Cultural Behavior of Vietnamese High School Teachers in Online Teaching: Current Status and Implications

ABSTRACT:

Although online teaching has become widespread, few studies have specifically examined teachers' cultural behavior within this context in Vietnam. To investigate teachers' cultural behavior, this article draws on theories of social behavior, interaction, media richness, and models of online communication. A quantitative survey using a structured questionnaire was conducted with 321 teachers and 602 high school students from multiple schools across three provinces/cities representing Vietnam's three regions (Hanoi in the North, Nghe An in the Central region, and Ho Chi Minh City in the South). The survey results indicate that some teachers still lack communication skills and exhibit inappropriate behaviors in the online environment. There are notable differences between teacher and student evaluations, and factors such as gender and teaching experience are found to influence teacher behavior. Based on these findings, the paper proposes strategies to enhance communication skills and cultural behavior in online teaching.

Keywords: Behavioral culture, high school teachers, online teaching, Vietnam

1. Introduction

Online teaching has become an inevitable trend in the context of globalization and the strong development of technology [1]. In particular, the COVID-19 pandemic has accelerated the transition from traditional teaching to online teaching worldwide [2]. In Vietnam, online education has also been rapidly deployed and gradually become familiar to teachers and students. However, along with this development, the issue of teachers' behavioral culture in the online environment has become a notable topic and needs to be carefully considered [3]. Behavioral culture in teaching is a set of rules, behaviors, and attitudes that teachers and students demonstrate through interaction. Behavioral culture reflects the core values of the educational environment, is the foundation for the success of a classroom, and is a necessary factor in building a positive learning environment [4]. A culture of behavior is not only about respect and responsibility but also reflects the ability to cooperate and interact positively among members of the classroom [5][6]. A culture of behavior plays a decisive role in maintaining a positive learning environment and encouraging the comprehensive development of students [7].

Online learning and teaching have several distinct characteristics, including increased accessibility [8], lower costs, flexibility in time and location [9], and more options for tailoring learning to individual levels and paces [10]. However, this type of learning poses several challenges, such as technological issues related to problematic internet connections, unavailability of technological devices, and difficulties navigating new technologies [11,12,13]. Online teaching allows students to self-manage their learning time and can be done remotely, but teachers face challenges in maintaining student discipline and active participation. Studies have also shown that online learning often creates feelings of loneliness [14] and makes teacher-student interactions difficult due to limited body language and eye contact [15]. In addition, factors such as teachers' experience with technology and digital interaction skills significantly impact communication with students

[16]. Teachers need to develop communication skills use technology flexibly and build appropriate rules of conduct and communication [17].

Netiquette in online teaching is a set of rules, standards, and correct practices when using online technologies in teaching, built based on ethical values, respect in communication, and the behavior of teachers and students on online learning platforms. Netiquette rules include respecting others, using appropriate language, not invading privacy, or discriminating against race, religion, gender, or culture [18][19]. Online teaching involves a variety of factors such as tools, resources, pedagogy, roles, organizational arrangements, and forms of interaction, supervision, and support [20][21][22][23]. In online teaching, the role of teachers is the most important factor to ensure successful online learning [24][25][26][27], teachers need to adapt to new methods to maintain interaction with students through digital platforms. This requires teachers to be flexible in using digital tools and establishing clear communication rules [13],[16], [28,[5]. In Vietnam, during the COVID-19 pandemic, teachers have made significant efforts to adapt to the online teaching environment [29]. However, not all teachers are ready or have enough skills to adapt to this form of teaching [30].

This paper aims to investigate the current status of the cultural behavior of high school teachers in Vietnam, especially in online teaching. The main research questions include:

1. What are the cultural behavior manifestations of teachers in the online environment?
2. Why do teachers and students have different assessments of teachers' cultural behavior?
3. What measures can be applied to improve teachers' cultural behavior?

From these questions, the research hypothesis includes: Teachers have inconsistent cultural behaviors in online teaching, leading to differences in evaluation between teachers and students. Furthermore, personal factors such as gender, teaching experience, and geographic area affect teacher behaviors.

This paper offers significant insights into the evolving landscape of online teaching in Vietnam, particularly focusing on the cultural behaviors of high school teachers. It addresses a crucial and timely issue—teachers' behavioral culture in the digital environment—which is critical to the success of online education, especially as education systems worldwide increasingly rely on digital platforms. The study's comprehensive survey and analysis involving both teachers and students from multiple regions provide valuable empirical data, shedding light on the challenges and differences in perceptions regarding teacher-student interactions in online classes.

To ensure the accuracy and reliability of the research results, we implemented rigorous variable control and eliminated confounding factors to minimize potential bias. Data collection and statistical analyses were meticulously conducted and thoroughly documented, providing transparent and reproducible findings. These efforts enhance the technical rigor of the study, ensuring that it meets high scientific standards and yields conclusions with substantial practical value.

2. METHODOLOGY

2.1. Instrument

The survey toolkit was designed based on a 5-point Likert scale (from 1 - Completely disagree to 5 - Completely agree). Specifically, the questionnaire includes two main parts:

- Part 1: Collecting demographic information of teachers and students such as gender, location, and online teaching experience.

- Part 2: Assessing teachers' cultural and behavioral expressions based on 7 observed variables, including entering the classroom on time, greeting students, using virtual backgrounds, respecting students' opinions, and other communication behaviors.

Table 1. Measurement Scales and observation variables on Teachers' behavioral culture in Online Teaching and Learning

No.	Observation variable code	Observation variable content
1	C6.4	The teacher sometimes enters the online class late.
2	C6.5	The teacher enters the online class without greeting the students.
3	C6.6	The teacher uses a virtual background throughout the class.
4	C6.8	The teacher turns off the student's microphone before the student finishes speaking.
5	C6.10	The teacher intervenes when students answer questions or discuss lessons in the online class.
6	C6.24	The teacher asks questions and encourages students to share their opinions proactively and respectfully.
7	C6.25	The teacher listens to students carefully, without criticizing them.

2.2. Sample

Regarding the survey subjects, a total of 923 people including teachers and students, of which teachers accounted for 34.2% and students accounted for 65.8%. The study surveyed 03 provinces/cities representing 03 regions in Vietnam, the proportion of teachers by locality was quite balanced, specifically: Hanoi accounted for 31.5%, Nghe An accounted for 37.4%, and Ho Chi Minh City accounted for 31.2%. The proportion of teachers living and working in urban/town areas (56.4%) was higher than that of teachers in rural areas (43.6%). Teachers participating in the survey were mainly those with 1 to 2 years of online teaching experience, accounting for 43.6%, followed by teachers with 2 to 3 years of experience, accounting for 28.0%, teachers with 3 years or more of experience, accounting for 19.6%, and teachers with less than 1 year of experience, accounting for only 8.7%.

For the student group, the proportion of students in Hanoi and Nghe An is 38.9, Ho Chi Minh City is 22.2%. Students living in urban/town areas (55.6%) are more than students in rural areas (44.4%). The proportion of students in grade 10 is 34.6%, grade 11 is 31.1%, and grade 12 is 34.4%.

Table 2. Characteristics of the survey sample

Characteristics		**Quantity**	**Percentage (%)**
Total survey samples		**923**	**100,0**
Survey subjects	*Teachers*	321	34,2
	Students	602	65,8
Teachers			
Gender	*Male*	90	28,0
	Female	231	72,0
Ethnicity	*Kinh*	316	98,4

Characteristics		Quantity	Percentage (%)
	Other	5	1,6
Location	*Hanoi*	101	31,5
	Nghe An	120	37,4
	Ho Chi Minh City	100	31,2
Living Area	*Urban/Town*	181	56,4
	Rural	140	43,6
Years of experience	*Under 5 years*	29	9,0
	5 to 9 years	53	16,5
	10 to 14 years	76	23,7
	15 to 19 years	67	20,9
	Over 20 years	96	29,9
Online teaching experience	*Under 1 year*	28	8,7
	1 to 2 years	140	43,6
	2 to 3 years	90	28,0
	Over 3 years	63	19,6
Students			
Gender	*Male*	266	44,2
	Female	336	55,8
Ethnicity	*Kinh*	584	97,0
	Other	18	3,0
Location	*Hanoi*	234	38,9
	Nghe An	234	38,9
	Ho Chi Minh City	134	22,3
Living Area	*Urban/Town*	335	55,6
	Rural	267	44,4
Current Grade Level	*Grade 10*	208	34,6
	Grade 11	187	31,1
	Grade 12	207	34,4

Source: Research team's statistics from survey data

2.3. Data collection method

The data collection process is conducted online. For students, the questionnaire is sent to schools with the permission of the school's Board of Directors. The research team will send the survey to students through the homeroom teacher in an online format designed on the Google Form application. All questions in the questionnaire are required to be answered, so when the form is

completed, there will be no missing data. The link to access the form is sent to the survey participants via internet-based applications such as email, Facebook Messenger, and Zalo. The data collection period is from February 18 to March 22, 2024. After that, the data is downloaded in *.csv format and imported into SPSS software for data analysis.

After the data was collected to 1014 records, including 321 teacher forms and 602 student forms. After the research team stopped collecting and performed the data cleaning process to detect errors that arose while respondents answered the questionnaire. Based on the design table on Google Forms, there are three types of errors expected to appear, specifically:
- There is no response data in the questions, appearing according to the data entered in text form because the form is designed to require a response in each question.
- The response content is inconsistent with the question, often appearing according to the data entered in text form.
The data (for Likert scale questions) responded according to a certain rule, such as all data received the same value, and the value increased or decreased according to the rule. The research team reviewed the compliance with the cores mentioned above. The cleaning result eliminated 91 records that were removed. The remaining 923 records in the data set met the requirements for conducting exploratory factor analysis (based on the suggestion of Hair Jr et al., 2014) [31].

2.4. Data analysis methods

The collected data were processed and analyzed using statistical tools, mainly using SPSS (Statistical Package for the Social Sciences). The main analysis methods include:
- Descriptive statistics: Used to summarize and describe the main characteristics of the data, including the mean score and standard deviation of observed variables.
- Levene test and ANOVA: Used to test for statistically significant differences between teachers' and students' assessments of behavioral culture. Levene test tests for homogeneity of variance between two groups, while ANOVA determines the difference in mean scores between groups.
- Correlation analysis: Conducted to assess the relationship between demographic factors (such as gender, location, and online teaching experience) and teachers' behavioral culture.

2.5. Reliability

To ensure the reliability of the scale, Cronbach's Alpha coefficient was used to test the internal consistency of the questions in the survey. Cronbach's Alpha coefficient was above 0.7, indicating that the observed variables have a high level of consistency, by social research standards. In addition, before officially implementing the survey, the questionnaire was tested on a small group of teachers and students to ensure the clarity and reasonableness of the questions.
Although the quantitative survey method has brought many valuable results, there are still some limitations:
- The survey sample is limited to several high schools, so the ability to generalize to the entire Vietnamese education system is limited.
- Online surveys can be affected by the subjectivity of respondents, especially in self-assessment of teachers' behavior and students' feelings.
The quantitative research method with the combination of online survey and statistical analysis has brought important findings on teachers' behavioral culture in the context of online teaching. Thereby, the study has provided practical evidence to propose solutions to improve teachers' behavioral skills in the process of digital transformation of education.

3. Results

3.1. Manifestations of teachers' behavioral culture in online teaching

The survey results show that teachers' behavioral culture in online teaching at high schools in Vietnam is assessed at an average level, with an overall average value of 2.69 on a 5-point scale. Specific manifestations of behavioral culture are analyzed according to 8 important factors as follows:

Table 3: Results of teachers' behavioral cultural manifestations

No.	Variable Code	Behavioral Manifestation Description	Mean Score	Standard Deviation	Classification
1	C6.4	The teacher does not arrive on time for online classes	2.96	1.450	Average
2	C6.5	Teacher does not greet students when entering online class	2.60	1.469	Average
3	C6.6	The teacher uses a virtual background throughout the lesson	3.23	1.337	Good
4	C6.8	The teacher mutes student's microphones before they finish speaking	2.30	1.539	Poor
5	C6.10	The teacher intervenes when students are discussing the lesson	3.10	1.413	Average
6	C6.24	The teacher encourages students to share their opinions	2.70	1.546	Average
7	C6.25	The teacher listens to students without criticizing them	2.37	1.497	Poor

The results obtained in the table above show that teachers who do not enter the classroom on time (C6.4) have an average score of 2.96. Although this score is not too low, it still reflects the situation of teachers not being punctual in online classes. This affects discipline and professionalism in teaching. Teachers who do not greet students when entering the classroom (C6.5) have an average score of 2.60, showing that most teachers do not pay attention to greeting students at the beginning of the online class. This is a basic behavior, but it affects the students' sense of respect. Using virtual backgrounds throughout the lesson (C6.6) has an average score of 3.23, the highest among the survey manifestations. Using virtual backgrounds helps teachers create a good learning space, helping students actively participate in the learning process. Turning off students' microphones before they finish their sentences (C6.8) had the lowest score of all observed variables with a score of 2.30. This shows that teachers do not fully respect students' right to speak and share their opinions. This action may discourage students from participating in the learning process, reducing interaction in the classroom. Intervening when students discuss lessons (C6.10) had an average score of 3.10, reflecting that teachers tend to intervene in students' discussions. However, this can be positive if teachers know how to navigate to support students. Encouraging students to share their opinions (C6.24) with an average score of 2.70 shows that teachers need to improve in creating a space for students to freely share their opinions, helping to increase interaction and student participation in online lessons. Listening to students without criticism (C6.25) only scored 2.37 points, showing that teachers have not done a good job of listening and responding respectfully to students. This affects the feeling of safety and comfort when students want to share their opinions or discuss in class. Thus, the survey results show that teachers' behavioral culture in

online teaching is still limited, especially in aspects related to respecting students (such as turning off students' microphones before finishing a sentence), listening, and encouraging students to participate in sharing their opinions. In the context of a strong transition to online teaching, teachers' communication and interaction skills need to be adjusted and further improved to ensure an effective and friendly learning environment.

3.2. Comparison of teachers' and students' assessments of teachers' cultural behavior in online teaching

Comparing the assessment between the group of teachers and students on the current status of teachers' cultural behavior in online classes, the analysis results are described in Figure 1 below. The difference between the assessment of teachers and students on the current status of teachers' cultural behavior in online teaching is quite clear based on the data shown in Figure 2 with a difference of 0.09 to 0.67. Which, the difference in the level of expression C6.5 "The teacher accessed the online class without greeting the students" is the highest, the difference in expression C6.8 "The teacher turned off the student's microphone before the student finished speaking" has the lowest difference. In general, the student group rated the VH02 factor higher than the teacher group. Specifically, the student group had a higher average value in 5/7 manifestations than the teacher group (including manifestations C6.4, C6.5, C6.6, C6.24, and C6.25), while the teacher group had a higher average score in the remaining 2 manifestations (including C6.8 and C6.10).

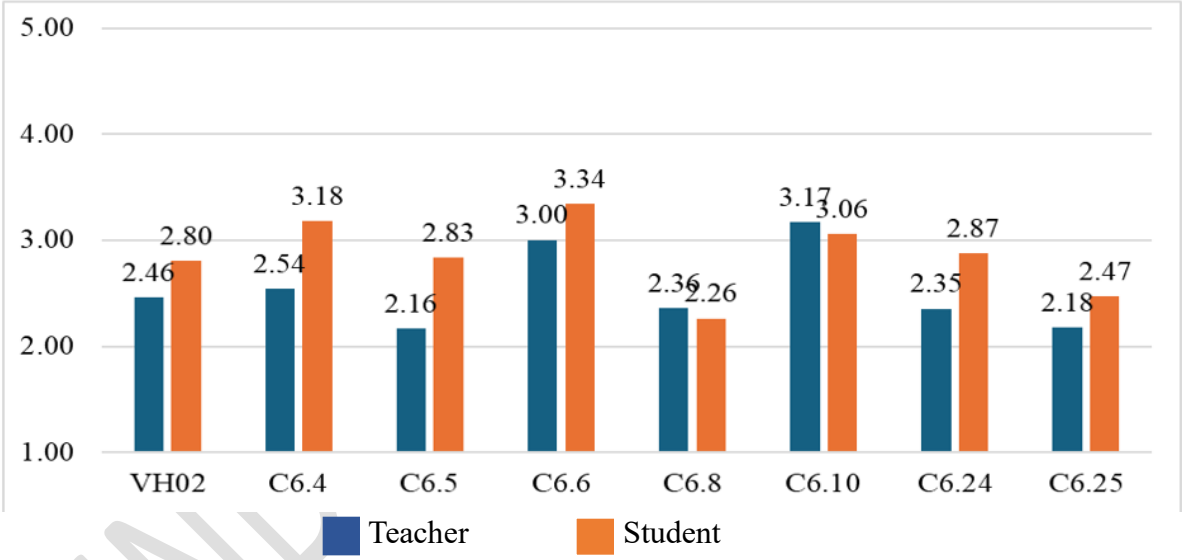

Figure 1. Comparison results of the assessment of the group of teachers and students on the current status of teachers' cultural behavior in online classes

Thus, the results describing the difference between teachers' and students' assessments of the current state of teachers' cultural behavior in online classes show that there is this, however, to know whether this difference is statistically significant or not, it is necessary to test that difference. The Levene test results in Table 4 show that: (i) there are 03 manifestations with Sig values > 0.05, which are C6.5, C6.8, and C6.24; and (ii) the Sig. values of factor VH02 and the remaining 04 manifestations all have Sig. values < 0.05, which are C6.4, C6.6, C6.10, and C6.25.

Table 4. Levene test for teachers' and students' assessments of the current state of teachers' cultural behavior in online classes

Variable	Levene Statistic	Df1	df2	Sig.
VH02	13.685	1	921	.000
C6.4	5.923	1	921	.015
C6.5	1.140	1	921	.286
C6.6	22.251	1	921	.000
C6.8	1.309	1	921	.253
C6.10	6.851	1	921	.009
C6.24	1.786	1	921	.182
C6.25	47.514	1	921	.000

Source: Research team analysis from survey data

The ANOVA test in Table 5 was applied to show that all 3 expressions C6.5, C6.8, and C6.24 had Sig.=0.000 < 0.05 => the difference in the assessments of teachers and students in these expressions is statistically significant.

Table 5. ANOVA test for the assessment of teachers and students on the current status of teachers' cultural behavior in online classes

Variable		Sum of Squares	df	Mean Square	F	Sig.
C6.5	Between Groups	8.827	1	8.827	13.372	.000
	Within Groups	607.923	921	.660		
	Total	616.750	922			
C6.8	Between Groups	8.827	1	8.827	13.372	.000
	Within Groups	607.923	921	.660		
	Total	616.750	922			
C6.24	Between Groups	8.827	1	8.827	13.372	.000
	Within Groups	607.923	921	.660		
	Total	616.750	922			

Source: Research team analysis from survey data

3.3. Assessing differences according to survey sample characteristics

The one-way ANOVA analysis method was used to examine whether there were differences in the assessment of each group of survey characteristics of each group of teachers and students. Specifically, the analysis results are presented below.

Regarding teachers:

The results show that there are differences in teachers' assessments of teachers' cultural behavior in online classes according to survey characteristics groups, specifically as follows:

Regarding gender: both groups rated this factor at level 2, in which the female group (2.36) rated it lower than the male group (2.60).

Regarding ethnicity: although both groups of this characteristic also rated this factor at level 2, the Kinh group of teachers (2.43) rated this issue higher than the group of teachers of other ethnicities (2.23).

Regarding location: Teachers from 03 provinces/cities participating in the survey all rated it at level 3, in which teachers in Hanoi were the group with the lowest average score (2.25), while teachers in Nghe An had the highest average score (2.57).
Regarding living area: teachers living in urban/town areas (2.49) rated this issue higher than teachers in rural areas (2.35).
Regarding training level: groups of teachers with different qualifications all rated this issue at level 2, in which the group of teachers with postgraduate qualifications had the highest average score (2.49), while the group of teachers with college qualifications had the lowest average score (2.17).
Regarding working experience: Teachers with the least working experience (less than 5 years) are the group that rates this issue the highest (3.06) corresponding to level 3, while teachers with 5 to 9 years of experience rate it the lowest (2.28). Regarding online teaching experience: although all groups rate it at level 3, the group of teachers with the most experience (3 years or more) rates this issue the highest (2.77), while the group with the lowest rating is the group of teachers with 1 to 2 years of experience (2.20).
The Levene test results in Table 6 show that there are 02 characteristics with Sig. values > 0.05 including: (1) Gender: 0.402; (2) Ethnicity: 0.356, while the remaining 05 characteristics have Sig. values < 0.05, which are: (1) Locality: 0.000; (2) Area of residence: 0.050; (3) Training level: 0.014; (4) Years of work experience: 0.021; and (5) Online teaching experience: 0.0001). Table 7. Levene test for teachers' assessment of the current status of teachers' cultural behavior in online classes according to groups of surveyed characteristics.

Table 6. Levene's test for teachers' assessment of the current status of teachers' cultural behavior in online classes according to survey characteristics groups

Variable	Levene Statistic	Df1	df2	Sig.
Gender	.704	1	319	.402
Ethnicity	.853	1	319	.356
Location	12.827	2	318	.000
Region of Residence	3.867	1	319	.050
Education Level	4.362	2	318	.014
Years of Service	2.935	4	316	.021
Online Teaching Experience	*8.234*	*3*	*317*	*.000*

Source: Research team analysis from survey data

The ANOVA test results in Table 7 show that both groups of characteristics have Sig. > 0.05 => There is no difference in the assessment of teachers according to these groups of characteristics about the current status of teachers' cultural behavior in online classes at high schools.

Table 7. ANOVA test for teachers' assessment of the current status of teachers' cultural behavior in online classes according to survey characteristics groups

Variable		Sum of Squares	df	Mean Square	F	Sig.
Gender	Between Groups	3.778	1	3.778	3.463	.064
	Within Groups	347.951	319	1.091		
	Total	351.728	320			

Ethnicity	Between Groups	.196	1	.196	.178	.673
	Within Groups	351.532	319	1.102		
	Total	351.728	320			

Source: Research team analysis from survey data

Thus, among the tested variables, only the variable Online Teaching Experience has a significant difference in variance between groups (Sig. < 0.05). The remaining variables all have Sig. values greater than 0.05, indicating that there is no significant difference in variance between groups of those variables.

Regarding students:

The results presented in Table 8 show that there are certain differences in students' assessments of the current status of teachers' cultural behavior in online classes according to groups in each survey sample characteristic, specifically as follows:

Regarding gender, the male student group rated this issue (3.10) higher than the female student group (2.68).

Regarding ethnicity: the Kinh student group (2.88) rated it higher than the group of teachers from other ethnic groups (2.43).

Regarding location: Hanoi students rated the current status of the issue the highest (3.06) among the three student groups, while students in Ho Chi Minh City had the lowest average score (2.65). This result indicates that the Ho Chi Minh City student group is the group that rates teachers teaching in online classes with more appropriate and better manifestations of VHUX than the Hanoi and Nghe An student groups.

Regarding living area: students living in urban/town areas (2.89) rated this issue higher than teachers in rural areas (2.83). This indicates that students in rural areas believe that teachers teaching in online classes have more appropriate and better manifestations of VHUX than students in urban/town areas.

Regarding grade level: the group of 10th-grade students is the group with the lowest average score on this issue (2.74) at level 5, while the groups of 11th and 12th-grade students rated it the lowest (both 2.93). Thus, the group of 10th-grade students is the group of students who rate teachers having appropriate manifestations of VHUX in online classes higher than the other two groups of students.

Regarding academic performance: No group of students had weak academic results; groups with average or above-average academic performance rated this issue lower than those with poor academic performance (3.06), with the average-performing group giving the lowest rating (2.82).

Table 8. Analysis of Differences in Student Evaluations of Teacher Behavioral Culture in Online Classes Based on Surveyed Characteristics

Characteristic		**Average value**	**Standard deviation**	**Standard error of the mean**
Gender	Male	3.10	1.198	.073
	Female	2.68	1.105	.060
Ethnicity	Kinh	2.88	1.169	.048

Characteristic		Average value	Standard deviation	Standard error of the mean
	Other	2.43	.925	.218
Location	Hanoi	3.06	1.261	.082
	Nghe An	2.79	1.154	.075
	Ho Chi Minh City	2.65	.939	.081
Living Area	City/Town	2.89	1.111	.061
	Rural	2.83	1.230	.075
Current Grade Level	Grade 10	2.74	1.110	.077
	Grade 11	2.93	1.200	.088
	Grade 12	2.93	1.180	.082
Academic performance	Poor	3.06	1.206	.292
	Weak	-	-	-
	Average	2.82	1.149	.173
	Fair	2.87	1.180	.091
	Good	2.90	1.130	.068

***Source**: Analysis by the research team based on survey data*

The Levene test results in Table 9 show that the Class currently attending (0.178) and Learning Outcomes (0.848) groups have Sig. > 0.05, while the remaining groups all have Sig < 0.05, specifically: (1) Gender: Sig. = 0.014; (2) Ethnicity: Sig. = 0.010; (3) Locality: Sig. = 0.000; and (4) Area of residence: Sig. = 0.015.

Table 9. Levene test for students' assessment of the current status of regulations on teachers' cultural behavior in online teaching according to survey characteristics groups

Variable	Levene Statistic	Df1	df2	Sig.
Gender	6.112	1	600	.014
Ethnicity	6.707	1	600	.010
Location	13.275	2	599	.000
Living Area	5.981	1	600	.015
Grade Level	1.731	2	599	.178
Academic Performance	.344	4	597	.848

The analysis results in Table 10 show that there is no difference among the groups of students in evaluating the current state of teachers' expressions of cultural behavior in online classrooms, as the Sig. value is greater than 0.05.

Table 10. ANOVA Test on Students' Evaluation of Teachers' Expressions of Cultural Behavior in Online Classrooms by Survey Characteristic Groups.

Variable		Sum of Squares	df	Mean Square	F	Sig.
Grade Level	Between Groups	4.753	2	2.377	1.757	.173
	Within Groups	810.069	599	1.352		
	Total	814.822	601			
Academic Performance.	Between Groups	2.680	4	.670	.492	.741
	Within Groups	812.143	597	1.360		
	Total	814.822	601			

Thus, based on the analysis results above, for the group of students, there are only differences between male and female students, as well as among student groups divided by the three provinces/cities: Hanoi, Nghe An, and Ho Chi Minh City, in their evaluations of the current state of teachers' expressions of cultural behavior in online classrooms, which are statistically significant. This further suggests that attention should be paid to gender and regional factors in Vietnam when considering issues related to teachers' expressions of cultural behavior in online classrooms in practice, to develop appropriate solutions and adjustments for each specific group and achieve the desired effectiveness.

The analyses above indicate that the current state of teachers' expressions of cultural behavior in online teaching, measured by seven observed variables, is rated by both teachers and students at an average value of 2.69 (on a 5-point scale, where 3 is neutral). There is a discrepancy in the evaluations between teachers and students on this matter (with differences in ratings ranging from 0.09 to 0.67). The group of students rated 5 out of 7 expressions with a higher average than the group of teachers, while the teachers rated 2 out of 7 expressions with a higher average than the students. ANOVA testing shows that 3 expressions (C6.5, C6.8, and C6.24) exhibit statistically significant differences in evaluations between teachers and students. The analysis of the characteristics of the teacher group, such as gender, ethnicity, location, living area, education level, years of experience, and experience in online teaching, suggests that attention should be paid to factors like gender, region, and online teaching experience.

4. DISCUSSION

The survey results on teachers' behavioral culture in online teaching at high schools in Vietnam have clearly shown that there are many concerns about improving behavioral culture in online teaching. Below is a discussion based on the main findings from the survey results and related studies:

Regarding the manifestation of teachers' behavioral culture in online teaching

Teachers sometimes enter online classes late: This action can reduce students' learning spirit, and students lose trust in teachers. In the online learning environment, discipline in teaching is the core factor in building an effective learning environment [32]. Teachers' failure to comply with time directly affects students' learning motivation [33]. Therefore, teachers need to seriously implement punctuality when teaching online.

Teachers enter online classes without greeting students: The average score of 2.60 in the survey results shows that some teachers do not greet students when accessing online classes. This will cause a sense of distance and a lack of connection between teachers and students. Greetings are the first step to build a sense of friendliness and encourage students to participate more

actively[34]. Vrasidas and McIsaac (1999) pointed out that creating connections and building a friendly learning environment is very important in online teaching[35]. Therefore, teachers need to greet students when they first access the class to show a friendly and open attitude.

Teachers use virtual backgrounds throughout the lesson with a survey result of 3.32. This shows that teachers pay attention to protecting their own private space and not distracting teachers[36]. In the theory of multimedia, Mayer (2009) also noted that irrelevant visual elements can cause interference and affect students' ability to concentrate[36]. The use of virtual backgrounds in online teaching requires careful attention to ensure that they do not distract students[37]. Therefore, teachers need to pay attention to the use of virtual backgrounds in the teaching process on online platforms.

Teachers turn off students' microphones when students have not finished their sentences: The survey of this expression (2.30), shows that many teachers do not pay attention to students when speaking, sometimes teachers turn off students' microphones when they are speaking. Respectful and supportive communication between teachers and students is the foundation for building trust and motivation in online learning[38]. Respecting students' opinions motivates them to express themselves[39]. Therefore, teachers need to pay more attention to turning off students' microphones when they are speaking.

Teachers intervene when students answer questions or exchange lessons: Interaction between students and teachers plays an important role in the online learning environment [40]. If teachers intervene too much, it can interrupt the flow of thinking and limit students' ability to think independently. The survey results with this expression of teachers is 3.10, showing that there are still some teachers who intervene when students answer questions or exchange lessons. Unnecessary intervention can make students lose interest and feel controlled [41]. Therefore, teachers need to pay more attention to interrupting students.

Teachers ask questions and encourage students to share their opinions proactively and respectfully: Encouraging students to share their opinions proactively and respectfully is an important element of online teaching [42]. Asking open-ended questions and encouraging students to participate in discussions helps to improve critical thinking and create a positive learning atmosphere [38]. The survey results show that many teachers do not know how to encourage students to ask questions and share their opinions proactively and respectfully.

Teachers listen carefully to students without criticizing them: The survey result of this expression is 2.37. This shows that many teachers do not listen to students, and still criticize students with disrespectful words or sarcastic tones. Teachers need to understand that listening carefully without criticizing helps students feel safe and confident [43]. Teachers should listen to students to better understand their perspectives, thereby creating a learning environment that encourages personal development.

Teacher's and student's perceptions of teachers' cultural behavior in online teaching

The results of the study indicate that there are significant differences in how teachers and students perceive teachers' cultural behaviors in the context of online teaching.

Teachers were more critical of their cultural behavior. Many teachers said that they were not open and listened to their students. They explained that this was due to the transition from face-to-face teaching to an online environment, teachers often felt a lack of confidence. The survey results are also consistent with the study of Hodges et al. (2020). He emphasized that teachers

often felt a lack of confidence when faced with changes in online teaching, leading to low self-assessment of their ability to interact and behave [16]. The reason may be that teachers have not been well-trained in how to teach online.

Meanwhile, students highly appreciated teachers' cultural behaviors, especially in aspects such as encouraging students to share their opinions and listening to students carefully and without judgment. Specifically, in criterion C6.24 (encouraging students to share their opinions), students felt encouraged to express their thoughts. Similarly, in criterion C6.25 (listening without judgment), students felt that teachers listened to their opinions carefully and without judgment, creating a sense of safety and comfort for students. Bao (2020) pointed out that students often felt that teachers' efforts to promote communication and support them in the learning process should be evaluated more positively[44].

Thus, the difference in the evaluation of behavioral culture between teachers and students is a common phenomenon due to many causes. Many studies have shown many perspectives on the difference. With a high sense of responsibility, teachers often set high standards for themselves, leading to a low evaluation of their ability to interact and behave. Students, as the recipients of the interaction, often focus on the efforts and positive behavior of teachers, so they tend to evaluate them higher.

Assessing differences according to survey sample characteristics

The analysis showed that factors such as gender, location, and online teaching experience significantly influenced teachers' behavioral culture. Female teachers tended to demonstrate better behavioral culture, especially in expressions related to communication and encouraging student participation. This aligns with the study by Bozkurt and Sharma (2020), which found that female teachers were generally more gentle and flexible when interacting with students [13]. Teachers in urban areas with better technology infrastructure tended to demonstrate better behavioral culture than teachers in rural areas. This suggests that technology infrastructure and technology skills play an important role in maintaining teachers' communication effectiveness in online teaching. Teachers with experience in online teaching tend to have a better behavioral culture.

5. PROPOSED SOLUTIONS

Based on the survey results, some solutions can be proposed to improve teachers' behavioral culture in online teaching:

Organize training courses and professional development: Educational institutions need to develop digital communication skills training programs for teachers, implement technology training programs and specific behavioral skills for teachers in rural areas; need to develop digital communication skills training programs for teachers; Organize training courses on communication skills in online environments: communication methods, how to build relationships with students, how to handle complex situations in teaching; Provide technology courses such as how to use software, online teaching platforms, interactive support tools such as Zoom, Google Meet, Kahoot, or Microsoft Teams; Organize training sessions on interactive teaching methods such as collaborative learning, project-based learning or methods that encourage students to participate in the learning process actively.

Psychological support and counseling: Set up a psychological counseling service available to teachers, which can be done via video calls or in person. A psychologist can help teachers deal with the stress and anxiety associated with teaching online; Create a safe and secure environment

for teachers to freely share personal issues they are facing; Organize social sessions where teachers can share personal stories, and feelings and receive encouragement from colleagues; Invite a psychologist to join in to provide advice and support.

Organize experience exchange sessions: Educational institutions can organize discussions, workshops, or working groups for teachers to share experiences and learn from each other about communication and interaction skills. These exchanges help teachers learn effective teaching methods from colleagues and discuss how to solve difficulties in communicating with students. Create conditions for teachers to participate in professional learning communities to research, discuss, and apply teaching strategies together, especially in communication and interaction.

Organize soft skills courses for teachers: Educational institutions need to provide training programs on emotional management to help teachers know how to control their emotions when communicating with students, especially in stressful situations. This helps maintain a positive learning environment and facilitates more effective communication. Equip teachers with leadership skills such as classroom management, motivating students, and building a positive learning atmosphere. These skills can help teachers improve their interactions and maintain close relationships with students.

Develop codes of conduct in online classrooms: Education management agencies at all levels, from the Ministry of Education and Training (at the national level) to Departments or Education Offices (at the local level), play an important role in developing general frameworks, issuing regulations on professional ethics, and controlling and supervising. School boards are responsible for concretizing regulations from management agencies into rules that are suitable for the actual situation and conditions of their schools. Teachers are the ones who directly implement and apply codes of conduct in the online teaching process. Students also play an important role in developing and implementing the code of conduct in online teaching. Parents have a role to play in supporting and ensuring that students comply with the code of conduct, especially when students are studying at home.

Provide online teaching materials and equipment: schools need to ensure that all teachers are fully equipped with the necessary equipment as well as guidance documents on online teaching and behavioral culture;

Build a close connection between schools and students' families: Educational institutions need to create conditions for teachers to communicate regularly with parents, through online meetings, emails, or communication applications. Collaboration between teachers and parents will help build a better learning environment for students while improving the relationship between teachers and students.

6. CONCLUSION

This paper has clarified the current status of high school teachers' behavioral culture in online teaching in Vietnam, an important issue in the context of digital transformation in education. The survey results indicate that teachers' behavioral culture is assessed at an average level, with many manifestations that need to be improved, such as the ability to communicate and listen to students' opinions. The assessment of teachers' behavioral culture varies between teachers and students. The results of the analysis of differences in survey sample characteristics such as gender, location, and online teaching experience showed that female teachers, teachers in urban areas, and teachers with more experience in online teaching often demonstrated better behavioral culture.

From the above results and analysis, this article proposes some solutions such as training in digital communication skills, technical support in rural areas, sharing effective online teaching experiences, etc. In general, although teachers' cultural behavior in online teaching is still limited, with the right attention and investment from teachers, schools, and educational institutions in Vietnam, these issues can be completely improved. This study is not only meaningful for improving cultural behavior in online teaching but also contributes to building the foundation for a successful digital education future. However, further research is still needed to support teachers in developing behavioral skills in digital teaching environments.

LIMITATIONS OF THE STUDY

Although the survey provides a lot of useful information, there are also some limitations. First, the scope of the survey mainly focuses on several high schools and the number of samples is not rich, leading to the ability to generalize the results is not high. Second, the survey is based on the feelings of teachers and students, which can be affected by personal cognitive and emotional biases. Finally, this survey mainly focuses on behavioral manifestations, not going into specific analysis of technology and infrastructure supporting online teaching.

CONSENT

As per international standards or university standards, Participants' written consent has been collected and preserved by the author(s).

ETHICS APPROVAL

We confirm that the questionnaire content has been agreed upon and accepted by the schools whose teachers participated in the survey. All teachers participating in the survey volunteered to complete the questionnaire. In case anyone disagreed, he/she was not in, and there was no press from the research team and their teacher. The authors have kept to all ethical concerns during the data-gathering process and ensured that all information was used for research purposes and was confidential.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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