

# Communicative performance training in university health students

## Treinamento da *performance* comunicativa em universitários da área da saúde

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### ABSTRACT

**Introduction:** Knowledge expression is a challenge in the lives of students in higher education. **Purpose:** Evaluation of the efficacy of Speech-Language Pathology intervention in a Communicative Performance Training (TAPCo) program for university students.

**Methods:** Twenty six students of both genres and from four different health courses participated in this study. The research was carried out in six stages: audiovisual record of an oral presentation of the students before the training; training of communicative skills through the TAPCo program; audiovisual recording after training; tabulation of participants by the researchers of this paper; randomized and blinded qualitative evaluation by three Speech-Language Pathologists that did not participate of the research of the 26 students, and; self-assessment performed by the 26 participants. The TAPCo was composed of eight training sessions that involved the following aspects: dress code, body and facial expression, voice and speech. **Results:** There was significant difference, according to self-assessment, in all trained aspects. Regarding the qualitative classification of judges' evaluations, it was observed that good was predominant in all evaluated aspects. In the dress code aspect was observed that there was a greater presence of the indifferent indicator. The speech and the voice aspects presented the highest predominance of the excellent qualification. **Conclusion:** Both the evaluations of the judges and the self-assessments showed the efficiency of TAPCo in training university students. Although the self-assessment presented some divergences compared to the judges' evaluation, this procedure proved to be an excellent tool to monitor the evolution of TAPCo.

**Keywords:** Communication; Training; Speech; Voice

### RESUMO

**Introdução:** A expressão do conhecimento é um desafio na vida dos alunos no ensino superior. **Objetivo:** Avaliar a eficácia da intervenção fonoaudiológica por meio do programa Treinamento da *Performance* Comunicativa (TAPCo) para universitários. **Métodos:** Participaram desta pesquisa 26 universitários de ambos os gêneros e de quatro diferentes cursos da área da saúde. A pesquisa foi realizada em seis etapas, a saber: registro audiovisual de uma apresentação oral dos discentes antes do treinamento; treinamento das habilidades comunicativas por meio do programa TAPCo; registro audiovisual após o treinamento; tabulação dos dados obtidos pelos pesquisadores; avaliação randomizada e cega dos 26 discentes, por três fonoaudiólogas não participantes da pesquisa, de forma qualitativa; autoavaliação dos participantes. O TAPCo foi composto por oito sessões de treinamento, que envolveram os seguintes aspectos: vestuário, expressão corporal e facial, fala e voz. **Resultados:** Houve melhora, com diferença estatisticamente significativa, em todos os aspectos treinados, de acordo com a autoavaliação. Quanto à avaliação qualitativa das juízas, observou-se que a classificação predominante foi boa, em todos os aspectos avaliados. No aspecto *vestuário*, houve maior presença do indicador indiferente. O aspecto *fala e voz* apresentou a maior predominância da qualificação excelente. **Conclusão:** Tanto as avaliações das juízas, quanto as autoavaliações, mostraram a eficiência do TAPCo para o treinamento de estudantes universitários. Embora a autoavaliação tenha apresentado algumas divergências em relação à avaliação das juízas, esse procedimento se mostrou uma excelente ferramenta de acompanhamento da evolução do TAPCo.

**Palavras-chave:** Comunicação; Capacitação; Fala; Voz

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**Conflict of interests:** No

**Author's contribution:** LCC acted as the main researcher and the supervisor of the research project; AMLG participated in data analysis and tabulation; JMAS participated in data collection and analysis; MAS participated in data collection and analysis; EMS participated in the analysis and discussion of the results.

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**Received:** 4/28/2017; **Accepted:** 11/22/2017

## INTRODUCTION

It is common for teachers in higher education to use the didactic strategy of presenting seminars as an evaluation method, and to share research and information among students<sup>(1,2)</sup>. Thus, it is habitual public presentations during the academic life. Knowing how to communicate and express the knowledge requires more than the mastery of the content, then achieving success in seminars or lectures is a challenge in the lives of the students.

The expressiveness of a speaker at the moment of the speech is a fundamental part in contextualizing the information to be socialized, because at that moment the individual's thought becomes alive, through language and body expression<sup>(3)</sup>. In this sense, several factors are essential for good communication, because this complex process, which is exteriorized by speech, but not reduced to it, requires the acquisition and improvement of certain inherent abilities in the oral communicative competence<sup>(4)</sup>.

The way in which the content of the message is transmitted encompasses several aspects, such as speech<sup>(5,6)</sup>, body<sup>(5)</sup>, voice<sup>(5,6)</sup>, gestures, look, body posture, facial expression<sup>(4,7)</sup> and even the dress code<sup>(8)</sup>.

However, it is noteworthy the difficulty to join all these communication aspects in an improvement training. Thus, in an attempt to minimize the subjectivity and assist the evaluators, it was proposed an evaluation focused on some points to be considered, such as voice, body language and accuracy, the Public Speaking Rubric<sup>(1)</sup>. Since the objective of this work was focused on the evaluation situations of presentations of works in higher education, aspects such as presentation of the scope, evidences of the research and skills of argumentative defense were included. Other studies that involved the evaluation or training of aspects related to communicative improvement showed the same tendency of variation of the means of evaluation, from the research demand<sup>(9,10,11,12)</sup>. The self-assessment tool, especially to general expressiveness, was also used as a resource to verify the effectiveness of Speech-Language Pathology (SLP) training<sup>(13)</sup>.

Despite the above listed obstacles, the SLP work with speech and voice standards improvement has been the focus of some studies in the area. In a quantitative study of this intervention, which analyzed a group of 14 meteorologists, its effectiveness was proven. There was an improvement in the communicative performance of the professionals, with a statistically significant difference in the pre and post intervention comparison<sup>(9)</sup>. Other qualitative study, which had students as participants, showed that, after the -SLP intervention, subjects were more confident in talking and improved the socialization of the message<sup>(12)</sup>. When studying the effect of -SLP training on TV journalists, there was a significant improvement after intervention, from the viewers' point of view<sup>(10)</sup>.

Regarding higher education, the main focus of this study, most of the university students feel disoriented at the

moment of an oral presentation, a situation often triggered by stress, fear and unpreparedness<sup>(14)</sup>. Thus, studies that seek to better understand such process and quantitatively verify the intervention in this public are necessary.

The purpose of this study was to evaluate the efficacy of SLP intervention through the Communicative Performance Training program (called TAPCo) for university students.

## METHODS

This is a prospective longitudinal study, approved by the Research Ethics Committee of *Faculdade de Ciências da Saúde da Universidade de Brasília*, under no. 686,976 and CAAE protocol no. 21132314.6.0000.0030.

Participants were selected among the 35 university students enrolled in the discipline of Communicative Performance Improvement (called APC). All of them agreed with the accomplishment of the research and with the dissemination of the results by signing the Free and Informed Consent Form (Resolution no. 466/2012 and its complementary ones), which detailed the objectives of the study and ensured the confidentiality of personal data.

Exactly 26 students, aged between 20 and 25, participated in this study, linked to different courses in the health area of a public university.

Inclusion criteria were that the university students were enrolled in the APC discipline and had 90% attendance at given classes and, as exclusion criteria, if they were enrolled in the SLP course, had already taken a graduation course, some course or training in oratory or professional voice and if they presented, at the time of the research, any SLP complaints.

The research was carried out in six stages, namely:

1. Audiovisual record (digital video camera, Sony®, Handycam® model DCR-SR45) of the participants of an oral presentation on a scientific theme of their interest, lasting up to three minutes;
2. Training in Communicative Performance, conducted by a SLP teacher with experience in the area. The training was done in eight weekly meetings of 100 minutes each, with six meetings being for practical activities (Chart 1);
3. Audiovisual record (digital video camera, Sony®, Handycam® model DCR-SR45) of the participants of the same oral presentation on a scientific theme of their interest, lasting up to three minutes;
4. Selection of the participants by the researchers, meeting the inclusion and exclusion criteria. It should be emphasized that the participants were selected after the activities were done, due to the possibility of bias in the knowledge of the objectives;
5. Randomized and blind evaluation of the 26 pre-training videos and 26 post-training videos by three SLP professionals. The evaluation by the judges ad hoc was performed individually and separately, at previously agreed date and

time, with the videos being exposed at random, not distinguishing whether they had been recorded before or after the participation in the training. The judges received guidelines for assigning grades from zero (totally disagree) to 5 (totally agree) to the participants' performance, regarding the aspects and items that should be evaluated: body expression (posture, walk, gestural diversity, gestures/speech relation, gestural amplitude), facial expression (eye contact, look/disfluencies ratio, expressiveness), speech, voice (articulation, speech rate, pauses, melody, voice intensity, emphasis) and dress code.

6. Self-assessment of the participating students, during the exhibition of the videos in the discipline, comparing the pre and post-training videos, using the same sheet made available to the judges.

The total score was calculated by the sum of the scores by item and/or aspect and could range from zero to 90, where zero indicated the non-variation of the evaluated aspect or item and 90 the use, during the presentation, of all the tools and concepts worked in the training.

To answer the question if there were differences between pre and post-training aspects and intra course ones, a descriptive and statistical analysis (means, medians, standard deviations, minimum and maximum values) of the parameters was performed: course, mean and total scores, by aspect and item.

Student's t-test for paired data with a significance level of 95% was used to compare each aspect and item and, to

quantitatively compare the evolution in each aspect and/or trained item, the post and pre-training grades were subtracted.

The numerical data were analyzed in terms of quality of the training, based on the judges' evaluation (Figure 1). For this, three ranges of variation were established, considering the values defined by the mean, the variation of the standard deviation and the minimum and maximum values obtained in these evaluations. The minimum and maximum scores were considered as the MINIMUM and MAXIMUM variation limits, respectively. The range of the scores defined by the sum and subtraction of the mean with the standard deviation was considered GOOD and the values obtained above and below this range were considered, respectively, EXCELLENT and MODERATE. The pre and post-training variation with values equal to zero received the INDIFFERENT indication.

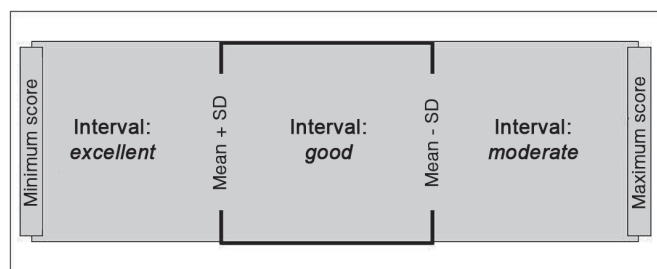
## RESULTS

The sample of this study was composed by 26 university students, 23 (88.5%) of the female gender and 3 (11.5%) of the male gender, aged from 20 to 25 years, enrolled in health undergraduate courses of a federal public university, 12 from the Nursing course (46.2%), 7 from Pharmacy (26.9%), 4 from Physiotherapy (15.4%) and 3 from Occupational Therapy (11.5%).

There was a positive evolution of all the parameters worked in the training. The means, medians and standard deviations

**Chart 1.** Practical activities developed during the course/training

Meeting	Focus	Activities/training
1	Upright posture	Shoulder rotation back and maintenance of the posture in small monologues. Discussion about the theme. Free theme oral presentation, focusing on the maintenance of the posture.
2 and 3	Facial and body expression; maintenance of the posture	Make eye contact with interlocutors, eyebrow movements, smile use; possible use of walking during presentations, versus movement of the legs; gestural dimension; gestural diversity (types and variety of gestures); correlation between gestures and expressed verbal content. Discussion about the theme. Free theme oral presentation, focusing on the maintenance of the posture, facial expression and body expression.
4 and 5	Articulation, speech rate, pauses, melody and emphasis; maintenance of the posture; facial and body expressiveness	Overarticulation exercises; reduction of articulation rate, by articulatory time marking and appropriate use of pauses; increase of melodic variation, through exercises using previously demarcated phrases and "words of value". Discussion on the use of the emphasis and its value, with use in simulated situation of oral presentation. Free theme oral presentation, focusing on the maintenance of posture, facial expression, body expression, articulation, speech rate, pauses and melody.
6	Dress code	Discussion of scientific articles on the theme; structure different visuals for different communication situations, with emphasis on formal and academic communication.
7	Integration	Train a short presentation in small groups; make the same presentation to the larger group trying to integrate the content of the training.
8	Self-assessment	Compare the videos made before and after the training, making a critical analysis of the observed difference.



**Figure 1.** Graphic presentation of the quality assessment of the pre-training and post-training scores, obtained from the evaluation of the Speech-Language Pathologists/judges

of the aspects and items obtained in the 52 self-assessments (26 pre-training and 26 post-training) are presented in Table 1.

When comparing the self-assessments by course, there was a statistically significant difference in all aspects and items in the students of the Nursing course. The Pharmacy course only showed no significant difference in the *dress code* aspect. In the Occupational Therapy course, there was a significant difference in all aspects, except for the itens *expressiveness* of the *facial expression* aspect and *articulation* of the *speech and voice* aspect. In the Physiotherapy course, there was a significant difference in all items and aspects of *body expression*. However, in the *facial expression* and *speech and voice* aspects, there was no difference in the *look/disfluencies ratio*, *speech rate* and *melody* items, respectively (Table 2).

The judges' evaluation showed that there were evolution in the worked aspects and items (Tables 3 and 4).

In the qualitative evaluation, performed by the judges, it was observed that all aspects received the GOOD indicator. In the *dress code* aspect, there was no MODERATE qualification and, when compared to the other aspects, there was a greater presence of the INDIFFERENT indicator. The *speech and voice* aspect did not presented the INDIFFERENT indicator and it was the aspect in which there was predominance of the EXCELLENT qualification.

## DISCUSSION

Admission to the university brings numerous challenges, which require a new repertoire of adaptation and efficiency strategies and the student should be prepared. Some of these students have difficulties adapting to this environment, defining the need for universities to prepare their students for new demands, avoiding stressful experiences that hinder academic performance<sup>(15)</sup>. Thus, a structured training, with the objective of providing practical strategies on the aspects of the development of communicative performance, is an important tool for the academic life and the professional future of these students.

In the TAPCo, it was sought the development of a production in which all the aspects and their respective elements chosen to compose the work appeared in a synergistic and coherent

**Table1.** Self-assessed aspects and items in pre-training and post-training, by all participants

Aspects and items	Pre-training (n=26)			Post-training (n=26)			p-value
	M	Med	SD	M	Med	SD	
Dress code	4.2	5.0	1.2	4.9	5.0	0.4	0.002*
Body Expression	2.2	2.0	0.9	3.9	4.0	0.6	0.000*
Posture	2.4	3.0	1.2	4.3	4.0	0.5	0.000*
Walk	2.0	2.0	1.1	4.0	4.0	1.0	0.000*
Gestural Diversity	1.9	2.0	1.1	3.5	3.0	0.8	0.000*
Gestures/speech ratio	2.3	2.0	1.3	3.8	4.0	0.8	0.000*
Gestural amplitude	2.4	2.0	1.3	4.0	4.0	0.9	0.000*
Facial expression	2.4	2.7	0.9	3.9	4.0	0.6	0.000*
Eye Contact	2.6	3.0	1.1	4.6	5.0	0.5	0.000*
Look/disfluencies ratio	2.1	2.0	1.2	3.4	4.0	1.3	0.000*
Expressiveness	2.6	3.0	1.1	3.7	4.0	0.9	0.000*
Speech and Voice	2.8	2.8	0.9	4.1	4.2	0.5	0.000*
Articulation	2.9	3.0	0.9	3.9	4.0	0.6	0.000*
Speech rate (tempo)	2.7	3.0	1.2	4.3	4.0	0.6	0.000*
Pauses	2.4	2.0	1.3	4.1	4.0	0.6	0.000*
Melody	2.8	3.0	1.1	3.8	4.0	1.0	0.000*
Intensity	3.3	4.0	1.1	4.0	4.0	0.7	0.000*
Emphasis	2.4	2.0	1.1	4.4	5.0	0.8	0.000*

\* Significant values (p<0.05) – Student's t-test

Subtitle: M = mean; Med = median; SD = standard deviation

**Table 2.** Self-assessed aspects and items in pre-training and post-training, by course

Aspects	Items	Measures	Nursing (n=12)			Occupational T. (n=3)			Physiotherapy (n=4)			Pharmacy (n=7)		
			Pre	Post	p-value	Pre	Post	p-value	Pre	Post	p-value	Pre	Post	p-value
Dress code		M	4.3	4.8		5.0	5.0		3.8	4.8		4.1	5.0	
		Med	4.5	5.0	0.023	5.0	5.0	0.000*	4.5	5.0	0.126	5.0	5.0	0.086
		SD	1.0	0.4		0.0	0.0		1.9	0.5		1.5	0.0	
Body Expression	Posture	M	2.1	4.2		3.7	4.7		2.5	4.5		2.3	4.3	
		Med	2.5	4	0.023	4	5	0.000*	4.5	0.008*	2	4	0.003*	
		SD	1.1	0.6		0.6	0.6		1.3	0.6		1.6	0.5	
	Walk	M	1.9	3.8		1.3	4		2.3	4.3		2.1	4.1	
		Med	2	4	0.001*	1	4	0.047*	2	4.5	0.008*	2	4	0.008*
		SD	1	1.3		1.5	0		1.5	1		1.2	0.7	
	Gestural Diversity	M	1.8	3.3		1.7	4.3		2.8	3.8		1.7	3.4	
		Med	2	3	0.000	2	4	0.028*	2.5	3.5	0.045*	2	4	0.018*
		SD	1	0.6		0.6	0.6		1.7	1		1.3	1.1	
	Gestures/ speech ratio	M	2.3	3.8		1.7	4.3		3	4		2.3	3.7	
		Med	2	4	0.000	2	4	0.007*	3	4	0.045*	2	4	0.029*
		SD	1.1	0.6		0.6	0.6		1.6	0.8		1.8	1.1	
Gestural amplitude	M	2.4	4.1		2.3	4.3		3.8	4.5		2	3.7		
	Med	2	4	0.000	3	4	0.037*	3.5	4.5	0.028*	2	4	0.008*	
	SD	1.2	0.8		1.2	0.6		1	0.6		1.5	1.1		
Facial expression	Eye contact	M	2.9	4.8		2.3	4.3		2.8	4.5		2.3	4.7	
		Med	3	5	0.000	3	4	0.037*	2.5	4.5	0.034*	2	5	0.001*
		SD	1	0.5		1.2	0.6		1	0.6		1.5	0.5	
	Look/ disfluencies ratio	M	2.3	3.6		2	2.3		2.8	2.8		1.6	4	
		Med	2	4	0.014	2	3	0.333	3	3	0.500	2	4	0.001*
		SD	1.2	1.4		0	1.2		1.5	1.5		1.3	1.2	
Expressiveness	M	2.8	3.9		2.7	3.3		2.8	3.8		2	3.7		
	Med	3	4	0.007	3	3	0.091	3	3.5	0.045*	2	4	0.003*	
	SD	1	0.8		1.5	1.5		0.5	1		1.4	0.8		
Speech and voice	Articulation	M	3	4.3		2.7	3.7		3.5	4.5		2.6	4.4	
		Med	3	4	0.003*	3	4	0.112	3.5	4.5	0.045*	3	4	0.000*
		SD	1	0.6		0.6	0.6		1.3	0.6		0.8	0.5	
	Speech rate	M	2.7	4.3		2.3	3.7		3	4.3		2.6	4	
		Med	3	4	0.000*	2	4	0.028*	3	4.5	0.070	3	4	0.012*
		SD	1.2	0.5		0.6	0.6		1.8	1		1.4	0.6	
	Pauses	M	2.5	3.9		1.7	3.3		3	4		2.4	3.7	
		Med	2.5	4	0.000*	2	3	0.018*	3	4	0.045*	3	4	0.005*
		SD	1.3	1.4		0.6	0.6		1.8	1.2		1.3	0.5	
	Melody	M	3	4.3		1.7	3.7		3.3	4.3		2.6	3.7	
		Med	3	4	0.000*	2	3	0.037*	3	4.5	0.091	2	4	0.033*
		SD	1	0.5		0.6	1.2		1.3	1		1.3	0.8	
Intensity	M	3.4	4.6		2.7	4.3		3.5	4.5		3.3	4.3		
	Med	4	5	0.001*	2	4	0.018*	3.5	4.5	0.046*	4	5	0.031*	
	SD	1	0.5		1.2	0.6		1.3	0.6		1.4	1.5		
Emphasis	M	2.8	3.9		1.7	4.7		2.5	3.8		2.1	3.7		
	Med	3	4	0.001*	2	5	0.000*	2.5	3.5	0.039*	2	4	0.000*	
	SD	1.1	0.8		0.6	0.6		1.3	1.0		1.3	1.6		

\* Significant values (p<0.05) – Student’s t-test

**Subtitle:** M = mean; Med = median; SD = standard deviation

way with the message. Because of it, the formal aspects of the communication were worked in a practical and isolated way, as shown in Chart 1, focusing on the oral presentations in the conference mode.

The elaboration of TAPCo started from the understanding that human communication includes the non verbal and verbal resources of the language and, therefore, it houses extralinguistic, paralinguistic and linguistic elements<sup>(16)</sup>.

**Table 3.** Aspects and items assessed by Speech-Language Pathologists/judges in pre-training and post-training, by participant

Aspects and items	Pre-training (n=26)			Post-training (n=26)		
	M	Med	SD	M	Med	SD
Dress code	3.44	4.00	1.27	3.42	4.00	1.26
Posture	3.19	3.00	1.16	3.21	3.00	1.18
Walk	2.40	2.00	1.19	2.42	3.00	1.20
Gestural Diversity	2.35	2.00	1.27	2.38	2.00	1.28
Gestures/speech ratio	2.71	3.00	1.36	2.74	3.00	1.38
Gestural amplitude	2.66	3.00	1.40	2.69	3.00	1.42
Eye Contact	2.91	3.00	1.24	2.94	3.00	1.24
Look/disfluencies ratio	2.35	2.00	1.53	2.33	2.00	1.54
Expressiveness	2.38	2.00	1.19	2.40	2.00	1.19
Articulation	2.82	3.00	1.11	2.86	3.00	1.13
Speech rate (tempo)	2.56	3.00	1.25	2.61	3.00	1.24
Pauses	2.20	2.00	1.24	2.25	2.00	1.26
Melody	2.28	2.00	1.26	2.32	2.00	1.27
Intensity	2.92	3.00	1.32	2.96	3.00	1.33
Emphasis	1.89	1.00	1.30	1.92	2.00	1.32
Final grade	3.07	3.00	0.93	3.09	3.00	0.95

**Subtitle:** M = mean; Med = median; SD = standard deviation

**Table 4.** Total scores of the aspects assessed by Speech-Language Pathologists/judges in pre-training and post-training, by participant

Aspects	Pre-training (n=26)			Post-training (n=26)		
	M	Med	SD	M	Med	SD
Dress code	3.33	3.00	1.3	3.56	4.00	1.22
Body expression	2.22	2.00	0.98	3.16	3.00	1.02
Facial expression	2.48	2.00	0.72	2.62	3.00	0.79
Speech and voice	2.04	2.00	0.96	2.89	3.00	1.01
Final grade	2.83	3.00	0.87	3.35	4.00	0.94

**Subtitle:** M = mean; Med = median; SD = standard deviation

Then, the extralinguistic *dress code* element was the theme of the sixth meeting (Chart 1). This element is understood as a communicative attitude which expresses the intention of the speaker and which, although does not directly transmit a message, is an aspect that favors the speech reliability, as indicated in studies<sup>(17)</sup>.

To the paralinguistic elements *body expression* and *facial expression*, three meetings were dedicated (1 to 3, in Chart 1). The training of body expression and facial expression assists in the performance of the communicative skills, since it allows the conveyance of emotions, posture and gestures that bring behavioral information about the speaker. Authors supported the need of the work on such aspects together with linguistic aspects, for the balance of the communication<sup>(17)</sup>.

In turn, the linguistic elements *speech* and *voice* were worked in two meetings (4 and 5, from Chart 1). The aspects of speech sounds and suprasegmentals production, referring to

prosody, are related to the aspect *speech* and *voice*. The work of prosodic aspects, such as pause, speech rate and emphasis is fundamental for, among other communicative aspects, the expression of attitudes<sup>(18)</sup> as well as of information selection and contrast of facts and affections<sup>(19)</sup>.

It is noteworthy that, in addition to the TAPCo structure, the reduced number of participants allowed everyone to have the opportunity to freely experiment the techniques. Thus, the structure, combined with the number of participants, resulted in a positive evolution of the communicative performance of the subjects of this study. Authors recommended that the training of communicative skills be exclusively practical and, for this, the group should be small, around 15 people<sup>(17)</sup>, which allows the experience of the different aspects involved.

In the studied sample, the majority (88.5%) of the participants were female. Studies have pointed out that health professions tend to the predominance of the female

gender<sup>(20,21,22)</sup>. Therefore, the greatest number of participants in this genre was expected.

The results referring to the self-assessment, considering the pre-TAPCo and post-TAPCo comparison, showed the positive evolution for all the worked parameters. There were exceptions for few elements, considering the analysis by course, such as *dress code* (Pharmacy), *expressivity* (Occupational Therapy), *look/disfluencies ratio* (Physiotherapy), *articulation* (Occupational Therapy), *speech rate* (Physiotherapy) and *melody* (Physiotherapy). Specifically in relation to the *body expression* aspect, improvement in the results after TAPCo was observed in all participants, with a statistically significant difference.

Other studies suggested that self-evaluation favors self-perception of the presented evolution, both in communicative abilities<sup>(3)</sup> and in specific aspects, such as melodic curve, emphasis, use of pauses, loudness and resonance<sup>(13)</sup>.

Regarding the judges' evaluation, a classification was proposed with four qualifiers for the evolution of the participants, in an attempt to observe the gradient of the result, albeit with subjective terms. Thus, it was observed that the intermediate qualifier, which indicated GOOD evolution, was predominant in all aspects. To some extent, this result is consistent with the result of the participants' self-assessment, insofar as the latter also indicated a positive evolution.

Most of the studies on communicative competence are carried out with professionals who already have some contact with public presentations, such as presenters<sup>(9)</sup> and television journalists<sup>(10,13)</sup>, or with students who are in training to perform radio and TV presentations<sup>(12)</sup>, which already predisposes them to the use of these tools in a continuous way. Thus, when they enter higher education, they are exposed to presentations of seminars and other forms of exposition in the classroom<sup>(1,2)</sup>, which brings insecurity, since most of these university students do not have a proportional level of critical and intertextual understanding, resulting in difficulties, both oral and written<sup>(19)</sup>.

Participation in the process and the evaluator's experience are factors that make intuitive and subjective the evaluation of the studied aspects<sup>(23)</sup>. The trained examiner values and quantifies aspects that the process participant does not know or appreciate.

The self-assessment has several positive implications for the individual, because it makes easy the self-regulation, provides a sense of self-continuity, accelerates the processing of relevant information, is a key to goal setting, influences social perception, determines the partner choice, as well as the behavior in personal relationships, and contributes to the projection of a consistent and desirable self-image for others. This process may happen by comparison, engagement, consensus or experience<sup>(24)</sup>. Studies<sup>(25)</sup> indicated that academic self-assessment is positively associated with student performance.

Likewise, the INDIFFERENT classifier (when the pre-TAPCo and post-TAPCo ratio was zero) was present in a

larger amount in *dress code*, which was one of the aspects observed as not statistically significant among the students of the Pharmacy course. So these results complement each other. Following this line of reasoning, but as a counterpoint, the result of judges' evaluation in which there was a greater predominance of the EXCELLENT qualifier was the *speech and voice* aspect, which disagrees with the Physiotherapy and Occupational Therapy students' self-assessment for the *articulation*, *speech rate* and *melody* elements, which are contained in the same aspect.

Studies showed that there is a difference between the perception of the training participants and the facilitators of this process, which may have several hypothetical causes, including excess or reduced confidence and absence of knowledge. Training time may also be a secondary cause for the levels of knowledge. In addition, unqualified and unconscious phenomena may play a role in the imprecise self-assessment<sup>(26)</sup>.

Although in the studied context the self-assessment presented some divergences regarding the evaluation of the judges, this procedure proved to be an excellent tool for monitoring the evolution of the TAPCo. It is known that, in SLP practice, it is not always possible to count on different specialists to evaluate the training process of a group, as well as its results. Therefore, it is suggested the appreciation of the self-assessment, since it proved to be quite effective.

## CONCLUSION

The TAPCo is effective for the development of the communicative abilities of university students. Both self-assessment and judges' assessment suggest that the participation in training promotes change in all the aspects.

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