

COMPARISON OF VIRTUAL AND PRESENT SPEECH VOICE THERAPIST SERVICE IN TELEVISION JOURNALISM PROFESSIONAL

Comparação dos atendimentos fonoaudiológicos virtual e presencial em profissionais do telejornalismo

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ABSTRACT

Purpose: to compare the effect of telepractice and present speech and voice therapist service in television news reporters speech. **Methods:** eight reporters received virtual speech therapy and eight reporters received speech therapy face-to-face. For analysis were used copies of two journalistic materials, from different periods (pre and post intervention). The reports were recorded in pairs, randomly about the date of viewing/recording and the group, totaling sixteen pairs of reportage. The material, pre and post intervention, was rated by judges speech voice therapist, blinded as to the state of reportage. Two specific protocols were used. A performance evaluation on task and naturalness of the professionals and one for auditory and visual analysis of the vocal and interpretive parameters. **Results:** there was improvement in communicative performance in both groups in the comparison between the pre-and post-intervention material. According to the judges, 61.53% of both groups, reporters began to involve more the viewer with the news on post-intervention and 69.23% material began to talk better with the viewer and to convey the news of more natural. There was improvement in the performance score of hearing and visual analysis protocol, most of the parameters of the virtual group (posture, gestures, expressions, vocal quality, pauses and emphasis) showed improvement in the post-intervention time compared with the face-to-face group which showed improvement in only one parameter (pitch). **Conclusion:** the study shows that both face-to-face and telepractice services promote improvement in communicative and vocal performance of telejournalism professionals, confirming the viability and the result of the virtual mode to monitor speech.

KEYWORDS: Voice; Journalism; Speech Language and Hearing Sciences; Telemedicine

■ INTRODUCTION

Speech Language Pathology is established as the Science studying the communication disorders, and in the last decades, has been consolidating its role in voice professional communication improvement. The broadcast journalism professionals have particular interest by the challenge of understanding and adjusting the communication development in a new broadcast reality, using language that today is more dynamic, practical and interactive. As technologic innovations highly

influence the production routine and the broadcast journalism itself, as the speech pathology demand are turned¹. The new technologies allow the generation and multiplication of contents simultaneously and these professionals need to be prepared to produce distinguished contents and to deal with the technologic news, which means, to rethink their way of work the broadcast journalism².

The traditional ways of communication have been modified and the virtual speech language attendance seems to be an interesting modality, particularly to the broadcast journalism professionals. In this profession there are times in which the professional has to dislocate or to be transferred to basis in other regions, working in distant

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broadcaster places. The virtual attendance allows to expand and to keep the speech language follow up to those professionals that many times are in distant from the TV central.

The *Conselho Federal de Fonoaudiologia – CFFa* (Federal Speech Language Council) have regulated virtual attendance as well as tele-health in speech language in Brazil on Resolution number 427 from 2013, March 1st³, based on the Resolution number 366 from 2009, April 25th that rules about the use of tele-health systems in speech language pathology⁴. According to CFFa, speech language tele-health is the profession exercise using technologies of information and communication which is possible to provide the services of tele-counselling in health, a second formation opinion, tele-attendance, tele-diagnose, tele-monitoring, and tele-education, aiming the improvement of quality, fairness, and efficiency of services and professional education provided by these technologies³.

According to ASHA (American Speech-Language-Hearing Association) that have been monitoring the use of services provided at distance by speech language pathologists since 1998 and keeping actual information on their website, the virtual attendance (tele-practice) is the technology of telecommunications application to provide the service at distance, connecting the clinician and the client to assessment, intervention and/or counselling. ASHA also provides in its documents guidance about distinct models of virtual attendance, potential risks and limitations, as well as the benefits and the intervention efficacy (results measures, client satisfaction)⁵.

Therefore, this new modality in speech language attendance, the virtual counselling, associated to the new view of journalism communication, and based on practice experience of the broadcast journalists' attendance that this research was developed. The purpose of the present study was to compare the effect of virtual and face-to-face speech language attendance to broadcast journalism reporters.

■ METHODS

This research was analyzed and approved by the Ethics Committee of Universidade da Cidade – UNICID under protocol number 254.006/13. It is a retrospective study using the speech language files of the reporters followed in a broadcaster of open television. 54 professionals were followed up by the speech language pathologist. All the

hired professionals that appear on TV (reporters and presenters) undergo to speech language assessment and follow up. The subjects were chosen by their files from the broadcaster that offers face-to-face attendance to 40 professionals in São Paulo state and virtual attendance to 14 professionals in squares or international correspondents. All professionals of virtual attendance, the last modality to be held in the broadcaster, were invited to the research, but only eight accepted to join the study. To balance the research were randomly selected eight professionals files and the inclusion criteria were: both gender professionals, with more than six months of professional experience on TV, with at least four months working on the broadcaster, to have at least three months of speech language follow up in the broadcaster, not to be previously followed by other speech language pathologist, to be constant in the meetings. 16 reporters joined the study: eight (four men and four women) in face-to-face group that received all their attendances directly and eight (four men and four women) in virtual group that received their first attendance face-to-face and the others through internet (placed on squares) or all the attendances exclusively by internet (international correspondents). The virtual group was composed by five square professionals, three women and two men, and three international correspondents, two men and one woman, aging from 26 to 42 years and professional experience on TV varying from one to 16 years. The face-to-face group (FG) was composed by four women and four men, aging from 29 to 51 and professional experience on TV varying from six months to 27 years.

Information regarding the speech language intervention was extracted from the files that are part of the routine of the speech language role on the broadcaster. All the reporters and presenters appear on the journalism shows of the house, independent of speech language follow up. The professionals had 10 months of follow up approximately in which the first months of attendance was the intensive follow up with sessions every week. This first phase have from three to six months of duration depending on the individual professional needs. Once this initial phase of follow up finished all the professionals remained in maintenance follow up with meetings every fifteen days and/or once a month. The average amount of sessions (intensive and maintenance) was 25 sessions by professional, as minimum 12 sessions in three months of follow up (Figure 1).

Type of counselling	Subjects	Age	Gender	Professional TV experience	Speech Therapy Follow up	
				Years	Months	Numbers of sessions
Virtual	VG 1	35	M	8	12	24
	VG 2	34	F	7	12	24
	VG 3	26	F	1	6	12
	VG 4	36	F	9	12	24
	VG 5	35	M	12	6	18
	VG 6	34	M	12	7	14
	VG 7	36	F	3	8	16
	VG 8	34	M	11	12	24
Face to face	FG 1	38	M	12	12	30
	FG 2	32	F	1	6	24
	FG 3	51	M	27	12	32
	FG 4	33	F	7	12	32
	FG 5	37	M	9	12	30
	FG 6	40	F	15	12	33
	FG 7	29	M	5	12	34
	FG 8	42	F	17	12	33

Legend: VG = Virtual Group; FG = Face-to-face group; F = Female; M = Male

Figure 1 – Groups profile according to counselling modality

Speech Language intervention occurred in systematic way to both groups as follow: the group 1 (Face-to-face Group – FG) always had the direct and individual meetings of 30 minutes each; to group 2 (Virtual Group – VG) the meetings were through video conferencing, with 30 minutes of duration. The software used to virtual attendance was Skype. As well as face to face attendance, the virtual ones allowed both the guidance regarding communication performance as the practice of exercises. The same that all the professionals followed in the broadcaster, the 16 professionals, in the first moment underwent to speech language assessment with spectrographic analysis, perceptual analysis of voice quality parameters (pitch, loudness, resonance, articulation, pneumo-phono-articulatory coordination) and hearing and visual perceptual analysis of communication performance (rhythm, speech rate, pauses and prolongations, modulations, gestures, and expressions). After first evaluation, the meetings of intervention started with vocal health guidance (harmful habits and improper vocal behaviors). Parameters as pitch, loudness, resonance, articulation, and breathing were approached in the follow up according to the need of each professional. The professionals were guided about speech psychodynamic and journalism authenticity, especially regarding speech rate, rhythm, pauses and prolongations, modulations, facial expressions, gestures,

and postures within the journalism communication. As support to guidance were used videos of news produced by the professionals. For the first meetings the personal file archives were used. To the others the news produced during the period of follow up were used, as were developed practical dynamics of journalism simulation and recording pilots of off materials and passage, bulletins recording simulations, and live entrance simulations. Part of the speech language role offered to the broadcaster professionals the practice of exercises to specific development of reporters according to the initial assessment and the individual need. It was prepared exercises series to specific development of reporters according to their first assessment and individual need. Exercises to adequate rhythm and speech rate, to improve articulation, resonance, to control pitch and loudness, to increase voice resistance and glottis closure besides exercises do warm up and cool down were used when necessary (Appendix 1).

All the selected subjects from the files signed the informant consent which contained the telephone and address of the responsible researcher. Two reports copies were used, with moment of off having the professional voice covered by images, and passages, moments of reports in which the professional appears while speaking. The reports were extracted from the broadcaster archives in different

periods and, the distance between the pre and post material of each professional varied according to the follow up duration of each one. For the material 1, it was chosen a report produced in the broadcaster in a previous data to the speech language follow up (pre intervention) and for the material 2 a report after the follow up was selected (post intervention). The reports were recorded in pairs on a DVD, randomly regarding the exhibition/recording date, in a total of 16 reports pairs. This strategy has forbidden the judges to identify the order of the material (pre and post intervention) and also to know which group the professional belonged. To the pre and post intervention analysis were used only recorded and broadcasted materials. Three speech language pathologists were judges, voice specialists that worked in other broadcasters, watched the reports, without any identification. The judges received a document with instructions, the edited material in DVD, and two protocols. The first one was to perceptual assessment of voice parameters (voice quality, pitch, speech rate, pauses, and emphasis) and visual perceptual analysis of communication and expressivity (posture, gestures, expressions, and articulation) (Appendix 2). The second protocol was used to assess the performance on the task and the reality degree of the professionals' pre and post intervention (Appendix 3). It was performed the statistical analysis of the obtained data and the compared variables pre and post intervention in each group and between groups.

To statistical analysis was used the Wilcoxon and Mann-Whitney tests, the confidence interval to mean and p-value. The adopted significance level for this research was 0.05 (5%).

■ RESULTS

The results were obtained through the pre and post recordings of the 16 reporters.

According to the judges' evaluation, the results showed that the performance improvement was equivalent to both groups. Most professionals from virtual group in both subgroups (squares and international correspondents), and the face-to-face group showed improvement in communicative performance after the speech language attendance regardless the number of sessions that each person received. In performance protocol of the task and the reality degree (appendix 3), of the sixteen professionals (VG and FG), eleven had better communicative performance in the post intervention video, six were from the virtual group and five from the face to face group. Two professionals of face to face group and one of virtual group had equal development pre and post intervention. One of each group

had a communicative performance better in the pre intervention. According to the judges 61.53% of the reporters of the face to face group and 61.53% of the virtual group started to involve the listener to the news more post intervention. 69.23% of the face to face group and 69.23% of the virtual group started to talk better to the listener and to transmit more naturally the news (Figure 2).

Based in the protocol analysis of the performance on the task and the reality degree, approximately 80% of the professionals in the face to face group started to convince better the listener and to involve more to the news against 57% and 43% from the professionals of virtual group. Around 70% of the virtual group professionals started to transmit the news in more natural way against 66% from the face to face group professionals, according to the judges (Figure 2)

Regarding the protocol visual and hearing analysis data (Appendix 2) the virtual group had difference between the evaluated moments in six parameters (posture, gestures, expressions, voice quality, pauses and emphasis) against the face to face group that showed significant difference in only one parameter (pitch). From the six parameters with significant difference in virtual group, the ones with higher score post intervention were gestures, pauses and expressions. The only parameters that did not show differences to both groups were speech rate in hearing analysis and articulation in visual analysis (Table 1).

■ DISCUSSION

One of the challenges to the presenters and reporter of newscasts nowadays is to gather information in a simple and pleasant way to the viewer, grouping objective texts, close to colloquial narration with body movements' harmonic to the voice resources⁶.

The preferred voice characteristics⁷ to broadcast journalism are passing through a transformation period. This transformation starts in the need to connect and to hold public attention that have available for them an interactive world, dynamic and mutant¹. The diffusion of digital technologies and the consequent convergence of communication, computer, and telecommunication fields are transforming the journalism activity. After more than 50 years of big achievements, the old model of broadcasting presents evident signs of detrition, becoming repetitive, less creative, and facing the growing competition of new technologies. The broadcast news narration evolved from the concern with intelligibility revealed by the exaggeration on

	Virtual group		Face-to-face group		Group total	
	Nº profes- sionals	%	Nº profes- sionals	%	Nº profes- sionals	%
The News was clearer.	3	42.85%	2	33.33%	5	38.46%
The reporter transmits the News naturally.	5	71.42%	4	66.66%	9	69.23%
The reporter improved talking to the viewer.	4	57.14%	5	83.33%	9	69.23%
The reporter transmits higher confidence talking.	3	42.85%	3	50.00%	6	46.15%
The reporter convinces by telling the News.	1	14.28%	1	16.66%	2	15.38%
You feel more involved with the News.	3	42.85%	5	83.00%	8	61.53%

Figure 2 – Groups comparison according to the performance and degree of reality of the professional on the post-intervention video.

Table 1 – Comparison of the parameters values divided by moment and group according to the three judges.

Parameter	Pre							Post						
	Face to face			Virtual			p- value	Face to face			Virtual			p- value
	N	mean	SD	N	mean	SD		N	mean	SD	N	mean	SD	
Speech rate	8	61	14	8	56.5	28.58	0.168	8	72.5	18.61	8	67.63	20.2	0.176
articulation	8	60.88	16	8	63.63	18.41	0.237	8	63.25	27.21	8	70.25	15.54	0.141
posture	8	57.63	16	8	54.75	20.53	0.249	8	63.88	24.78	8	65.5	18.88	0.069
gesture	8	56	19	8	48.5	19.72	0.116	8	65.13	18.52	8	64.38	15.35	0.046
expression	8	55.5	18	8	53.5	27.23	0.173	8	64.5	27.84	8	68.13	17.1	0.05
Voice quality	8	61.63	19	8	64.88	29.35	0.225	8	69.88	21.19	8	72.38	25.03	0.041
pauses	8	59.75	14	8	53	26.26	0.401	8	67.13	22.04	8	67.13	23.01	0.046
emphasis	8	56.63	15	8	51	25.14	0.398	8	64.63	21.65	8	63.63	23.02	0.068
Pitch	8	63.63	12	8	60.88	27.12	0.027	8	75.63	7.23	8	69.38	23.31	0.144

Wilcoxon and Mann-Whitney tests, significance level of 0.05 (5%)

articulation in reading news texts to the concern to interactivity and engagement to news authorship⁵.

Independent of the need of attendance for each professional and the specific job that the professionals received according to the initial assessment, the work with classic exercises of articulation, speech rate, pitch, and vocal loudness, the speech language work in the broadcaster kept as purpose to build a more realistic journal narration, authorship, using a more natural speech, close to colloquial and that approach the viewer to the reporters. The exercises, as well as the observation and self-evaluation using the produced material and the practical dynamics of journalistic situation simulation and pilots' recordings were important to the communicative performance improvement of the professionals of both groups.

Regarding the attendance modalities, similar data were found in recent researches in Brazil, with the research about the use of tele-health in AASI⁸ programing and adapting, and in the foreign countries there are speech languages research using virtual attendance to Parkinson's patients⁹, with dysphagia^{10,11}, and with aphasia¹². These data helped to validate the CFFa³ resolution that forecast

the service of tele-health to perform procedures that ensures the same efficacy, effectiveness and equivalence of the face to face attendance and teaching. This research allows concluding that virtual speech language attendance is viable, safe and efficient.

About the hearing and visual perceptual analysis, the virtual group was the one showing more differences between the scores pre and post intervention in interpretative parameters (posture, gestures, expressions, pauses, and emphasis) with better performance post intervention. This result showed that guidance related to voice and body gestures⁵ may have been incorporated by virtual group even without the presence of the therapist (Table 1).

The professionals that had equal values between the videos or higher value in the pre intervention score are, coincidentally, in face to face group which did not present difference in voice quality parameters, speech rate, pauses, and emphasis of hearing analysis and in the posture, gestures, expressions, and articulation parameters in visual analysis (Table 1). This result could maybe to represent a therapeutic limitation, or even to be related to adherence of the professional to the follow up, but it also alerts

to the need to understand the old model transformation of journalist narration, focused on the intelligibility, revealed by over articulation⁶ associated to the speech rate, in a simpler model, practical and natural of connection and talk to the viewer. The challenge, therefore, is in harmonic explore the visual and hearing communication channels, since the message needs to be transmitted naturally, precisely, with cohesion and clearness in a really short time^{6,7}. Considering the viewer as an agent in communication process creates a new way of thinking the relationship between producers and consumers, between audience and journalists, besides it generates esthetic and language changes, promoting different ways to tell the daily news¹³. One of the challenges for the presenters and reporters of broadcast is to gather information in a simple and pleasant way to the viewer, using objective texts, close to colloquial narration with harmonic body movements to voice resources⁶. Now the viewer watch television while navigates on internet and access the social networks using tablets and smart-phones, opining about the information watched¹⁴. This plurality requires new ways of journalism production with more plural and creative contents in the attempt to conquer the viewer's complicity¹⁵.

The results shows that most of the professionals started to transmit the news more naturally^{1,6,7} (Figure 2), as consequence the reporters involve more the viewer to the news and present a more natural, dynamic, authentic and author narration.

This research showed that the speech language attendance to broadcast journalism professionals presents significant results and, particularly, equivalent results in face to face and virtual modalities. Therefore, it is suggested that tele-health also may be used in the communication development of voice professionals.

The virtual attendance is already discussed in science and also explored by Speech Language Pathology^{8,9,11,12,16}. Internet, digital world, and communication networks are already tele-health services and found in worldwide^{9-12,16,17} and Brazilian^{8,18-20} clinician practice. Since this is a new subject in Brazil there were not found many researches about tele-health in speech language pathology. Only two recent^{8,20} papers involve this attendance modality. Regarding recent researches

about speech language pathology and broadcast journalism, in the last five years were found only two paper from 2008, one a doctoral thesis studying voice and body gestures and another master dissertation in linguistics that studies the temporal organization in broadcast journalistic narration²¹.

Nowadays the connectivity and the virtual world became important tools of work and an alternative to improve the health care in developing countries. This is an attractive tool to lower density population regions or having limited access to health care services⁸. The subject is innovator and currently discussed in science community and available to the health professions.

It is necessary to develop researches that verify the interaction professional-patient and the satisfaction of the patient regarding tele-attendance³ that also debates the effectivity of this modality in other speech language specialties and may approach the tele-health in several therapeutic programs, using different treatment periods and with population samples. But it is necessary to attempt about the use of virtual environments as therapeutics also to speech rehabilitation. More than that, and for the importance of tele-health in speech language pathology, it is essential to stimulate the interest for researches that debates the tele-health regarding clinic requires and ethics aspects of clinician-patient relationship and/or among professionals and cases^{19,20}.

With the equivalent results between groups, this research presents virtual attendance (tele-health in speech language pathology) as a new a possible option to broadcast journalism professionals not only for the easiness to implant/manage or by its flexibility of schedule considering the varying routine of those professionals, but also to enable the follow up of those reporters and presenters that travels, are transferred, or remain placed in different squares.

■ CONCLUSION

This research showed as face-to-face as virtual counselling promotes the improvement in vocal and communication performance of broadcast journalism professionals affirming the viability and the virtual modality result in speech language practice.

RESUMO

Objetivo: comparar o efeito do atendimento fonoaudiológico virtual e presencial a repórteres de telejornal. **Métodos:** oito repórteres receberam acompanhamento fonoaudiológico virtualmente e oito receberam acompanhamento presencial. Para análise foram utilizadas cópias de duas reportagens, de períodos diferentes (pré e pós- intervenção). As reportagens foram gravadas aos pares, de maneira aleatória quanto à data da exibição/gravação e ao grupo, totalizando dezesseis pares de reportagem. Os materiais, pré e pós-intervenção, foram avaliados por juízes fonoaudiólogos especialistas em voz, cegos quanto ao momento da reportagem. Foram utilizados dois protocolos específicos. Um para avaliação do desempenho na tarefa e de naturalidade dos profissionais e outro para análise auditiva e visual dos parâmetros vocais e interpretativos. **Resultados:** houve melhora no desempenho comunicativo em ambos os grupos na comparação entre o material pré e pós-intervenção. De acordo com os juízes, 61,53% dos repórteres de ambos os grupos passaram a envolver mais o telespectador à notícia no material pós-intervenção e 69,23% passaram a conversar melhor com o telespectador e a transmitir a notícia de forma mais natural. Quanto ao escore do protocolo de análise auditiva e visual, a maioria dos parâmetros do grupo virtual (postura, gestos, expressões, qualidade vocal, pausas e ênfase) apresentou melhora no momento pós-intervenção na comparação com o grupo presencial que apresentou melhora em apenas um parâmetro (*pitch*). **Conclusão:** o estudo mostra que tanto o atendimento presencial quanto o virtual promovem a melhora no desempenho vocal e comunicativo dos profissionais de telejornalismo, confirmando a viabilidade e o resultado da modalidade virtual na prática fonoaudiológica.

DESCRITORES: Voz; Jornalismo; Fonoaudiologia; Telemedicina

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■ APPENDIX 1**Speech Therapy Exercises**

Part of the speech language counselling to the station professionals is to provide exercises series, from the list below, to the specific development of reporters according to the initial speech language assessment and the need of each professional. Thus, it was also prepared exercises series to the research participants according to each professional need.

Chosen exercises to practice rhythm, speech rate, and articulation:

To increase breath flow: to blow for a long time during exhale and natural inhale

Cork technique: to speak the months of the year and the days of the week with the cork between the teeth using the best possible quality.

Over articulation speech technique: months of the year and days of the week using a broad articulation during 1 minute.

Repetition of articulatory *trines technique*: PRA TRA CRA, PRE TRE CRE, PRI TRI CRI, PRO TRO CRO, PRU TRU CRU

Several tongue twisters

Chosen exercises to resonance training:

Humming technique: nasal sound /m/ emission exercise

Humming technique: nasal sound /m/ emission with vowels

Chewing humming technique: nasal sound /m/ emission exercise

Vocalizing with jaw opening, with broad voice tract

Chanted voice technique

Chosen exercises to voice resistance:

Vocal fry

Semi-occluded vocal tract exercises (SOVT)

High pitched sound using a straw

Sounded blowing with partial obstruction of orbicular using the hand.

Vibration sounds techniques: continuous tongue or lip trills using glissando

Voice and voiceless fricative sounds technique

To control pitch and loudness:

Vibration sounds techniques: continuous tongue or lip trills with glissando.

Voice and voiceless fricative sound technique starting soft, going to loud and then returning to soft.

Prolonged /b/ technique

To increase breath flow: to blow for a long time during exhale and natural inhale

Perceptual self-analysis of professionals.

Warming up exercises presented in attendance:

Amplified facial muscles movements technique – 1 minute exercise

Facial muscles massage technique (mouth orbicular muscle, buccinators muscle, chin muscle, frontal muscle, eye orbicular muscle): 1 minute exercise

Vibration sounds technique: continuous tongue or lip trills sounding effortless 10 times.

SOVT exercise: Sounded blowing with partial obstruction of orbicular using the hand. 10 times.

Chewing humming technique: nasal sound /m/ emission

Cooling down exercises presented in attendance:

Sounded yawn technique

Humming technique: nasal sound /m/ emission using decreasing sound.

Habitual speech in low intensity

Vocal rest

■ **APPENDIX 2**

Assessment Protocol I
Perceptual analysis, visual and hearing.

You will hear two pairs of news from 16 reporters and, according to your perception; you must fulfill the protocol signing the analogue visual scale of 100mm.

Professional name: _____

Visual Analysis

1	Proper posture to the function	Video 1	No	Yes
		Video 2	No	Yes
2	Proper gestures to the text	Video 1	No	Yes
		Video 2	No	Yes
3	Proper facial expression to the text	Video 1	No	Yes
		Video 2	No	Yes
4	Proper sounds of speech articulation to the function	Video 1	No	Yes
		Video 2	No	Yes

Hearing Analysis

1	Proper voice quality to the function.	Video 1	No	Yes
		Video 2	No	Yes
2	Proper pitch to the text.	Video 1	No	Yes
		Video 2	No	Yes
3	Proper speech rate to the text.	Video 1	No	Yes
		Video 2	No	Yes
4	Proper pauses to the text.	Video 1	No	Yes
		Video 2	No	Yes
5	Proper emphasis to the text.	Video 1	No	Yes
		Video 2	No	Yes

■ **APPENDIX 3**

Assessment Protocol II
Performance analysis and natural degree

Professional name: _____

Here, based on the watched videos, answer the following questions and, if necessary, use the notes to complete your evaluation.

The performances are:

- Equal
- Different

Whether different, which is better?

- Video 1
- Video 2

Sign one or more options that better define the improvement:

- The News was clearer.
- The reporter transmits the News naturally.
- The reporter improved talking to the viewer.
- The reporter transmits higher confidence talking.
- The reporter convinces by telling the News.
- You feel more involved with the News.

Notes: _____

