Hungarian high school teachers involved in the study be characterized from the students' perspective?

Q2. When taking background variables into account, what differences can be observed in the assessment of the teacher among different student groups?

Q3. How do the teachers involved in the study perceive their own interaction style?

Q4. To what extent does the self-assessment of the teachers involved in the study align with the assessment made by the students?

4. Results

A total of 110 students (35 male and 75 female respondents) participated in the survey (Table 2). The respondents were from 8 different classes, with class sizes ranging from 8 to 25 students (Table 3).

Table 2: *Gender Distribution Among The Research Participants*

		Frequency	Percent	Valid Percent	Commulative Percent
Valid	**male**	35	31,8	31,8	31,8
	female	75	68,2	68,2	100,0
	Total	110	100,0	100,0	

(Source: Authors' Own Table)

Table 3: *The Number of Students in Classes Participating in the Research*

		Frequency	Percent	Valid Percent	Commulative Percent
Valid	**Class 1**	17	15,5	15,5	15,5
	Class 2	11	10,0	10,0	25,5
	Class 3	10	9,1	9,1	34,5
	Class 4	25	22,7	22,7	57,3
	Class 5	16	14,5	14,5	71,8

Class 6	12	10,9	10,9	82,7
Class 7	11	10,0	10,0	92,7
Class 8	8	7,3	7,3	100,0
Total	110	100,0	100,0	

(Source: Authors' Own Table)

The reliability indices for the individual interpersonal variables are provided in Table 4. It can be observed that all variables can be considered reliable.

Table 4: *The Reliability Indices of Wubbels QTI in our Research*

Wubbels' 8 categories	**Items belonging to octants**	**Number of items**	**Cronbach-alfa**
Admonishing (ADM)	4, 8, 12, 16, 20, 24	6	0,713
Dissatisified, doubtful (DIS)	27, 31, 35, 39, 43, 47	6	0,775
Helpful, friendly (HFr)	25, 29, 33, 37, 41, 45	6	0,723
Leader, determined (LEA)	1, 5, 9, 13, 17, 21	6	0,679
Student responsibility (SRE)	26, 30, 34, 38, 42, 46	6	0,742
Strict (STR)	28, 32, 36, 40, 44, 48	6	0,739
Uncertain, indecisive (UNC)	3, 7, 11, 15, 19, 23	6	0,765
Understanding, consensus-oriented (UND)	2, 6, 10, 14, 18, 22	6	0,690

(Source: Authors' Own Table)

We found the repeated check of the measurement tool important in terms of reliability. Cronbach's alpha reliability coefficient proved to be excellent for examining the internal consistency of the items constituting each variable. The accepted value range in terms of reliability was between 0.6 and 0.9. The 48-item QTI questionnaire includes 6 items for each of the 8 octants. These items have a random order in the questionnaire. The participants are unaware of which item corresponds to which interpersonal teacher behavior prototype.

Table 5: *The Cronbach's Alpha Values of QTI Octants*

The prototypes of interpersonal teacher behavior	Final research sample	Gender		Teacher	
		Male	Female	1	2
Admonishing (ADM)	0,713	0,795	0,659	0,621	0,755
Dissatisfied, doubtful (DIS)	0,775	0,851	0,622	0,657	0,808
Helpful, friendly (HFr)	0,723	0,702	0,726	0,701	0,737
Leader, determined (LEA)	0,679	0,770	0,619	0,665	0,687
Student responsibility (SRE)	0,742	0,758	0,745	0,638	0,749
Strict (STR)	0,739	0,801	0,706	0,768	0,623
Uncertain, indecisive (UNC)	0,765	0,758	0,758	0,610	0,820
Understanding, consensus-oriented (UND)	0,690	0,735	0,643	0,640	0,711

(Source: Authors' Own Table)

It can be stated that all variables can be considered reliable. The Cronbach-alpha reliability indicators are presented in Tables 4 and 5, and the results are provided for each subgroup. The average Cronbach-alpha for male respondents (0.77) is higher than the average value (0.68) reached by female respondents.

Factor analysis was also conducted to verify whether the research results confirmed the assignment of items to QTI variables. First, it was ensured that the variables were suitable for factor analysis. The Kaiser–Meyer–Olkin value was 0.636, which is considered adequate (Table 6).

Table 6: *The Kaiser–Meyer–Olkin (KMO) Values for Each Octant*

8 categories defined by Wubbels	KMO
Admonishing (ADM)	0,736
Dissatisfied, doubtful (DIS)	0,749
Helpful, friendly (HFr)	0,682
Leader, determined (LEA)	0,735
Strict (STR)	0,778
Student responsibility (SRE)	0,745
Uncertain, indecisive (UNC)	0,759
Understanding, consensus-oriented (UND)	0,630

(Source: Authors' Own Table)

When determining the number of main components (factors), we applied the *a priori* method and set it to the eight factors. We aimed to approach the cumulative variance close to the expected minimum level of 60% in social science research, which ultimately amounted to 54.182%. Principal component analysis was used for variable compression, followed by the well-established Varimax rotation (Table 7).

Taking the sample size into account for the interpretation of factors, the minimum value of factor loading was determined to be 0.35. Considering the rotated factor loading matrix, the assignment of items to factor variables was quite surprising. Some factors, such as factor 5, entirely confirmed a QTI variable, as the same items were assigned to the factor as the ones contemplated by those compiling the questionnaire (factor loadings fall between 0.325 and 0.744).

Table 7: *Rotated Component Matrix*

Rotated Component Matrix[a]							
Component							
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
HFR4 .698							
LEA3 .648							
HFR6 .636							
LEA4 .553							
LEA1 .553							
HFR5 .538							
UND3 .531							
LEA2 .519							
UND2 .509							
UND4 .499							
LEA5 .464							
ADM1 −.458							
ADM2 −.456							
UNC3	.790						
UNC2	.786						

UNC6		.698					
UNC1		.695					
UNC4		.572					
UNC5		.473					
LEA6		−.355					
DIS1			.801				
DIS4			.774				
DIS3			.669				
DIS6			.481				
SRE6				.751			
SRE3				.663			
SRE4				.659			
SRE2				.606			
SRE1				.553			
HFR1				.438			
STR5					.744		
STR3					.687		
STR4					.614		
STR6					.592		
STR1					.579		
STR2					.325		
ADM6						.776	
ADM4						.673	
ADM5						.673	
UND6						−.578	
UND5						−.385	
HFR3							.667
HFR2							.543
DIS2							−.536
DIS5							.386
ADM3							−.128

SRE5								**–.511**
UND1								**–.500**
Extraction Method: Principal Component Analysis.								
Rotation Method: Varmiax with Kaiser Normalization.								
a. Rotation converged in 11 iterations.								

(Source: Authors' Own Table)

There are factor variables (e.g., 2 and 4) in which items from multiple original variables are reflected, but there are also less identifiable factor variables (e.g., 1 and 7) because the factor loadings of items associated with them are distributed among multiple factor variables. The interpretation of individual factors is as follows (N = 110 participants):

- F1: This factor consists of 13 items, which are made up of four different dimensions (HFR: 3, LEA: 5, UND: 3, ADM: 2). It can be observed that five out of the six dimensions of LEA are included in this factor. Three out of the four dimensions almost entirely encompass positive evaluations of teacher collaboration skills, including understanding and seeking consensus (UND), being helpful and friendly (HFr), and being directive and decisive (LEA).

- F2: This factor includes the entire uncertain, indecisive (UNC) dimension as well as one question from the opposite LEA dimension (directive, decisive).

- F3: This factor includes the four questions of the DIS dimension (dissatisfied, skeptical) without mixing with other dimensions. In this factor, a negative evaluation of the lack of teacher cooperation is reflected.

- F4: In this factor, the five questions of the SRE (student responsibility) dimension and one question from the HFR dimension (helpful, friendly) are reflected. Positive evaluations of teacher collaboration skills are behind these two variables.

- F5: This factor entirely includes the strict, assertive (STR) QTI variables.

- F6: This factor includes four items from the ADM dimension and two items from the UND dimension. These two dimensions can be considered opposites (disciplinary, warning vs. understanding, seeking consensus).

- F7: This factor includes two items from the HFR dimension and one item from the DIS dimension. These two dimensions can be considered opposites (helpful, friendly, vs. dissatisfied, skeptical).

- F8: This factor includes four items, and all four items come from different dimensions (ADM, DIS, SRE, UND).

Summarizing these, it can be stated that the factor analysis of the results obtained in the study does not fully reflect the QTI variables. In Table 8, the descriptive statistical indicators of the eight interpersonal variables obtained during the pilot study are provided.

Table 8: *Descriptive Statistics of QTI Variables*

8 categories of Wubbles	Mean	Std. Deviation	95% Confidence Interval for Mean		Skewness	Kurtosis
			Lower Bound	Upper Bound		
Admonishing (ADM)	10,59	3,522	9,925	11,256	1,642	3,993
Dissatisfied, doubtful (DIS)	8,20	3,210	7,593	8,806	2,267	7,194
Helpful, friendly (HFr)	26,80	3,516	26,135	27,464	-1,590	2,662
Leader, determined (LEA)	26,36	2,926	25,810	26,916	-1,056	1,088
Strict (STR)	14,51	3,939	13,773	15,262	0,968	1,509
Student responsibility (SRE)	16,00	3,667	15,307	16,693	-0,127	0,530
Uncertain, indecisive (UNC)	10,00	2,605	9,507	10,492	0,754	0,539
Understanding, consensus-oriented (UND)	27,45	2,751	26,934	273974	-1,803	4,836

(Source: Authors' Own Table)

The smallest possible value of the mean can be 6, while the highest can be 30, as there were six items for each dimension, and the lowest value on the Likert scale was 1, while the highest was 5. The attributed characteristics of the teachers include being understanding, helpful, and authoritative, while their less characteristic traits are being dissatisfied, uncertain, and admonishing. The highest value for standard deviation is observed in the strictness (STR) dimension (Figure 2), while the smallest is in the uncertain, indecisive (UNC) dimension (Figure 3).

Figure 2: *Standard Deviation of STR Dimension*
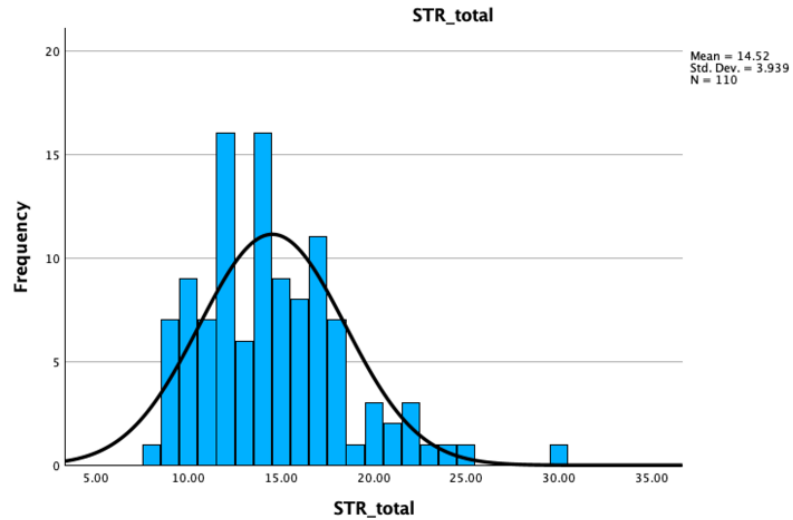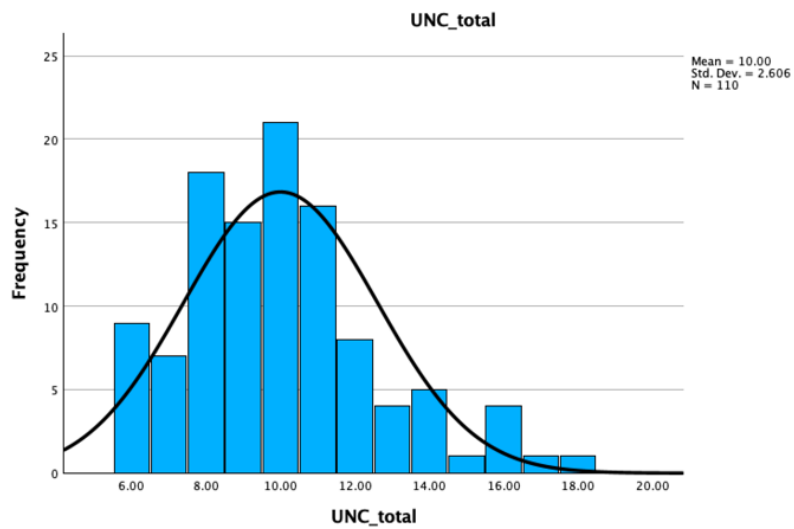

(Source:Authors'Own Illustration)

Figure 3: *Standard Deviation of UNC Dimension*
(Source: Authors'Own Illustration)

Using confidence intervals, we can see that there are dimensions where the values tend more towards the lower bound (ADM, UNC), and there are dimensions where the values tend

towards the upper bound (HFR, UND). Kurtosis indicates how peaked the distribution is compared to Normal. To assess this, we first applied the Kolmogorov-SmirNov test (Table 9).

Table 9: *Kolmogorov-SmirNov test on 8 dimensions*

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ADM	.185	110	<.001	.869	110	<.001
DIS	.264	110	<.001	.716	110	<.001
HFR	.206	110	<.001	.825	110	<.001
LEA	.150	110	<.001	.910	110	<.001
SRE	.120	110	<.001	.982	110	.144
STR	.116	110	<.001	.941	110	<.001
UNC	.136	110	<.001	.943	110	<.001
UND	.195	110	<.001	.820	110	<.001
a. Lillefors Significance Correction						

Tests of Normality

(Source: Authors' Own Table)

The Normality test indicates that None of the eight dimensions has a Normal distribution because the obtained values are less than 0.05. We conducted the Kolmogorov-SmirNov test separately for each teacher. In the case of Teacher 1, we found a Normal distribution in the UNC dimension (Sig. 0.069), while for Teacher 2, we found a Normal distribution in the SRE dimension (Sig. 0.071). Both teachers are least characterized by the attitudes of dissatisfaction, skepticism, and uncertainty, while they are most characterized by a helpful and understanding attitude. Based on these results, we can conclude that the students' perceptions of the two teachers are similar (Table 10).

Table 10: *The Mean and Standard Deviation of QTI Variables in the Case of Teachers*

8 categories of Wubbels	Teacher 1		Teacher 2	
	Mean	Standard deviation	Mean	Standard deviation
Admonishing (ADM)	10,184	3,593	10,805	3,490

Dissatisfied, doubtful (DIS)	7,684	2,600	8,472	3,476
Helpful, friendly (HFr)	26,131	3,939	27,152	3,244
Leader, determined (LEA)	25,947	2,875	26,583	2,949
Strict (STR)	16,368	4,450	13,541	3,271
Student responsibility (SRE)	14,500	3,391	16,791	3,579
Uncertain, indecisive (UNC)	10,026	2,487	9,986	2,682
Understandable, consensus-oriented (UND)	27,526	2,501	27,416	2,891

(Source: Authors' Own Table)

We examined the individual QTI variables in relation to the following background variables:

(1) Gender

(2) Behavior grade

(3) Diligence grade

(4) English grade

(5) Mother's highest education level

(6) Father's highest education level

(7) Classes

(8) Teacher

(9) Class teacher

(10) Whether there is a teacher in the family

Based on Mann-Whitney and Kruskal-Wallis tests, we found the following:

(1) According to gender, we found that the male respondents significantly think that teachers in the sample are more dissatisfied and skeptical, while females judged teachers to be less dissatisfied and skeptical (Table 11).

Table 11: *Mann-Whitney Test for Male and Female Respondents in terms of Background Variables*

Test Statistics[a]								
	ADM	DIS	HFR	LEA	SRE	STR	UNC	UND
Mann-Whitney U	1249,000	1020,000	1067,500	1227,500	1039,500	1136,500	1040,000	1191,500
Wilcoxon W	4099,000	3870,000	1697,500	1857,500	3889,500	1766,500	3890,000	1821,500
Z	–.411	–1.973	–1.592	–.550	–1.761	–1.135	–1.765	–.789

Asymp. Sig. (2-tailed)	.681	.049	.111	.582	.078	.256	.078	.430
a. Grouping Variable: GENDER								

(Source: Authors' Own Table)

(2) Regarding the LEA dimension, there is a significant difference between the good (4) and excellent (5) behavior grades. Students with a good grade consider teachers less directive and decisive than students with an excellent behavior grade.

(3) No significant differences were found based on the diligence grade.

(4) For the English grade, a significant difference was found in the STR dimension. There is a significant difference between the good (4) and excellent (5) grades. Students with a good grade perceive teachers as much stricter and more assertive than students with an excellent English grade.

(5) Based on the mother's highest educational qualification, a significant difference was found in the UNC dimension. Students whose mothers have higher educational qualifications perceived teachers as more uncertain and indecisive than students whose mothers have only elementary school qualifications.

(6) Regarding the father's highest educational qualification, significant differences were found in the LEA and UND dimensions. Students whose fathers have only elementary school qualifications perceived teachers as more directive and decisive than students whose fathers have higher education. In the UND dimension, three significant differences were found. Students whose fathers obtained elementary school, technical school, or specialized secondary school qualifications perceived teachers as much more understanding and seeking consensus than students whose fathers had higher education.

(7) Based on classes, significant differences were found in five dimensions (ADM, DIS, LEA, STR, and UND) (Table 12).

Table 12: *Kruska Wallis test in Terms of Classes*

Test Statistics[a,b]								
	ADM	DIS	HFR	LEA	SRE	STR	UNC	UND
Kruskal-Wallis H	27.138	15.319	12.617	30.701	13.408	19.519	4.508	18.024
df	7	7	7	7	7	7	7	7

Asymp. Sig. (2-tailed)	<.001	.032	.082	<.001	.063	.007	.720	.012
a. Kruskal Wallis Test								
b. Grouping Variable: CLASS								

(Source: Authors' Own Table)

The Scheffe test shows a significant difference in the LEA dimension between Group 1 and Group 7. Group 1 perceived the teacher as significantly more directive and decisive than Group 7. Since Groups 1 and 7 did Not fill out the questionnaire about the same teacher, this does Not count as a significant difference (Table 13).

Table 13: *Scheffe Test Applied in 5 Dimensions in Terms of Teachers*

Dependent Variable	CLASS	ADM	DIS	LEA	STR	UND
	2	0,979	1,000	0,410	0949	1,000
	3	0,166	1,000	0,591	1,000	0,893
	4	1,000	1,000	0,608	0,283	1,000
Class 1	5	0,871	0,684	0,981	0,987	1,000
	6	1,000	1,000	0,999	0,084	0,999
	7	0,414	1,000	*0,006*	0,550	0,672
	8	0,999	0,999	0,563	0,854	0,960

(Source: Authors' Own Table)

(8) Between the assessments of the two teachers, we found significant differences in two dimensions (SRE and STR). Students perceived Teacher 2 as more lenient than Teacher 1. This is supported by the fact that Teacher 2 is considered less strict and authoritative than Teacher 1.

(9) A significant difference was found in the ADM and LEA dimensions. In classes where the teachers were also class teachers, students perceived them as much more admonishing and warning than in classes where the teachers did not have the role of class teacher.

In the case of the LEA dimension, we obtained a p-value close to the threshold (0.05), which, by definition, still indicates a significant difference. Based on this, in classes where the teachers were also class teachers, students considered them less directive and decisive than in classes where the teachers did not have the role of a class teacher.

(10) In the LEA dimension, students who have teachers in their close family perceive the teachers as less directive and decisive than students who have No teacher in their close family.

We asked the two teachers participating in the research to complete the QTI questionnaire adapted for teachers, so they could also get an insight into their self-perception.

We compared the obtained results with the values provided by the students (Table 14). Responses where the difference between the teacher's self-assessment and the students' assessment exceeded 3.00 are highlighted in red, while those where the difference was equal to or less than 3.00 are marked in green. For both teachers, we can observe larger differences in two dimensions each. In the case of Teacher 1, these are the SRE and UNC dimensions, while for Teacher 2, these are the DIS and STR dimensions. Based on this, we can conclude that Teacher 1 perceived themself as much more lenient as well as more uncertain and indecisive than the students perceived them. In the case of Teacher 2, we can see that they perceived themself as much more dissatisfied and skeptical as well as much stricter and more assertive than the students perceived them.

Table 14: *Comparison of Teachers' and Students' Evaluations*

	Teacher 1			Teacher 2		
	itself	classes	difference	itself	classes	difference
ADM	8	10,18	**-2,18**	9	10,81	**-1,81**
DIS	8	7,68	**0,32**	16	8,47	**7,53**
HFR	28	26,13	**1,87**	28	27,15	**0,85**
LEA	23	25,95	**-2,95**	26	26,58	**-0,58**
SRE	25	14,50	**10,50**	18	16,79	**1,21**
STR	14	16,36	**-2,36**	21	13,54	**7,46**
UNC	21	10,03	**10,97**	10	9,99	**0,01**
UND	26	27,53	**-1,53**	28	27,42	**0,58**

(Source: Authors' Own Table)

5. Answering the Research Questions

The current study aimed to answer four research questions: The first research question was the following: (Q1) *How can the interaction style of the two Hungarian high school teachers involved in the study be characterized from the students' perspective?* In Table 8, we can see the distribution of responses according to the teacher. The examined eight dimensions were ranked in the following order for Teacher 1 (from left to right, with personality traits increasingly

characteristic of the teacher): DIS (7.68); UNC (10.03); ADM (10.18); SRE (14.50); STR (16.37); LEA (25.95); HFr (26.13); UND (27.53).

The examined eight dimensions were ranked in the following order for Teacher 2 (from left to right, with personality traits increasingly characteristic of the teacher): DIS (8.47); UNC (9.97); ADM (10.81); STR (13.54); SRE (16.79); LEA (26.58); HFr (27.15); UND (27.42).

In the examined sample, the lowest score for both teachers was in the DIS dimension, representing the "dissatisfied, skeptical" dimension. The highest score was in the UND dimension for both teachers, representing the "understanding, seeking consensus" dimension. We can conclude that, in the examined sample, the students perceived both teachers as understanding, consensus-oriented, helpful, and friendly. According to students' assessments, the teachers were not admonishing, nor were they uncertain or indecisive.

The second research question (Q2) was the following: *When taking background variables into account, what differences can be observed in the assessment of the teacher among different student groups?* The research was based on ten background variables. The results of the research are presented in Table 14.

**Table 15:** *Significant Differences Based on Background Variables*

	ADM	DIS	HFr	LEA	SRE	STR	UNC	UND
Gender	No	Yes	No	No	No	No	No	No
Behavior grade	No	No	No	Yes	No	No	No	No
Deligence grade	No	No	No	No	No	No	No	No
English grade	No	No	No	No	No	Yes	No	No
The highest education qualification of the mother	No	No	No	No	No	No	Yes	No
The highest education qualification of the father	Yes	No	No	Yes	No	No	No	Yes
Classes	No	No	No	No	No	No	No	No
Teacher	No	No	No	No	Yes	Yes	No	No
Class teacher	Yes	No	No	Yes	No	No	No	No
Teacher in family	No	No	No	Yes	No	No	No	No
Number of significant differences	2	1	0	4	1	2	1	1

(Source: Authors' Own Table)

The third research question (Q3) was the following: *How do the teachers involved in the study perceive their own interaction style?* So that we have an answer to this question, both participating educators in the study completed the teacher version of the QTI questionnaire. The results are presented in Table 9. According to their own perception, both educators are least dissatisfied and skeptical, while being mostly characterized by an understanding and consensus-seeking attitude.

Both educators perceive themselves as the least dissatisfied and skeptical, while having mostly an understanding and consensus-seeking attitude. The fourth research question (Q4) was as follows: *To what extent does the self-assessment of the teachers involved in the study align with the assessment made by the students?* Table 14 presents the self-assessment of the two educators as well as the summarized responses from their students. In the case of Teacher 1, they perceived themself as much more lenient and tender as well as more uncertain and indecisive, compared to the students' assessment (Figure 4). In the case of Teacher 2, we observed that they perceived themself as much more dissatisfied and skeptical as well as stricter and more assertive than how thier students perceived them (Figure 5).

Figure 4: *Comparison of the Assessment of Teacher 1*
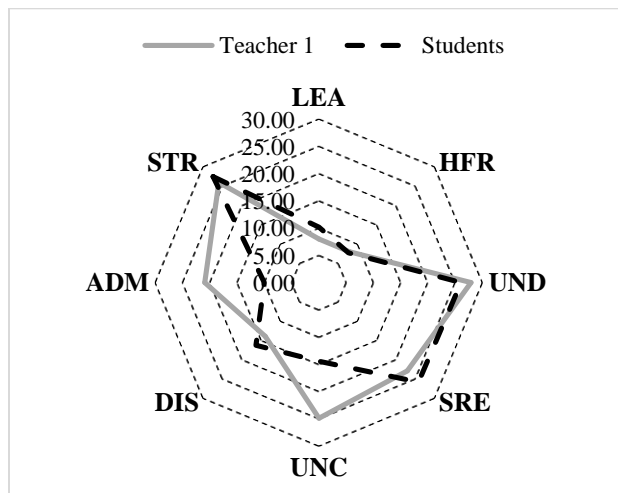
(Source: Authors' Own Illustration)

Figure 5: *Comparison of the assessment of Teacher 2*
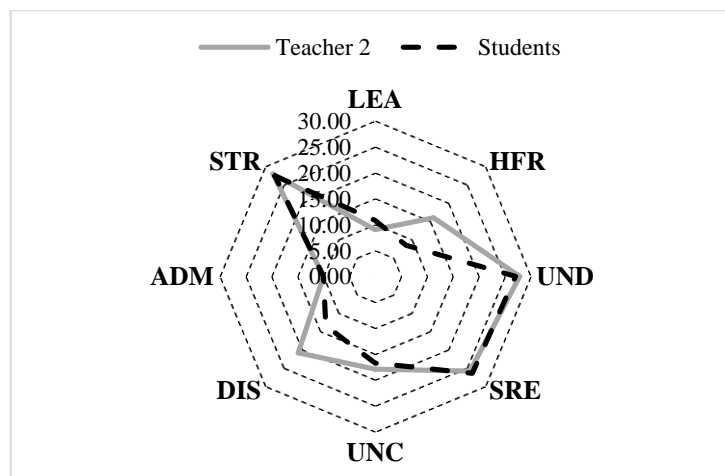
(Source: Authors' Own Illustration)

6. Conclusion

In the first section of our paper, we gave an overview of the theoretical background of teacher interaction, focusing on Wubbel's theory and the international results of the QTI measuring tool. We applied the Hungarian version of the QTI questionnaire which was elaborated by Szabó and Horváth in 2023. In this study, the goal was was to determine the high school students' opinions on their English teachers' interaction in a Hungarian high school.

In this paper, we presented the results of our research conducted with the involvement of 110 high school students in Hungary. Furthermore, We asked the two teachers participating in the research to complete the QTI questionnaire adapted for teachers, so they could also get an insight into their self-perception. In the case of Teacher 1, they perceived themself as much more lenient and tender as well as more uncertain and indecisive, compared to the students' assessment, while in the case of Teacher 2, we observed that they perceived themself as much more dissatisfied and skeptical as well as stricter and more assertive than how thier students perceived them.

At the end of the research we can conclude that there can discrapancies between what the teachers think of themselfes and what the students think of their teachers. By applying this method, teachers can receive feedback on how their students' see them. This method can help us to know, what do the students think of ideal teacher interaction as well as Tóth and Horváth (2022) did it already. They used this questionnaire apprehend the teacher students' opinions on ideal teacher interaction in the Carpathian Basin. With the same method we would like to

continue this direction, and we would like to analyze what high school students think of the ideal teacher interaction in Hungary or worldwide. We continue our research in this direction.

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