Representations of students with different strategies of meaning transfer about the teacher in the educational process

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Abstract. The author has studied peculiarities of students' representations with different strategies of meaning transfer on communication and professional skills of teachers influencing students' meaning-making. The research involved 156 students of the age of 18-21 at their BSc 1st -3rd years of different study areas. The results reveal that there are certain peculiarities in students' ideas on the expression of verbal and non-verbal characteristics of a teacher in the educational process with different strategies of semantic transfer. Students believe that expressive and verbal features of the teacher influence their learning outcomes and appropriation of professional meanings.

1 Introduction

The study of "representation" category in psychology has been developed since the last century and is closely linked to studies of perception and the cognitive mechanisms of processing external information. In modern psychology, there is a wealth of material on how information from the world around us is processed. People interpret situation cues according to their past experiences, personality traits [1], current affect [2] and purpose [3], cognitive traits and control styles [4], self-esteem and reflection [5]. Situation perception subsequently influences people's motivation and behavior [1, 6, 7].

When perceiving and evaluating people, actors rely on contextual features of the environment, the object, the subject and the situation. Generally, contextual features can be divided into four categories: facial features (e.g. eye gaze), sender features (e.g. body position), external environmental features (e.g. setting, environment) and perceptual features (e.g. affective processes) [8]. Several studies have presented findings on the modulating effects of contextual information and their effects on human perception [9-11].

Much of what we know about the cognitive processes of human perception is derived from research on the cognitive background of facial perception. The cognitive model of Bruce V. and Young AW. later improved by Breen N. et al., shows that a key element in adequate, conscious recognition of faces is that faces must also recall semantic information. This includes names, occupations, places of residence and so on. The so-called identity node combines visual information from a person with knowledge stored in memory [12].

Research findings show that perception and evaluation of people are highly individual

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processes, influenced by cognitive, emotional and non-emotional aspects of contextual information and further modulated by individual personality traits [13].

There are studies that show that language functions as a context that shapes human perception [14]. When a person speaks, verbal information conveying different affective values can help to reveal character traits and influence how that person is judged [13, 15]. In everyday communication, those who tend to be frequently critical may display their negative qualities and lead others to disapprove and shun them socially; conversely, praise comments may play the opposite role [16-18].

Currently, both Russian and foreign researchers have been actively studying students' perceptions of the educational process, including online or mixed format, as well as perceptions of the teacher. Thus, the studies present the results of students' positive attitudes towards online learning, the existence of a relationship between students' perception of online learning and academic performance [19], students' positive evaluation of teachers' efforts in online learning format [20]. A study of the relationship between personality traits and students' level of engagement in online learning revealed close links between extraversion, conscientiousness and agreeableness [21].

Research by Sivan, A., Chan, D. W. K. on students' perceptions of university teachers' personality traits revealed that students experience positive emotions towards teachers with such characteristics as friendliness/helpfulness, understanding and leadership, negative emotions towards discontent, exhortation and insecurity, and mixed emotions towards strict behavior and student behavior that demonstrates freedom and responsibility [22]. The study by Ortiz-López, N. et al. showed that teacher competencies, personality traits and physician competencies are qualities that influence the perception of global effectiveness of clinical teachers [23].

The works of Korochentseva A.V. et al. revealed that positive perception of the teacher by students often leads to increasing motivation of educational activity and perception of educational material. The authors state that the process of communication between teacher and students in the psychological information field of communicators provides an effective transfer of emotions and experiences, meanings and values [24]. Effective transfer of meaning is understood as a process of communication when partners perceive the transmitted meanings and values, an adequate understanding of the text, information, as well as emotional experiences of the partner arises. Researchers have established that an attractive teacher is not only a person who is friendly and sympathetic to students, but also a top-ranking specialist who is able to communicate meaning in the educational process effectively [25].

However, despite the fact that researchers point out the role of communicative and personal skills of the subject of perception in formation of perceptions and evaluation of situations and the teacher in the educational process, it is unlikely to find enough research data on the features of students' perceptions with different strategies of sense-transmission about the teacher in the educational process, which makes our study relevant.

Meaning-transfer refers to the process of transferring meaning through verbal and non-verbal means in situations of interaction and solving different kinds of tasks. There is no doubt that the educational process in HEIs is aimed not only at transferring and shaping professional competences, knowledge, skills and abilities, but also at students' acceptance of professional values and meanings.

The aim of the study is to investigate the characteristics of students with different strategies of meaning- transmission about the teacher in the educational process.

Hypothesis of the study. We hypothesize that there are differences in the perceptions of students with different strategies of meaning-transmission about the teacher in the educational process.

2   Materials and methods

In the course of study, methods of literature analysis, psychodiagnostic method and the method of mathematical data processing were used. The following tools were used for the study: questionnaire "Strategies of meaning transfer" by E.A. Suroedova, questionnaire survey of students, in order to identify students' perceptions of the teacher in the educational process. The questionnaire "Strategies of meaning-transmission" allows determining the level of verbal and non-verbal activity of the interviewee in the process of meaning-transmission and 5 strategies of meaning-transmission: passive, emotionally dominant, balanced, cognitively dominant, active. The questionnaire aimed at identifying the perceptions of the teacher in the educational process consists of 15 questions, which allow to establish what non-verbal and verbal characteristics of the teacher in the students' perceptions influence on the learning information and meaning-making.

Statistical processing of the results was carried out using the following methods: descriptive statistics, quantitative and qualitative analysis of the results, the method of comparative analysis. The calculation was made using Excel 2016 software.

Characteristics of the subjects studied: in total, 156 students of the first-third courses of t technical and humanitarian courses, aged from 18 to 21 years, took part in the study. Of these, 46 of the subjects were male, 110 of the subjects were females. The average age of the subjects was 19.1 years.

3   Results and discussion

The survey results of students' meaning-transmission strategies revealed that the majority of the sample studied was dominated by a balanced strategy (37.2%) and less frequently by an active meaning-transmission strategy (14.1%). The data are presented in Figure 1.
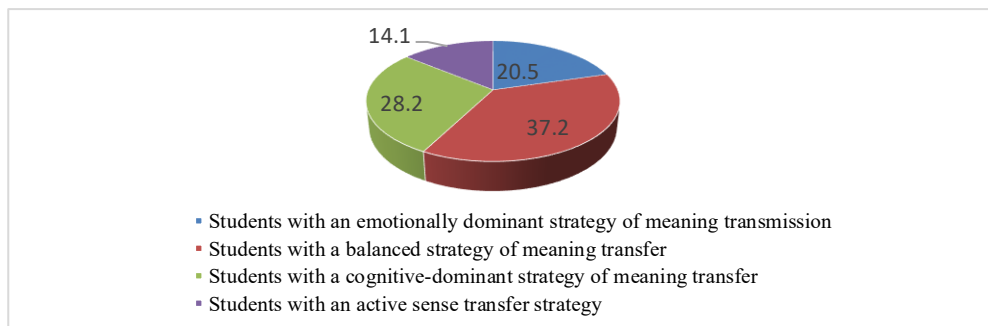

Fig. 1. Results of a study on students' meaning-transmission strategies.

The study of meaning-transmission strategies allowed us to divide the sample into 4 groups: Group 1 - students with emotionally dominant CC, Group 2 - students with balanced CC, Group 3 - students with cognitive dominant CC, Group 4 - students with active CC.

In the course of interviewing students with different strategies of meaning-transmission about the educational process and characteristics of teachers as subjects of meaning-translation in educational-professional activity, we revealed some peculiarities in perceptions.

Considering question 1 "If it were possible, I would prefer: a) watch webinars, online broadcasts, b) attend lectures and practical classes, c) study from textbooks and books allowed to establish differences between groups in preference of learning format, we can

see that survey results demonstrated most students with active and emotionally dominant strategies of meaning transfer to prefer attending lectures and practical classes in person, while most of the interviewees with cognitive dominant strategy of meaning transfer gave preference to online learning. The results are presented in Figure 2 and Table 1.
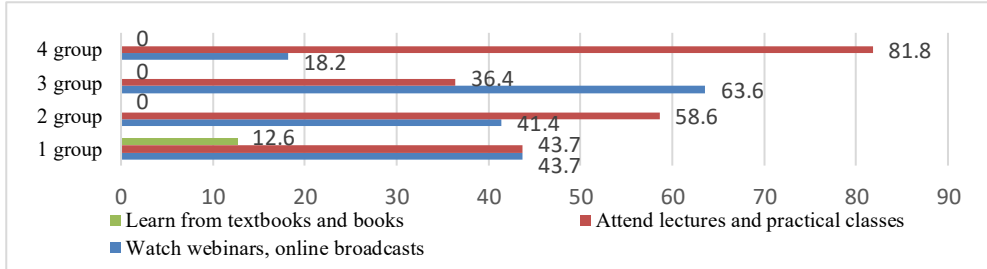

Fig. 2. Preference of students with different strategies of meaning transfer of learning format.

Table 1. Exploring differences in groups of students preferring different learning formats.

Group	Watch webinars, online broadcasts		Attend lectures and practical classes	
	φ	p	φ	p
1 - 3 group	1,722	0,04		
1 - 4 group	2,04	0,03	2,939	0,01
2 - 3 group	2,241	0,02	2,246	0,02
2 - 4 group	2,065	0,02	2,061	0,03
3 - 4 group	3,696	0,01	3,696	0,00

It was revealed that many students prefer learning through online technologies, which is consistent with the data of Russian researchers [26]. It was found that the majority of students with active and emotionally dominant transfer strategies preferred to attend lectures, while the majority of respondents with cognitive-dominant transfer strategies preferred online learning.

The study of students' perceptions of the feasibility of meaning-transferring and communicating professional values revealed some differences between groups of students with different strategies of meaning-transferring. The results are presented in Figure 3 and Table 2.
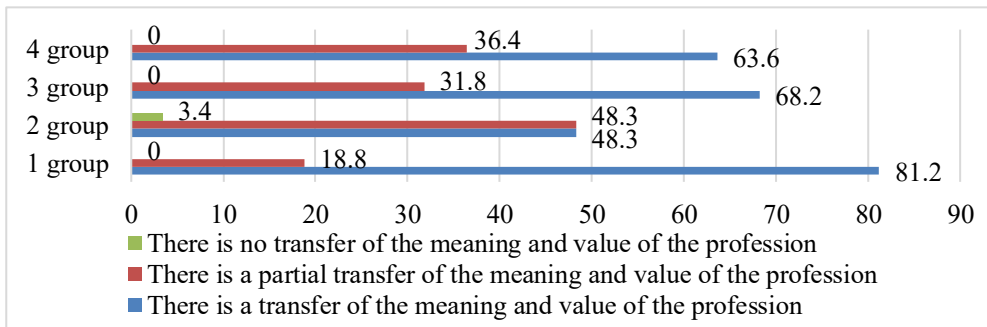

Fig. 3. Students' perceptions of the meaning transmission and translation of professional values in the educational process.

Table 2. Differences in students' perceptions of the transfer and translation of professional values in the educational process.

Group	There is a transfer of the meaning and value of the profession		There is a partial transfer of the meaning and value of the profession	
	φ	p	φ	p
1-2 group	2,906	0,01	3,22	0,00
1 - 3 group	4,502	0,00	4,515	0,00
1 - 4 group	3,427	0,00	3,437	0,00
2 - 3 group	2,031	0,03	1,696	0,05

The results of mathematical statistics revealed that the majority of students with the emotional-dominant strategy are of the opinion that there is a transfer of meanings in the educational process. The same differences in the proportion of those who believe that there is a translation of meanings and professional values between the groups of students with a balanced and cognitive-dominant strategy were also established.

When studying facility of content uptake and acceptance of professional meaning depending on the emotionality of the teacher certain specific features were discovered. The results are presented in Figure 4 and Table 3.
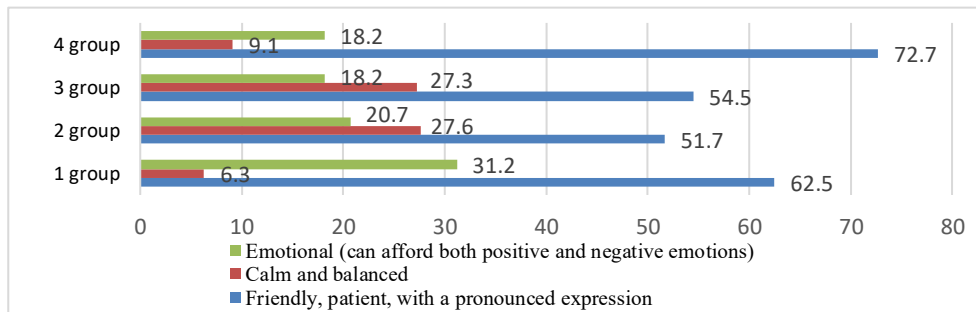

Fig. 4. Students' perceptions of the influence of teacher emotionality on information assimilation and acceptance of professional meaning.

Table 3. Differences in students' perceptions of the impact of teacher emotionality on information assimilation and acceptance of professional meaning.

Group	Calm and balanced	
	φ	p
1-2 group	2,72	0,001
1 - 3 group	2,5651	0,005
2 - 4 group	1,969	0,03
3 - 4 group	1,961	0,04

It was revealed that in all groups most students note that in order to assimilate learning information and accept professional meanings, a teacher should be friendly, patient and demonstrate clear expression. It was also found that the group with balanced and cognitive-dominant strategies includes more students preferring to interact with balanced and calm teachers.

The results of the study on teacher's gestures activity demonstrated some features in students' preferences. The results are presented in Figure 5 and Table 4.
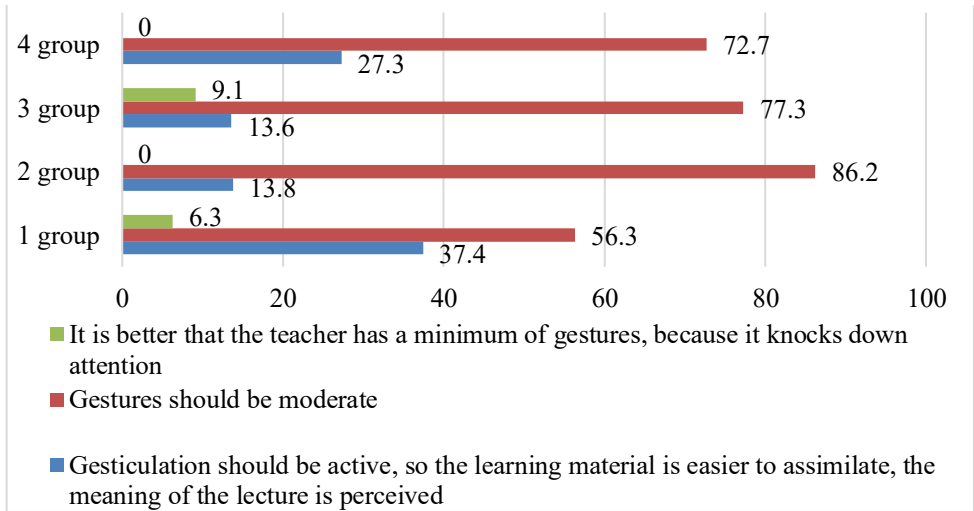
Fig. 5. Students' perceptions of the teacher's gestures affecting the ease of learning and comprehension of the lecture.

Table 4. Differences in students' perceptions of the impact of the teacher's gestures on facility of learning and perception of the meaning of the lecture.

Group	Gesticulation should be active, so the learning material is easier to assimilate, the meaning of the lecture is perceived		Gestures should be moderate	
	φ	p	φ	p
1-2 group	2,529	0,005	3,477	0,000
1 - 3 group	2,423	0,005	2,648	0,001

It was found that much more students from emotionally dominant strategy group preferred the active gesturing of the teacher during lectures than in the other groups within the sample.

The study of the peculiarities of students' perceptions of the relationship between facial expressions, i.e. expressive movements of facial muscles as one of the forms of manifestation of certain human feelings, with their mastery of the learning material and understanding of meaning has revealed some peculiarities. The results are presented in Figure 6 and Table 5.
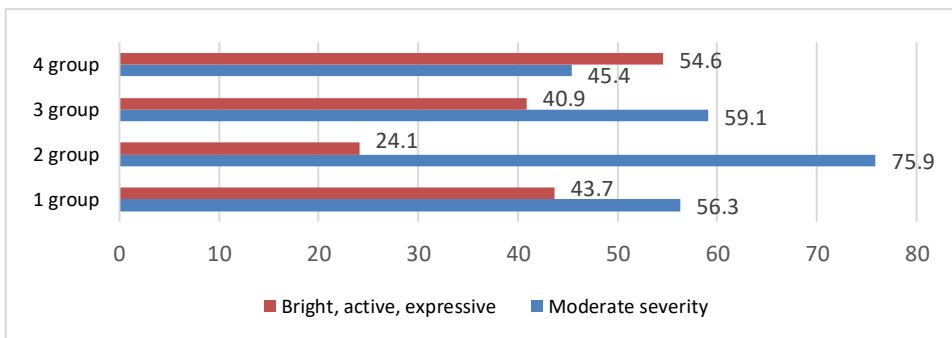

Fig. 6. Students' perceptions of the expressiveness of the teacher's facial expressions, influencing the ease of learning and the perception of the meaning of the lecture.

Table 5. Differences in students' perceptions of the impact of facial expressiveness on the ease of absorption and comprehension of a lecture.

Group	Moderate severity		Bright, active, expressive	
	φ	p	φ	p
1-2 group	1,792	0,05	1,801	0,04
2 - 4 group	2,436	0,01	2,44	0,01
2 - 3 group	1,688	0,05	3,509	0,005
3 - 4 group	2,63	0,005		

The differences in students' perceptions of the influence of instructor's facial expressiveness on the learning of meaning in the educational process were revealed at statistically significant level. The share of students with active semantic conveying strategy compared to the share of students with balanced and cognitive-dominant semantic conveying strategies prefer to listen to lecturers with expressive active facial expressions. A considerably higher proportion of students in groups 2 and 3 believe that the facial expression of a lecturer in class should be moderate.

The study of students' perceptions whether the external data of the lecturer influences the perception of educational information and the assimilation of the meaning of the subject also revealed some peculiarities. The results are presented in Figure 7 and Table 6.
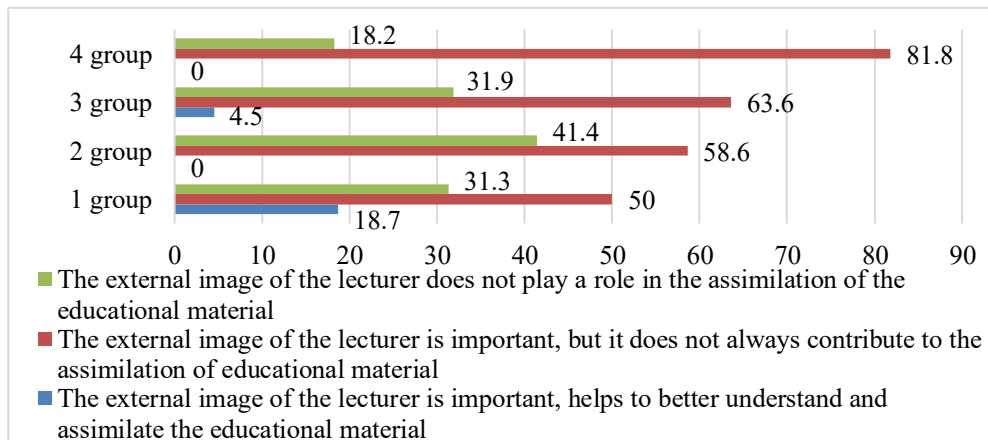
Fig. 7. Students' perceptions of the influence of the teacher's appearance on perception of learning information and comprehension of the meaning of the subject.

Table 6. Differences in students' perceptions of the influence of the teacher's appearance on perception of learning information and comprehension of the meaning of the subject.

Group	The external image of the lecturer is important, helping to better understand and assimilate the educational material		The external image of the lecturer does not play a role in the assimilation of the educational material	
	φ	p	φ	p
1-4 groups	2,488	0,01		
2 - 4 group	2,061	0,03		
3 - 4 group	1,809	0,04		
1 - 2 group			1,871	0,03
2 - 4 group			2,065	0,03

Groups 1 (emotional-dominant strategy), 2 (balanced strategy), 3 (cognitive-dominant

strategy) had significantly more students who believed that external data positively influenced learning and understanding of the material than Group 4 (active strategy of meaning-transmission) did.

The study of the relationship between student's perception of the meaning of the discipline and the teacher's observed distance in the interaction process established some specific features in students' preferences with different strategies of meaning-transfer. The results are presented in Figure 8 and Table 7.
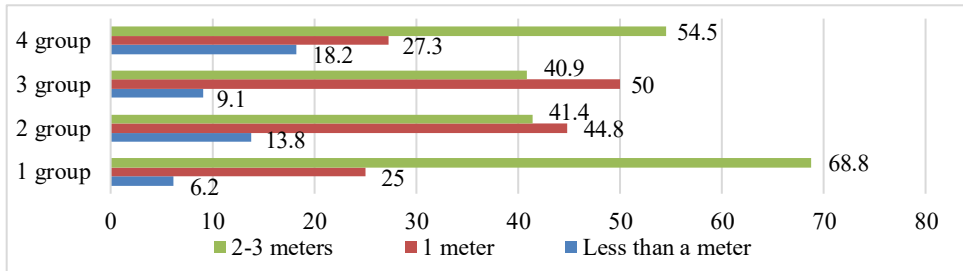

Fig. 8. Students' perceptions of the relationship between the perception of the meaning of the discipline and the distance observed by the teacher during the interaction.

Table 7. Differences in students' perceptions of the relationship between perceptions of the meaning of the discipline and the teacher's observed distance in the interaction.

Group	1 meter		2-3 meters	
	φ	p	φ	p
1-2 group	1,907	0,03	2,534	0,005
1 - 3 group	2,255	0,02	2,445	0,01
3 - 4 group	1,804	0,04		

It was found that the majority of students in groups 2 (balanced strategy) and 3 (cognitive-dominant strategy), unlike students in other groups, believe that the distance should be 1 metre. The majority of students in Group 1 (emotional- dominant strategy) prefer to study with the teacher at a distance of 3-4 metres.

The study of students' perceptions of the influence of extra-linguistic characteristics of the teacher's voice on the acceptance of the meaning of the lecture, seminar showed some peculiarities. The results are presented in Figure 9 and Table 8.
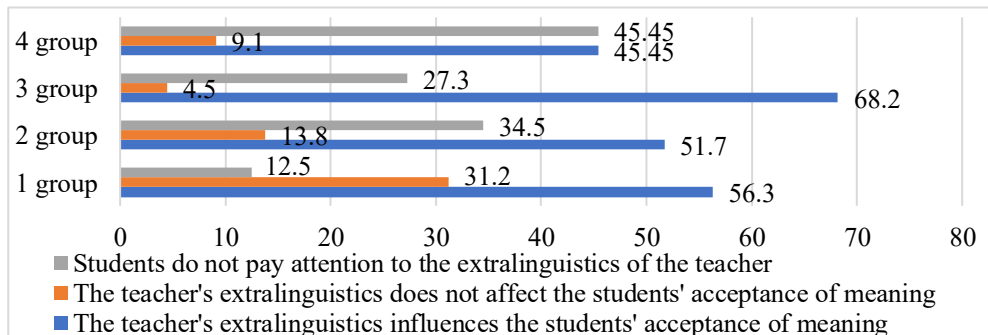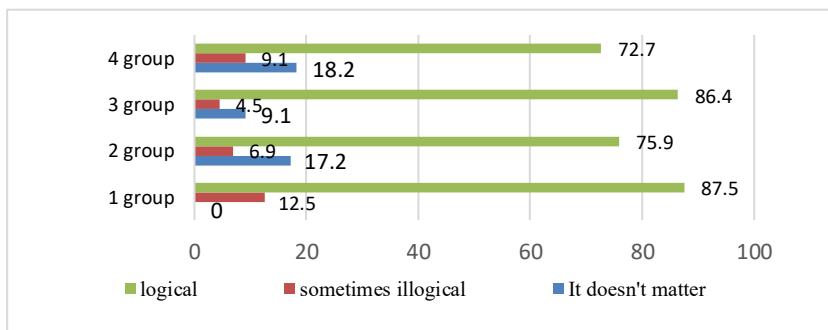

Fig. 9. Students' perceptions of the relationship between the extra-linguistic characteristics of the teacher's voice and their perception of the meaning of the discipline.

Table 8. Differences in students' perceptions of the relationship between the extra-linguistic characteristics of the teacher's voice and their perception of the meaning of the discipline.

Group	The teacher's extralinguistics does not affect the students' acceptance of meaning		Students do not pay attention to the extralinguistics of the teacher	
	φ	p	φ	p
1-2 group	1,935	0,03	2,42	0,01
1 - 3 group	3,586	0		
1 - 4 group	2,073	0,03	2,737	0,005
2 - 3 group	1,666	0,05		

The majority of the students in the sample note that they enjoy hearing the instructor's emotional voice and when the instructor controls the voice (can speak quieter, louder, speed of speech changes, pitch and timbre). However, in the group of students with an emotionally dominant strategy than in other groups of students, there is a significantly higher proportion of those who believe that excessive emotionality interferes with the perception of the meaning of the lecture. The number of students with an active strategy of meaning transmission is higher than that of students with a cognitive-dominant strategy who think that the emotional coloring of the voice has a negative impact on the perception of learning information. The proportion of students in the balanced and active strategy groups who do not pay attention to extra-linguistic characteristics of the voice is significantly higher than in the emotionally dominant strategy group.

A study of students' perceptions of teachers' verbal characteristics also allowed us to establish some features. Thus, it was revealed that the majority of students believe that for better understanding of the meaning of the subject the teacher's speech should be logical, coherent and consistent, understandable for the student. There were no significant differences in the students' perceptions of logical and coherent speech in different groups. Visual results of the study are presented in Figures 10, 11, 12.

Fig. 10. Students' perceptions of the relationship between the logicality of the teacher's speech and their grasp of the meaning of the learning material.
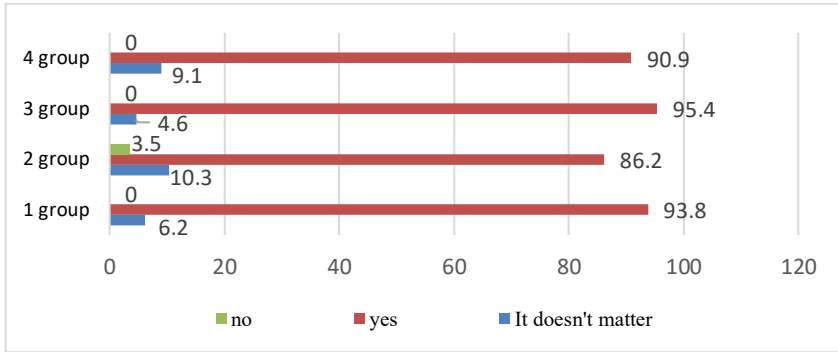
Fig. 11. Students' perceptions of the relationship between coherence and consistency of the teacher's speech to the comprehension of the meaning of the learning material.
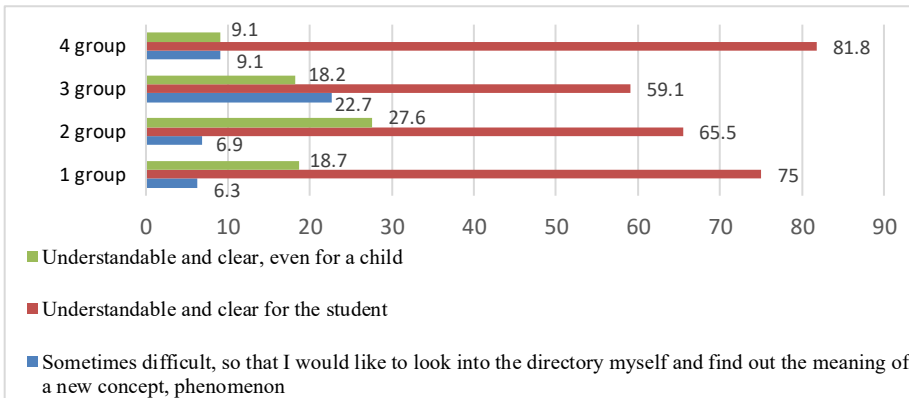

Fig. 12. Students' perceptions of the relationship between the comprehensibility of the teacher's speech and their assimilation of the meaning of the learning material.

The study of students' perceptions of the influence of speech culture on the acceptance of the meaning of educational and professional material revealed some peculiarity. The results of the study are presented in Figure 13 and Table 9.
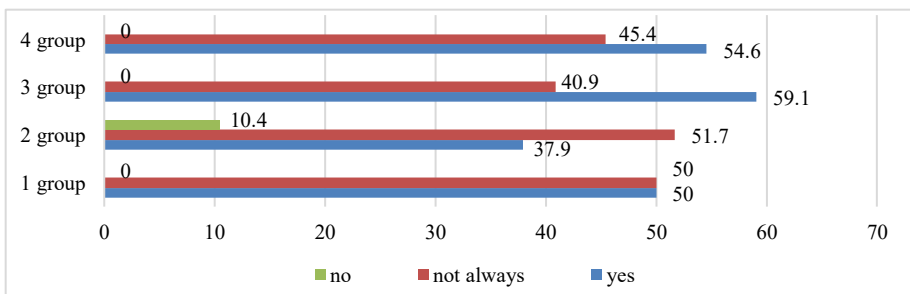

Fig. 13. Students' perceptions of the relationship between the teacher's speech culture and their assimilation of the meaning of the learning material.

Table 9. Differences in students' perceptions of the relationship between the teacher's speech culture and their assimilation of meaning.

Group	Yes, speech culture has an impact on learning	
	φ	p
2-3 group	2,141	0,02

It was found that there are significant differences in the proportion of students in groups 2 (balanced strategy) and 3 (cognitive-dominant). According to the perceptions of the majority of students with cognitive-dominant strategy of meaning-transmission the teacher's speech culture influences meaning-translation and its acceptance by students.

The study of the students' perceptions of the impact of the teacher's dialogue with the group during the classes on the students' assimilation of learning information revealed some differences. The results are presented in Figure 14 and Table 10.
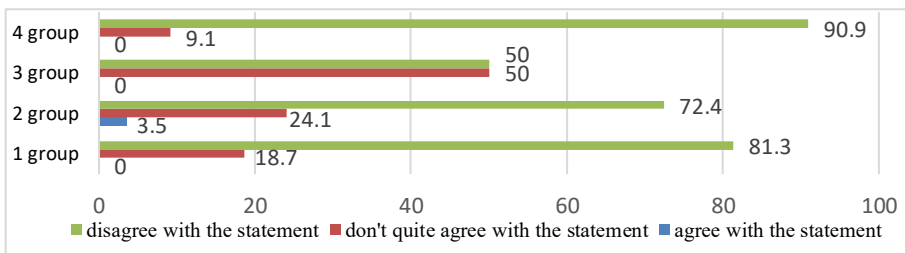

Fig. 14. Students' perceptions of the impact of the teacher's dialogue with the class on students' learning.

Table 10. Differences in students' perceptions of the impact of the teacher's dialogue with the class on students' learning.

Group	don't quite agree with the statement		disagree with the statement	
	φ	p	φ	p
1-3 group	2,901	0,000	2,91	0,000
2 - 3 group	2,726	0,000	2,321	0,000
3 - 4 group	3,699	0,000	3,699	0,000

It was found that the majority of the students in the sample believe that there can be a dialogue between the student and the teacher in the classroom and it contributes to a better assimilation of the data meaning. However, in group 3 (cognitive-dominant strategy) significantly more students (comparing to in other groups) think that the teacher should talk a lot in the lecture and dialogue with the group is not allowed.

The study of students' perceptions of the relationship between the meaningfulness of the teacher's speech, which should feel the attitude towards the subject, the significance of his/her professional activity, allowed to establish some specific features. The results of the study are presented in Figure 15 and Table 11.
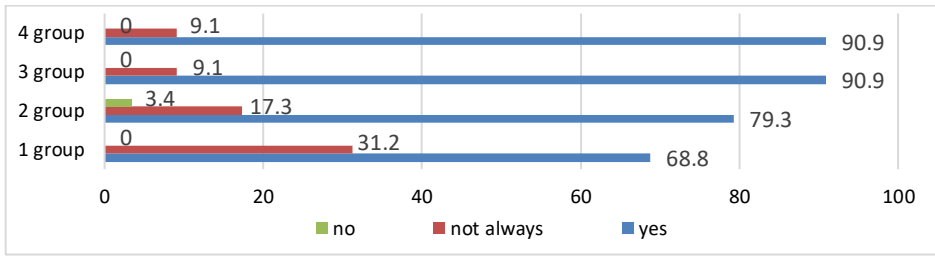
Fig. 15. Students' perceptions of the relationship between the meaningfulness of the teacher's speech, in which the attitude towards the subject should be felt.

Table 11. Differences in students' perceptions of the relationship between the meaningfulness of the teacher's speech, in which attitudes towards the subject should be felt.

Group	agree with the statement	
	φ	p
1-3 group	2,466	0,01
1 - 4 group	2,069	0,03
2 - 3 group	1,661	0,05

The results of mathematical statistics revealed differences in the proportion of students in the groups who believe that teacher's speech should be meaningful and have a sense of attitude towards professional activities, meaning- transferring from teacher to student. Thus, the number of students in the groups of students with cognitive-dominant and active semantic transfer strategies is significantly higher than in the groups of students with emotional-dominant and balanced semantic transfer strategies.

4 Conclusion

Thus, it can be concluded that there are differences in perceptions of non-verbal and behavioral features of teachers and the educational process among students with different strategies of meaning-transmission.

Thus, students with a high level of non-verbal activity have the following perceptions of non-verbal characteristics of the teacher: the teacher should be friendly, patient, with pronounced expression; he/she should actively gesture in the classroom; have emotional and expressive active facial expressions; maintain social distance; the teacher's voice should not be excessively emotional or loud.

Students with a cognitive-dominant strategy have the following perceptions of the teacher: the teacher should be balanced and calm; with moderate gestures and expression; keep a distance of 1 meter during class.

It was found that the majority of the students in the sample represent the teacher with a well-presented speech, logical and consistent presentation of the material. However, of students with cognitive-dominant strategy have perceptions that teachers should have certain speech culture and speak a lot during lectures, avoiding dialogue and debate with students.

These results are consistent with the view of Kocsor, F., Ferencz, T., Kisander, Z. *et al.* that processing information about people occurs by mapping elements of multiple representational spaces to one another: representations of appearance, behavioral characteristics, semantic knowledge and affective information, all of which can be further subdivided into overlapping layers of representations (12).

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