

## Relationship Between Interaction Style-Built Teacher Authority and Classroom Climate Dimensions

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### Abstract

The contribution focuses on the issue of teacher authority and classroom climate. Our research aimed to determine a relationship between teacher authority built on the teacher's interaction style and dimensions constituting the classroom climate. The research involved  $n = 411$  students who assessed the interaction style of their teachers ( $n = 23$ ). The Questionnaire on Teacher Interaction (QTI) and Classroom Environment Scale (CES) were employed. Analysis of empirical data showed a statistically significant positive relationship between the interaction style-built teacher authority and classroom climate dimensions. The statistically significant positive relationship was between the interaction style dimensions: helpful, understanding, student responsibility and the classroom climate dimensions: involvement, task orientation, organisation and order, and rule clarity. A statistically negative relationship was found between the interaction style dimensions: uncertain, dissatisfied, admonishing and the classroom climate dimensions: teacher support, organisation and order, and rule clarity. According to our findings, authoritative teachers, perceived by students as good organisers, helpful, understanding, and giving responsibility, can create a positive climate in classrooms.

**Keywords:** *authority, interaction style, classroom climate*

## **Introduction**

Building and maintaining teacher authority is a long-term social process where any teacher behaviour is both cause and consequence (Reichenbach, 2011). Hemmings and Pace (2007) found out that good teacher-student interaction has the greatest impact on building, especially maintaining teacher authority. Other authors' (Metz, 1978; Tirri & Puolimatka, 2000; Vališová, 2013) research findings indicated that although teacher authority is connected with the teacher's legitimate role, the quality of the teacher's interaction style considerably affects its building and maintenance.

The interaction style conception is based on Leary's theory (1957), who worked up a model of interpersonal behaviour. Other authors also used the model in the educational practice: Wubbels and Levy (1991; 1993); Wubbels, Creton, Levy, and Hooyman (1993); Brekelmans, Wubbels, and den Brok (2002), Wubbels and den Brok (2004) whose studies confirmed that the teacher interaction style can be considered an important element of education. The authors' studies resulted in developing a model of 8 types of teacher interaction style. They are the following: directive, authoritative, authoritative-tolerant, uncertain, aggressive, repressive, and drudging. According to the authors, the interaction style of authoritative and tolerant-authoritative teachers can be perceived as the best. The authority itself, thus also the teacher authority, is often wrongly identified with an obscurant view, directiveness, authoritarianism, blind obedience, coercion, constraint, commanding, etc. However, teacher authority provides students support and shows clear boundaries between freedom and wilfulness. Regarding authority building and exercising, we focus primarily on the two mentioned types of teacher interaction styles, where teacher authority is manifested. The selected two types of teachers in our research included 23 teachers assessed by 411 students as authoritative or tolerant-authoritative. According to Wubbels et al. (1993), these types of teachers can be characterised as follows:

- *Authoritative teacher* is most often referred to as a good, task-oriented teacher. From the perspective of a positive classroom climate, he is kinder to students than the directive type but consistent in asserting rules and roles in the system of education. He takes a personal interest in students, motivating them to perform better.
- *Authoritative – tolerant teacher* is a teacher who uses various approaches to supporting students' freedom and responsibility. The classroom climate is friendly, there is little need to assert the teacher's position, and he tolerates students' minor infractions, focusing on teaching and achieving his educa-

tional goals. According to Wubbels et al. (1993), the two types of teachers are well predisposed to build and exercise authority in educational practice and referred to by their students as the best teachers in building a positive classroom climate that is most effective in achieving the goals of education.

## **Research Problem**

Teacher authority is a construct facilitating education effectiveness, especially a positive classroom climate. Our review of professional literature reveals a lack of research in our conditions and abroad that reflects the existing relationship between teacher authority and positive classroom climate; this is why we believe it is important to carry out empirical research aimed at the issue. Our research aimed to determine and analyse the relationship between the selected two types of teachers (authoritative and authoritative-tolerant teachers) and classroom climate dimensions.

## **Methods**

The teacher interaction style and classroom social climate were investigated by a questionnaire. The Questionnaire on Teacher Interaction (QTI) by Wubbels and Levy (1993) was used to measure the teacher interaction style. The QTI has scaled items for assessing 8 sectors of the teacher interaction style. Each questionnaire sector is represented by 8 items with answering options from „never” to „always”. In order to measure the classroom climate, the Classroom Environment Scale (CES) was used, developed by R. H. Moose and E. J. Tricketton (Fraser & Fisher, 1983). The questionnaire investigates affiliation, teacher support, involvement, task orientation and competition in the classroom. The system dimension includes order and organisation, rule clarity, teacher control and innovation. For our research, the CES short version (of 24 items) was employed (Fraser & Fisher, 1983).

The research involved  $N = 411$  students who assessed the interaction style of their teachers (23). The research sample consisted of elementary school 7<sup>th</sup> grade students:  $n = 316$  (71.77%) boys and  $n = 95$  (23.11%) girls.

Based on the research aim and previous research (Metz, 1978; Vališová, 2013; Pace & Hemmings, 2007; Wubbels et al., 2006; 2012), the following 8 hypotheses were formulated:

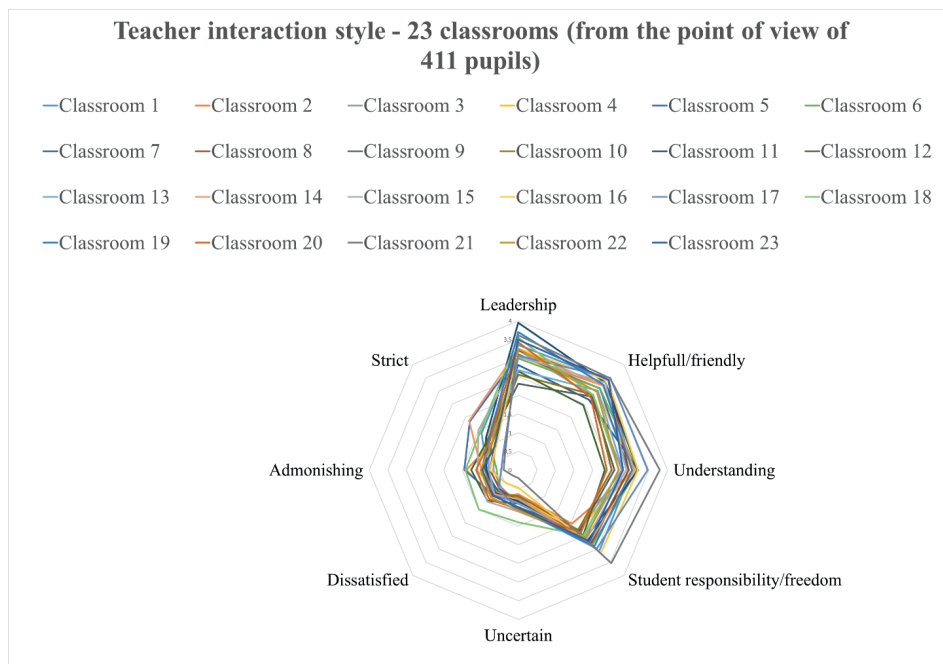
- H1: We assume a statistically significant positive relationship between the teacher interaction style dimension Leadership Behaviour and the dimensions of classroom social climate.
- H2: We assume a statistically significant positive relationship between the teacher interaction style dimension Helpful and the dimensions of classroom social climate.
- H3: We assume a statistically significant positive relationship between the teacher interaction style dimension Understanding and the dimensions of classroom social climate.
- H4: We assume a statistically significant positive relationship between the teacher interaction style dimension of Student Responsibility and the dimensions of classroom social climate.
- H5: We assume a statistically significant negative relationship between the teacher interaction style dimension Uncertain and the dimensions of classroom social climate.
- H6: We assume that there is a statistically significant negative relationship between the teacher interaction style dimension Dissatisfied and the dimensions of classroom social climate.
- H7: We assume a statistically significant negative relationship between the teacher interaction style dimension Admonishing and the dimensions of classroom social climate.
- H8: We assume a statistically significant negative relationship between the teacher interaction style dimension Strict and the dimensions of classroom social climate.

We decided to investigate the connection between teacher authority and classroom social climate and the above hypotheses based on Vališová's view (2013) and Wubbels et al. (2006) research. The authors perceive the interaction style as the main starting point in terms of teacher authority building and exercising and as the basis for building the relationship between a positive classroom climate and teacher authority.

A non-parametric test – the Spearman correlation coefficient was used to identify statistically significant differences and relationships between variables since the variable did not show normal distribution in any sub-set, which was verified by the Kolmogorov-Smirnov test ( $p \leq 0.05$ ). For descriptive statistics, the arithmetic mean (AM), standard deviation (SD), median (Me), minimum (Min) and Maximum (Max) values were used. Data were analysed in SPSS20.0.

## Results

The first part of our research aimed at finding out the teacher interaction style in the investigated classrooms. The circumplex in Picture 1 shows that investigated students perceived their teachers as good organisers, helpful, understanding and giving responsibility.



**Picture 1.** Circumplex of teacher interaction styles in investigated classrooms  
 Source: Own study.

The higher mean scores teachers achieved in the dimensions Leadership Behaviour, Helpful, Understanding, and Student Responsibility also indicate that the investigated classes were taught by authoritative teachers and authoritative-tolerant teachers, which was confirmed based on the model by Wubbels et al. (2012).

The next part of our research focused on classroom climate monitoring.

**Table 1.** Climate in investigated classrooms

Classrooms and arithmetic means of classroom social climate dimensions	Affiliation	Teacher Support	Involvement	Task Orientation	Order and Organisation	Rule Clarity
Classroom 1	9.25	7.41	7.83	7.25	9.00	8.12
	Good	Weaker	Weaker	Weaker	Good	Good
Classroom 2	9.75	7.81	7.76	7.50	9.50	8.65
	Good	Weaker	Weaker	Weaker	Good	Good
Classroom 3	8.40	8.86	7.33	6.80	7.73	9.13
	Good	Good	Weaker	Weaker	Weaker	Good
Classroom 4	9.89	9.31	7.26	7.31	7.94	9.15
	Good	Good	Weaker	Weaker	Weaker	Good
Classroom 5	8.64	9.23	7.76	7.82	8.47	9.52
	Good	Good	Weaker	Weaker	Good	Good
Classroom 6	9.00	10.69	8.53	7.46	8.69	10.3
	Good	Supportive	Good	Weaker	Good	Supportive
Classroom 7	9.14	9.00	6.85	7.00	11.92	9.64
	Good	Good	Weaker	Weaker	Supportive	Good
Classroom 8	9.65	10.18	7.81	7.31	8.43	10.43
	Good	Supportive	Weaker	Weaker	Good	Supportive
Classroom 9	9.62	9.93	7.06	7.18	7.62	9.56
	Good	Good	Weaker	Weaker	Weaker	Good
Classroom 10	7.77	9.66	6.77	7.38	7.66	9.11
	Good	Good	Weaker	Weaker	Weaker	Good
Classroom 11	9.17	9.46	7.35	6.94	7.23	9.88
	Good	Good	Weaker	Weaker	Weaker	Good
Classroom 12	8.86	10.04	7.60	7.00	8.00	10.33
	Good	Supportive	Weaker	Weaker	Weaker	Supportive
Classroom 13	9.38	10.07	6.76	6.61	7.69	9.69
	Good	Supportive	Weaker	Weaker	Weaker	Good
Classroom 14	8.37	10.00	8.06	7.56	8.18	10.37
	Good	Good	Good	Weaker	Good	Supportive
Classroom 15	9.92	9.46	7.71	7.42	8.07	10.57
	Good	Good	Weaker	Weaker	Good	Supportive
Classroom 16	9.06	10.12	8.06	7.75	7.81	10.00
	Good	Supportive	Good	Weaker	Weaker	Good

Classrooms and arithmetic means of classroom social climate dimensions	Affiliation	Teacher Support	Involve-ment	Task Ori-entation	Order and Organisa-tion	Rule Clarity
Classroom 17	9.86	10.02	8.53	8.60	9.13	10.46
	Good	Supportive	Good	Good	Good	Supportive
Classroom 18	9.94	9.66	6.72	6.27	7.22	9.72
	Good	Good	Weaker	Weaker	Weaker	Good
Classroom 19	9.55	9.55	6.77	7.00	7.50	9.50
	Good	Good	Weaker	Weaker	Weaker	Good
Classroom 20	9.03	9.30	6.61	6.84	8.86	9.30
	Good	Good	Weaker	Weaker	Good	Good
Classroom 21	10.00	10.93	9.00	8.75	9.56	10.87
	Good	Supportive	Good	Good	Good	Supportive
Classroom 22	9.35	9.17	6.52	6.76	7.29	9.41
	Good	Good	Weaker	Weaker	Weaker	Good
Classroom 23	9.46	10.04	6.71	6.08	7.85	9.61
	Good	Supportive	Weaker	Weaker	Weaker	Good
<b>Total</b>	<b>9.26</b>	<b>9.56</b>	<b>7.45</b>	<b>7.24</b>	<b>8.32</b>	<b>9.71</b>
	<b>Good</b>	<b>Good</b>	<b>Weaker</b>	<b>Weaker</b>	<b>Good</b>	<b>Good</b>

The research findings presented in Table 1 allow us to state that students in all investigated classes taught by the authoritative or authoritative-tolerant teacher type had good relationships. Also, it can be observed that the classes taught by authoritative teachers and authoritative-tolerant teachers were characteristic of the teachers supporting their students.

Except for some exclusion (Classrooms 6, 16, 17, 21), students were less involved in learning in classes taught by authoritative and tolerant-authoritative teachers. Similar findings can be observed in the dimension of Task Orientation, where in “Classrooms 17 and 22”, authoritative and tolerant-authoritative teachers less encouraged their students to learn. As to the class organisation, classrooms 1, 2, 5, 6, 7, 8, 14, 15, 20, and 21 with authoritative and tolerant-authoritative teachers showed good organisation of students, against other classes where the organisation was lower (weaker).

**Table 2.** Relationship between dimensions of authoritative and tolerant-authoritative teacher interaction styles and classroom climate dimensions

Relationship between dimensions of authoritative and tolerant-authoritative teacher interaction styles and classroom climate dimensions		Affiliation	Teacher Support	Involvement	Task Orientation	Order and Organization	Rule Clarity
Leadership	Spearman rho	0.086	-0.066	-0.112	-0.002	-0.208	0.025
	p-value	0.697	0.766	0.610	0.993	0.340	0.911
	N	23	23	23	23	23	23
Helpful	Spearman rho	0.308	0.173	0.522	0.448	0.149	0.284
	p-value	0.153	0.429	<b>0.011*</b>	<b>0.032*</b>	0.498	0.189
	N	23	23	23	23	23	23
Understanding	Spearman rho	0.228	0.075	0.463	0.570	0.440	0.292
	p-value	0.295	0.733	<b>0.026*</b>	<b>0.005*</b>	<b>0.036*</b>	0.176
	N	23	23	23	23	23	23
Student Responsibility	Spearman rho	0.085	0.353	0.615	0.479	0.189	0.483
	p-value	0.701	0.099	<b>0.002*</b>	<b>0.021*</b>	0.389	<b>0.019*</b>
	N	23	23	23	23	23	23
Uncertain	Spearman rho	0.212	-0.075	-0.331	0.152	-0.440	-0.526
	p-value	0.332	0.735	0.123	0.487	<b>0.036*</b>	<b>0.010*</b>
	N	23	23	23	23	23	23
Dissatisfied	Spearman rho	0.117	-0.230	-0.354	-0.358	-0.459	-0.113
	p-value	0.596	0.291	0.098	0.093	<b>0.027*</b>	0.609
	N	23	23	23	23	23	23
Admonishing	Spearman rho	0.122	-0.424	-0.311	-0.262	-0.296	-0.221
	p-value	0.579	<b>0.044*</b>	0.149	0.227	0.170	0.310
	N	23	23	23	23	23	23
Strict	Spearman rho	-0.064	-0.217	-0.169	-0.247	-0.390	0.164
	p-value	0.771	0.319	0.441	0.256	0.066	0.456
	N	23	23	23	23	23	23

The empirical data presented in Table 2 allow us to state that the hypotheses H2, H3, H4, H5, H6, and H7 were confirmed. The hypotheses H1 and H8 were not confirmed. The next part of our contribution reflects only empirical findings related to the confirmed hypotheses.

The empirical findings revealed a statistically significant positive relationship ( $0.011 \leq 0.05$ ;  $0.032 \leq 0.05$ ) between the teacher interaction style dimension



Helpful and the classroom climate dimensions Involvement and Task Orientation. While authoritative teachers and tolerant-authoritative teachers achieved higher mean scores ( $AM = 3.10$ ) in the dimension Helpful, corresponding to being perceived by students as teachers who help them, they achieved mean scores ( $AM = 7.45; 7.24$ ) in the dimensions Involvement and Task Orientation, corresponding to lower (weaker) involvement of students in learning and lower task orientation of the class.

A statistically significant positive relationship ( $0.026 \leq 0.05; 0.005 \leq 0.05; 0.005 \leq 0.05$ ) was found between the teacher interaction style dimension Understanding and the classroom climate dimensions Involvement, Task Orientation, Organization, and Order. Authoritative teachers and tolerant-authoritative teachers achieved higher mean scores ( $AM = 2.95$ ) in the interaction style dimension Understanding, indicating that their students perceived them as empathic, patient, and understanding. Yet, authoritative teachers and tolerant-authoritative teachers achieved mean scores ( $AM = 7.45; 7.25$ ) in the classroom climate dimensions Task Orientation and Organization, corresponding to weaker (lower) involvement and task orientation of the class. Nevertheless, the classroom climate can still be perceived as appropriate in the mentioned dimensions because the achieved mean scores are not in the range of 4 to 6, where the classroom climate dimensions are considered inappropriate.

Our other empirical findings point to a statistically significant positive relationship ( $0.002 \leq 0.05; 0.021 \leq 0.05; 0.019 \leq 0.05$ ) between the teacher interaction style dimension Student Responsibility and the dimensions Involvement, Task Orientation, Rule Clarity, creating, along with the other dimensions, classroom climate. Authoritative teachers and tolerant-authoritative teachers were perceived by students as teachers giving Student Responsibility ( $AM = 2.64$ ). When compared with the mean scores achieved in the dimensions Leadership Behaviour ( $AM = 3.15$ ), Helpful ( $AM = 3.10$ ), and Understanding ( $AM = 2.95$ ), it can be observed that teachers with authority achieved lower mean scores in this dimension.

Our other research findings show a statistically significant negative relationship ( $0.036 \leq 0.05; 0.010 \leq 0.05$ ) between the teacher interaction style dimension Uncertain and the classroom climate dimension Organization and Order, and Rule Clarity. This finding is indicated by the negative value of Spearman rho. The empirical findings, which we take useful, allow us to state that the lower mean score ( $AM = 0.86$ ) teachers achieved in the teacher interaction style dimension Uncertain, the higher mean score they achieved in the classroom climate dimensions Organization and Order, and Rule Clarity ( $AM = 8.32; 9.71$ ), which corresponds to good organisation and order in the classroom, requiring clear rules.

Also, our research findings show that there is a statistically significant negative relationship (Spearman  $\rho = -0.459$ ) between the teacher interaction style dimension Dissatisfied ( $0.027 \leq 0.05$ ) and the classroom climate dimension Organization and Rule Clarity. The lower the mean score (AM = 0.88) achieved by authoritative teachers and tolerant-authoritative teachers in the dimension Dissatisfied, the higher score achieved in the classroom social climate dimension (AM = 8.32).

A statistically significant negative relationship was found between the teacher interaction style dimension Admonishing ( $0.044 \leq 0.05$ ) and the classroom social climate dimension Teacher Support. The lower mean score achieved by teachers with authority in the interaction style Admonishing, the higher their mean score (AM = 9.56) in the dimension of Teacher Support.

## **Discussion**

The empirical findings prove that teachers with authority create a positive social climate in the classroom. Our research findings show that authoritative teachers understand, help and give their students responsibility in involvement, task orientation, organisation and order, and rule clarity. The less investigated authoritative teachers are uncertain and dissatisfied, the higher organisation and order, thus more explicit the rules in the classroom. The lower admonition by authoritative teachers, the higher their support to students. All the areas manifested mainly in involvement and affiliation are predispositions for a positive classroom climate. In addition to our research, similar results were also confirmed by other researchers (Brophy, 1998; Davies, 2003; Pace & Hemmings, 2007; Cornelius-White, 2007), pointing out that the classroom social climate and the teacher interaction style as the indicator of the climate were recognised as main aspects of teaching, thus as the most important for students' learning and activities.

Research by den Brok et al. (2004) and Wubbels et al. (2006) highlight that the higher score in dominance in the teacher interaction style, which is, based on the teacher interaction style model, typical of authoritative teachers and tolerant-authoritative teachers, reflects in the supporting classroom social climate manifested in support, motivation and good school results of students. It was also confirmed by our research findings that authoritative teachers involved their students in learning and oriented them to tasks.

Further research (Brekelmans et al., In Goh et al., 2000; den Brok et al., 2004; Wubbels & Levy, 1993; Ham et al., 2013) stressed that positive teacher-student

relationships are prerequisites for student involvement in classroom learning activities. Positive relationships in classrooms manifest through a positive social climate. Vališová (2013) confirmed that the social climate a teacher creates by his teaching activities in the classroom has a fundamental influence on students' motivation and positive attitudes towards learning. We were able to confirm this also in our research.

## **Conclusion**

Our research focused on the relationship between teachers' authority and a positive climate in the classroom where they teach. Based on the findings, it can be recommended that teachers make an effort to build and exercise their authority by understanding and supporting their students. Also, teachers must give their students responsibility and as little uncertainty and dissatisfaction as possible and admonish their students as little as possible. The mentioned areas are not only important elements of teacher authority building and exercising but help the teacher create a positive classroom climate manifested mainly in the areas of student involvement in learning, task orientation of the class, organisation and order, and last but not least, in the clarity of rules. It creates a positive classroom climate and a precondition for an educational environment where students will be motivated and led to the achievement of positive outcomes in education.

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