

# Teacher specialized in visual impairment: the meaning of the voice

## *Professor especializado na área da deficiência visual: os sentidos da voz*

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### ABSTRACT

The aim of this case report was to investigate the meaning attributed to the voice and its practice in the classroom by teachers specialized in the field of visual impairment. Participants were eight teachers, divided into three groups: four sighted teachers, two teachers with low vision, and two blind teachers. Each subject was interviewed individually, answering six semi-directed questions which were previously prepared, about the communication between the specialized teacher and visually impaired students in the classroom environment. After the interviews were transcribed and analyzed, the answers yielded three categories: the teacher's work, daily experiences, and necessary support. The educational approach is based on the principles of providing all possible details and information about the content, adapting supplies, providing guidance with regards to mobility, among others, using body and vocal resources. The importance of the voice for the development of a visually impaired person was explicit in the reports which consider it essential so that this individual can coexist in his social and educational context. It was observed the importance of classroom interaction, favored by body and vocal resources, both for teachers and students, in order to provide a clearer and more objective communication. The meaning attributed to the voice by the participants contributed to its recognition as the main mean of communication between teacher and students.

**Keywords:** Voice; Faculty; Visually impaired persons; Education, special; Public health

### INTRODUCTION

A wide variety of information can convey, through speech, the characteristics of the speaker, and are thus called social, physical and psychological markers. Hence, characteristics of the voice, speech, language and non-verbal behaviors develop according to the social environment and personality of each individual<sup>(1)</sup>.

The voice is a flexible communication tool, which may be used to evidence information regarding emotional state and attitudes, and also to attribute and infer opinions about people's behaviors<sup>(2)</sup>.

Speech markers, given to the speaker's personality, are defined by the listener, using his own concepts and personality attributions. The speaker is given the possibility to infer, from vocal quality, information that presents different functions which characterize a subject<sup>(2)</sup>.

Speech-Language Pathology has been concerned with issues of expressiveness, and, more recently, when using this term, has conducted studies with different populations, especially with the so-called voice professional.

In this perspective, the term expressiveness contemplates both oral and body aspects. Particularly, in the present study, the term oral expressiveness was adopted, according to the adopted theory references<sup>(3)</sup>. The term oral is used as to not suggest a dissociation between speech and voice, since this dissociation is not physiologically justified, and also to avoid attributing a greater emphasis to aspects of vocal dynamics or vocal quality. Thus, oral expressiveness is the process in which the speaker uses sound in its symbolic form, either consciously or not, using symbolisms acquired from a culture.

The listeners may infer about the speaker's biological,

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psychological and social aspects, from that which is revealed by their body and vocal gestures. Still according to this study<sup>(3)</sup>, expressiveness, through social group characteristics (oral, body and speech), to which the speaker belongs, will demonstrate his own subjectivity and singularity. Parallel to this study, these characteristics are important both for the work of the specialized teacher in the classroom, as well as for the students.

The teacher specialized in visual impairment needs to be Always alongside his students, who are blind or have subnormal sight, in order to favor sensory and perceptive experiences (hearing, smelling, tasting, touching and movement); to work with daily life activities; provide guidance concerning movement in the school environment; practice cursive writing, so that people with visual impairment are able to sign documents; teach Reading and writing in Braille, among others<sup>(4)</sup>.

Their work also includes promoting situations that will favor the students' personal and social adjustment, in the resource room and anther environments, using equipment and other specific software, recording texts on tape, Family guidance, among other activities<sup>(5)</sup>.

The visually impaired student needs to find a school environment that is adequate to his special educational needs, as well as teachers who are apt to understand them. These are essential conditions to promote bonding in the classroom, as the educational needs and development process are equivalent to those of sighted children.

Teacher-student communication is one of the main bonds in the construction of knowledge, and, in this specific context, the presence of the teacher, as a mediator, is crucial to help them read the situations in which they are placed.

School is a fundamental and important environment for the development of learning, as it demands specific social situations and mediation instruments, and, especially, the work of the teacher<sup>(5,6)</sup>.

In spite of the great vocal demand, many of these teachers, specialized in visual impairment, are not aware that the voice is one of their main work tools, possibly because they have not received specific training in this aspect, as haven't those teachers who work with any other student. As a consequence, they do not seek information in this field, since they don't see in their voices a possibility to improve their professional performance<sup>(7)</sup>.

In the literature, the voice of teachers has been the object of several studies, as seen in updated bibliography searches in Speech-Language Pathology publications in this theme area. In a bibliography review<sup>(7)</sup> of 15 years, in the period in between 1994 and 2008, there were 500 published references. However, there are few researches that aim to understand the issues of the voice of teachers who work with impaired students. An example of this type of investigation refers to faculty members who teach deaf/hearing impaired students<sup>(8)</sup>.

In the issue of social inclusion, the respect towards diversity is preconized, be it racial, religious, or people who present some kind of impairment, among others. The insertion of these individuals as participating members of a society, with the same rights and duties, becomes more emphasized by the day. This insertion is a responsibility of all sectors of society.

Therefore, this case study is interested in investigating the meaning attributed to voice and expressiveness, by teachers specialized in the field of visual impairment, and the use of body and vocal resources in their educational practices.

## CLINICAL CASES PRESENTATION

This is a qualitative, prospective, descriptive study, which was approved by the Research Ethics Committee at the Pontifícia Universidade Católica de São Paulo, under protocol number 130/2008. Six questions were presented to the participants in a direct initial contact through informal conversation. Participants were eight female teachers specialized in the field of visual impairment, with undergraduate and/or graduate degrees in Special Education, who work in Specialized Educational Support Services, in visual impairment resource rooms, in the São Paulo State Educational System. A formal invitation was sent when each teacher manifested interest in participating in the study, and a date was set for the meeting between researcher and teachers.

Initially, a free and informed consent term was handed out, and the aims of the study were explained. The teachers with subnormal sight and blind teachers, the free-consent terms were handed in larger font and in Braille, respectively.

Then, the inclusion criteria were defined: visual accuracy (sighted, blind, and subnormal sight), and time of experience in the classroom, as reported by the subjects. Thus, four of the eight selected teachers are sighted (SG), two are blind (BG) and two have subnormal sight (SSG); subjects had a mean age of 37 years (minimum 25 and maximum 42), and a degree in Education; they were all specialized in the education of the visually impaired, and worked in the São Paulo State public school system. Five of them had up to ten years of experience, and the other three had greater experience. All are identified in this study by the letter T (T1, T2, T3, T4, T5, T6, T7, T8) and categorized in groups: SG – T1, T3, T6, and T8; BG – T4 and T7; and SSG – T2 and T5.

Individual interviews were the option for data collection, each composed of six semi-directed questions previously designed using a script which regarded teacher-student communication in the classroom environment:

- 1) To what extent are body and vocal resources taken into account in your work?
- 2) What is the importance of these resources in performing your job?
- 3) Describe a typical work situation with your students and what you find in your everyday life.
- 4) How important is vocal use in transmitting knowledge?
- 5) How is the work with the students in the classroom?
- 6) What could be done as improvements?

All interviews occurred in the same day and place of easy access, common to all participants, and were recorded using a Sony® digital voice recorder/MP3, and lasted approximately 15 minutes, in average.

The transcribed interviews were subject to content analysis<sup>(9)</sup> which focuses on the analyses of the development of ideas, facts, insertion in their historical and social contexts, from the approach of discursive practices and production of meanings.

Meaning production, according to this perspective<sup>(9)</sup>, is a social dialogical practice that aims towards the comprehension of repertoires used in discursive productions and in the daily lives of individuals in interaction.

Discursive practices are ways from which people produce meanings and take positions in everyday social relationships.

After the analyses process of the collected interviews, which happened in successive readings of the material, the first step was to establish categories, according to aspects that were highlighted in the content of the answers that were defined in the following manner:

- The work of the teacher: the importance of using body and vocal resources in the classroom, present in their work.
- Everyday living: situations experienced by the teacher in his daily life; resources and difficulties in the classroom and what needs to be done to work in the best possible way.
- Necessary support: support from other professional, Family members, material and educational resources.

These categories were selected in order to explicit and organize the teachers' answers, and, mainly, to show each of their points of view. After defining the categories and organizing the material, idea association maps were made, which preserve the interaction process and enables the visualization of the interanimation process in front of the questions, keeping the dialogical context intact. These procedures took place during the process of organizing the content of the interviews.

According to the method described above<sup>(9)</sup>, the results of the three categories of analysis (Chart 1), literally transcribed, were:

- The work of the teacher: where the work in the classroom using body and vocal resources is described.
- Everyday life: in which the teacher's typical work situations and her performance in the classroom are briefly illustrated.
- Necessary support: a survey of necessary support systems (from other professional, Family members; material and educational resources) in order for the interviewed teachers to be able to work.

To exemplify the categories (Chart 1), some excerpts of the reports were selected, and this selection prioritized different subjects of different groups, as follows.

### **T1 (SG) – Sighted teacher, with 13 years of teaching experience**

#### ***To what extent are body and vocal resources taken into account in your work?***

*"[...] so if he can't touch the body... and if you can't use the body to express and use only your voice you don't convey much information and the blind child needs a lot of information, and also working with the body is very important... if you don't get physical... if you don't involve the child physically... in a game... while playing... You can't get through to this child... so I think the voice is very important for the teacher of the visually impaired... We communicate a lot... we talk a lot to the students but the body is also very important [...]"*

### **What is the importance of using the voice in transmitting knowledge?**

*"It is crucial... I think it is the key because it is the greatest work tool we have, isn't it? The voice... uh... for every teacher... especially of the blind, I think that... the teacher who works with blind children is the one that most uses his voice... for him it's also a very important work tool, but to those who teach the blind, the importance is squared [...]"*

### **What could be done as improvements?**

*"What could be done as an improvement? ... oh... so much, right? ... a lot... I think that the resources are the main thing... the resources could be less expensive... that at the moment when the student needed medical assistance we could have a hand reaching out to help... you know... offering an optical resource [...]" (T1)*

### **T2 (SSG) – Teacher with subnormal sight, with 02 years of teaching experience**

#### ***To what extent are body and vocal resources taken into account in your work?***

*"The vocal resources... uh... in my point of view, help a lot according to the vocal intonation that you convey, I believe that to the visually impaired you express yourself through intonation and he will be able to better perceive the way, the... how should I put it... It's difficult... your tone, actually, if you were aggressive when explaining something, he will be able to feel it, he will give you the feedback himself... you can, and also I can, having subnormal sight, perceive this from the student, even without having a complete Picture of his body language... of... how he is reacting through his voice, or the small gesture, I can visualize it."*

#### ***How is the work with the students done in the classroom?***

*"gestures... few, but touching, I don't know if it's body expression., if touching is also part of body expression., because we work a lot with touching... touching things, feel the other person's expression through touch... [...] facial expression, which helps a lot, [...]"*  
*"Oh... the voice is of crucial importance... especially for the visually impaired because it is through it that the student is able to identify the teacher... identify the contents that are being given [...]"*

### **What could be done as improvements?**

*"[...] well... in my work, what could be done is having support from a speech-language pathologist in the school, because there aren't any, it's something that is really missing because... even for us who are professionals in the field, it would help us, some hints which the SLP could give so that we could work with the students, with the multiple student, with the visually impaired only student, or the completely blind, so the presence of a speech-language pathologist...uh... what else would help... oh, a recording studio, speech-language pathology guidance, I don't know if this exists nowadays, but I don't think so [...]"*

**Chart 1.** Exerts of the transcribed interviews with the sighted, subnormal sight and blind participants: description of work in the classroom (body and vocal resources); description of typical situations and performance of teachers; descriptions of aims and necessary support

Group	SG	SSG	BG
Vocal resources and body resources	Resource that helps complementing the information	Help, according to vocal intonation	Voice full of details and information
	Voice is very important to teachers of the visually impaired	For the visually impaired, expression occurs through intonation	Help the learning process
	Primordial, fundamental	The teacher notices the mood of the student through the voice	Most information come through through voice and speech
	Biggest work instrument	The vocal resource is unquestionable, it is everything	When the voice is hoarse, the teacher is hindered from working
	Teachers of blind children are the ones that most use the voice	Feeling	Oral communication is extremelly important
	Voice is the spine of the work	Captures the feeling through voice	Needed to anticipate situations
	Mainspring of all	Digital era, media recordings, among others	
	Communication for the visually impaired is essential	Everything for the visually impaired involves hearing	
	Personal interaction with the student	Through voice, the student identifies the teacher and the contents worked	
	Bond, the student is guided by the voice	Acknowledges people	
	The voice allows the student to fulfill his objectives		
	Using your own body and the students body to help explanations	Important to visualize small gestures	Using your own body and the students body to help explanations
	Working with the body is very important	It is impossible to divide a person	Aid in learning
	Work with orientation and mobility	His face is a reaction	Work with orientation and mobility
	The body will not always be of crucial importance	Body Posture	
	Importance of posture	Gestures, touching	
	Environment disposition in the classroom	Body expression.	
	Exploring the environment	Resource for explanations	
	Work with orientation and mobility		
Situation and performance	Receives students of many schooling levels, blind and subnormal sighted students	Convey to the student that the voice is the face's expression.	Working with fractions or graphs
	Children with different levels of disabilities	The voice is the student's greeting card	Complementing certain subjects, copying subjects, among other activities
	Regular classroom with too many students	Oral reading and writing situations	
	Involvement with personal issues		
	Weekly follow-ups		
	Partaking in meetings		
	Development of the content of the regular classroom in the resource room	Hints about orientation and mobility and daily-life activities	Work using the voice and concrete material
Always seek new information		Description of all the actions that happen in the classroom	

Chart 1. continuation

Group	SG	S SG	BG
Situation and performance	More specific work in the resource room		
	Structure and balance for performance		
	Adapting specific material		
	Hints of orientation and mobility and daily-life activities		
Support and aims	Seeking for other professional, such as Speech-Language Pathologists	Support and guidance from speech-language pathologist	Specific resources and material adaptation (Braille and concrete material)
	Seeking for specific educational material	From society	Partnership with the family
	From the school team, community, family	From regular classroom teachers	Opportunities
	Resources from the health field	From the family	Training of regular classroom teachers
			Other professional, such as psychologists
	Support for the student	Guidance in voice use for specific actions with the students	Complement and teach what was missing in regular school
		Subsidize the work with the student in the classroom	Encourage the student and continue the work at home
			Develop abilities and competences
			Working with the student in the regular classroom
		Assistance to family and students	

**Note:** SG = sighted participants; S SG = subnormal sight participants; BG blind participants

### T3 (SG) – Sighted teacher, with 12 years of teaching experience

#### *What is the importance of these resources in the performance of your job?*

*“Focusing once again in oral expression.... I think that, it’s really crucial... it’s the main engine for everything [...] the body, in turn, I think that won’t Always be so important, depending on the content being given in the classroom... so in certain situations... depending on... the teacher... if it’s a child... or a teenager... a young adult... depending on the content being given... so this physical contact... this physical explanation is important but it’s not crucial as the voice... I think the voice is the spinal cord of all the work [...]”*

#### *What is the importance of voice use in transmitting knowledge?*

*“[...] I will try to explain in different ways with different words... in a certain intonation and then he will perceive... for example... if I have enough patience to explain... if I’m irritated because he’s not understanding... this personal interaction with the student when he needs me, he will base himself on the voice [...]”*

### *What could be done as improvements?*

*“Look... it is even hard to think of improvements in the classroom because... our reality in the state of São Paulo is not ne we can complain about... We have a television with a magnifying lens in the classroom... we have the resource of a computer with a printer and scanner, we have soroban devices, playing material, so... capacitation resources we always go to São Paulo to get, to receive and continue, so this continuing education process... it’s complicated to say what could be improved... if course there is always something that can be improved [...]”*

### T4 (BG) – Blind teacher, with 10 years of teaching experience

#### *Describe a typical work situation with your students and what you find in your everyday life.*

*“[...] I put Braille and also worked in concrete with this pie in wood... graphs, which is also another adaptation... uh... it’s a matter of partnership... family is the base... I think there needs to be a greater level of involvement, the family needs to motivate this student and unfortunately what happens is this... but I’m not making this into a general statement [...]”*



**What could be done as improvements?**

*“Look, the first step... the visually impaired student needs to want... awareness needs to be taken care of... because unfortunately we still have a society with a bit of disbelief... sometimes even the family... so there needs to be involvement... and the issue of partnership... family is the base... I think there needs to be a greater level of involvement, the family needs to motivate this student, and unfortunately what happens is this... our family still... and I'm not saying this as a general statement, but some families are like this [...].”*

**T5 (SSG) – Teacher with subnormal sight, with 01 year of teaching experience****To what extent are body and vocal resources taken into account in your work?**

*“I think it is very important for the visually impaired because he has to listen to everything... for the visually impaired everything involves what? Hearing... so the speech of the teacher and how she says things is very important [...].”*

**How is the work with the students in the classroom?**

*“he already... sometimes... if... we... are in a classroom... and suddenly someone comes in talking he can recognize this person by their voice... and this i show it is [...].”*

**What could be done as improvements?**

*“[...] better awareness of society... you know?... because the teachers in regular schools are also helping that student because our work doesn't go well if the regular school teacher doesn't give that student a good base... not demanding from the student, because if the teacher isn't demanding the student won't take an interest [...].”*

**T6 (SG) – Sighted teacher, with 9 years of teaching experience****O que poderia ser feito para melhorar?**

*“Well... educationally speaking... they complain a lot about not having audio-books... but books like... you know... not just Brazilian literature... they want Sidney Sheldon... differentiated things... I have a student that has already read and heard everything they had there [...].”*

**T7 (BG) – Blind teacher, with 10 years of teaching experience****What is the importance of this resource in performing your job?**

*“To me it is fundamental because... if, uh... since I chose to be a teacher... and I have a visual impairment... if I have no voice... – for example - ... if I'm hoarse... I see myself unable to work... because to me oral communication is extremely important [...].”*

**How is the work with the students in the classroom?**

*“I provide guidance to classroom teachers and OM (orien-*

*tation and mobility) activities, I work with them inside the schools they attend and here in this school where the resource room works [...].”*

**T8 (SG) – Sighted teacher, with 21 years of teaching experience****To what extent are body and vocal resources taken into account in your work?**

*“Well... the voice is crucial to make contact with the student because it is through it... since the student has finer hearing than we do... so the voice is crucial because it serves as a guide for everything you will teach, inform... to help in the student's learning... so it is very important in this first contact that you make with your student [...].”*

**DISCUSSION**

It is important to note that even though Speech-Language Pathology has been focusing on expressiveness since its beginnings, attention given to research in this field is recent<sup>(3)</sup>. Most teachers, during their education, receive little information about vocal well-being<sup>(8,10)</sup> and even less about the possibility of better professional performance if using expressiveness in their favor. If this happens in the context of teachers who work with students without impairments, it is possible to imagine that those who are involved with impaired students<sup>(8)</sup> are in an even more precarious situation<sup>(5)</sup>.

It may be said that that teaching a visually impaired child is similar to teaching a sighted child, as this consists in the fixation of contents through audiovisual resources, with the teacher occupying himself in transposing visual materials into tactile resources<sup>(5)</sup>. However, the impairment of a blind student increases the strength of vocal resources.

Aside from educational contents, some teachers commented on the possibility of students and other people recognizing or perceiving the manifestation of emotions and attitudes, through the voice.

In Speech-Language Pathology studies with teachers, there is emphasis on the issue of a survey of a vocal profile of these professionals<sup>(7)</sup>. However, it is necessary to pay attention to the voice as a means of expression, in order for the teacher to be able to perform his job more effectively.

In the case of the teachers interviewed in this study, the areas of voice, expressiveness and resources are even more prioritized, since it is through the use of these resources that the visually impaired students will better learn the content that they are taught. Without going into depth in theoretical issues, they were able to express that vocal resources are important markers of emotions and in some moments may be constituted into an element that actually highlights what is being said<sup>(3)</sup>.

The construction of the voice happens in a social environment, through experience and social interaction, by being exposed to different models<sup>(11)</sup>. The voice becomes a mean for sensory identification, of the speaker and the listener, who always attribute it with meaning.

In the classroom, of sighted teachers and students, language

and voice are the resources most commonly used as strategies for the student to focus his attention on the teacher and participate in activities<sup>(10)</sup>.

In the case of the interviewed teachers, this occurs so that the visually impaired student directs his attention to what is being said, especially in a classroom with a greater number of students.

The listener uses the way an enunciate is produced to attribute meaning to the voice, since this is an object of social construction, and its use is a part of a social process<sup>(1,3)</sup>. The voice, as a gesture, responds to the symbolic, body, linguistics and style dynamics. The vocal gestures in the individual's expression make the contextual and subjective demands concrete, and therefore put the voice in the universe of language<sup>(3)</sup>.

The interpretation of perceptions of the variations of voice (intonation, vocal/personal characteristics, as well as perceptions related to the body and environment), as well as the sense of smell (when capturing environment odors), and mostly to hearing, which is then the most important pathway in organizing the sounds that are received (through echoes of their own steps, sounds and noises of all kinds), provide various orientation tips for the involved parties in a teaching-learning activity<sup>(4)</sup>.

However, the SSG prioritized the issue of voice intonation as a physical and psychological marker. Through the voice, both student and teacher perceive different emotions and attitudes, in addition to identifying people, according to vocal characteristics<sup>(12)</sup>.

To perform their job more effectively, the BG shows concern with vocal quality, emphasizing that if it is altered or compromised, it makes classroom work much more difficult or impossible, differently than what was reported by the SG, or even by teachers of sighted students, as these, even when confronted with a vocal disorder, keep teaching their classes. One of the subjects in the SSG suggests the implementation of a vocal development program, with the assistance of a speech-language pathologist, for working specifically with disabled students.

The groups of teachers with subnormal sight (SSG) and blind teachers (BG) focus on the need for a speech that is richer in prosodic information, for it allows for a better oral description of objects, environment, and activities, among others. They feel limited by the presence of a vocal disorder, as in the SG, but differently from this group, the BG understands a voice disorder as an impediment to the execution of their job.

Therefore, there is a need for a specific work with expressiveness, for it takes communication in its entirety, fact which is reflected in the reports of the interviewed subjects, who consider the voice an important means of expression.

Once again, an alert towards the direction of the work of the speech-language pathologist is focused, not only concerning the issues of vocal-well-being, but also to those concerning vocal resources. Some authors<sup>(7,13)</sup> point out that oral expressiveness in the teaching-learning relationship, is important for the performance of the teacher in the classroom, with students with or without disabilities. In the report of a SG teacher, the importance attributed to vocal resources is highlighted. With regards to vocal resources, the SSG was the group that

prioritized them the most as a powerful work tool.

The interviewed subjects also reported the importance of using body resources, associated to vocal resources, especially in regards to orientation and movement. The voice is also seen as a bond, as it is carried with information and emotions.

The responses, in regards to using the body as a resource, to the SSG, go beyond activities of environment exploration, orientation and mobility. The teachers understand the importance of seeing the student as a whole, and any gesture or body reaction is considered. The issue of the body being a reference in space, as a concrete form present in the world, is very important to the students with visual impairment<sup>(4)</sup>.

It may be noted that, for the work of these teachers, the SSG was the group that most prioritized vocal characteristics such as intonation, for example, in perceiving emotions and attitudes, mood and feelings. On the other hand, body resources as orientation, mobility and exploring the environment, were mostly highlighted by the SG. If there is a need, in the education of teachers in general, for emphasis on the aspects regarding the voice, especially oral expressiveness, it may be imagined that especially for blind or subnormal sighted teachers, preparation should also include issues regarding body expression.

Beyond voice and body, the teachers also highlight the importance of establishing educational resources, trustworthy and affectionate bonds in order to work with students and families who have visual impairment. Family guidance, provided by the specialized teacher, is considered crucial for follow-up and development of activities at home.

In typical work situations, the SG considers as main issues: providing guidance for regular-classroom teachers, the excessive number of students in the classroom and participating in meetings with the team of professionals in the school. The BG uses vocal information and describing all the actions, associated to concrete materials. Guidance to regular classroom teachers and specific guidance in individual work in the Resource room are emphasized<sup>(6)</sup>.

Interpersonal relationships are crucial to the development of the individual's behavior, and the expectations and attitudes, especially from the Family, society and other environments of social interaction are important to the adjustment of any person.

According to the reports (Chart 1), the teachers pointed to different directions in regards to material resources and equipment: that the resource rooms are well equipped and, therefore, they consider necessary to have guidance from health professionals such as psychologists and speech-language pathologists to work alongside the specialized teacher. In the case of the latter, they ask for guidance concerning the correct use of the voice, and even some educational guidance.

In the reports of the teachers, the issue of guidance for the teachers in the regular classroom and better training for them is a big differential for the work of the teacher in the resource room, and for a better understanding of the role of this professional. The contribution also occurs for the process of insertion of the person with disability in the social context<sup>(6)</sup>.

According to the reports of the teachers regarding specific resources, the classroom must be well equipped in order for the educational work to be performed with quality, with students with or without visual impairment. In regards to the context

with students with subnormal sight in school, the literature emphasizes the need for materials such as: books with amplified characters, optical and non-optical resources, and electronic and computer equipment<sup>(14)</sup>.

All groups work basically in the same way, using body and vocal resources, and almost always present similar situations, doubts, anguishes and success situations in the classroom.

However, the groups disagreed in some of their answers; for example: the SG considered partnerships to be very important: partnerships with the Family, with the school team, with the community and especially with the regular classroom teacher. In addition, in regards to vocal use in the classroom, even when having a voice disorder, some of these teachers continue to go to work, for they are able to use secondary resources.

The SSG prioritized intonation, the voice as a means of expression of emotions and attitudes, alongside information conveyed by touching. The teachers highlighted the importance of the clarity of the words and of the subject that will be explained in class.

In turn, the BG focused on the importance of a speech filled with information, using vocal resources. It also pointed out that in the presence of a vocal disorder, their work is affected, for they consider the voice their main mean of communication.

It is interesting to note that this study mobilized the interviewed subjects, and this was seen when, at the end, they reported that taking part in this study allowed them to pay more attention to how important the voice really is.

Thus, each of the groups reported similar or diverging aspects of their work in the classroom, according also to their own needs.

It is interesting to note that all of the teachers (sighted, with subnormal sight or blind) present the same worries about the principles and methods in the classroom, and each one uses their own interaction resources with the students and addresses their specific needs.

Teachers of both sighted and visually impaired students do not receive, or receive a limited amount of guidance in using the voice in an occupational context. Therefore, special attention should be paid to the fact that the issue of voice in a differentiated manner when compared to the teachers of sighted students. While teachers in regular classroom value the voice as a work tool, the interviewed teachers highlight the expressive side of the voice, which along with body resources help

in the teaching-learning process of their students. Its practice will occur according to the needs of each student<sup>(15)</sup>.

## FINAL COMMENTS

The teachers specialized in visual impairment participating in this study recognize the voice as a main way of communication with their students in the classroom.

This importance is shown in the reports that consider it essential in living with the visually impaired person, in school, Family and social contexts. The voice, oral expressiveness alongside body expressiveness, or using both body and vocal resources at the same time, provide a positive impact on the work of the specialized teacher, and more efficient results in his performance with the students.

Using body and vocal resources, the educational practices are subsidized in the principles of providing possible details and information about content, adapting material, provide guidance concerning mobility, among others.

If both oral and body expressiveness are processes of producing meanings in the relationship between the actions of the teachers and the reception and interpretation of the student, there is always a possibility of producing new meanings. These are permeated by the constant contact between the interlocutors, by the culture in which they are inserted and the attributions given to aspects of body and speech.

The education of teachers and other professional of similar fields, such as speech-language pathologists, to work with students and/or patients with any kind of impairment is mandatory.

All of the participating teachers presented the same preoccupations, among the principles in methods, in the classroom, each one using their own interaction resources with the students and addressing their specific needs.

Other studies about the voice of the teacher as and educational research would be very important to promote a stronger bond between Speech-Language Pathology and the field of Education.

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## RESUMO

O objetivo deste relato de caso foi investigar o sentido atribuído à voz de professores especializados na área de deficiência visual e sua prática em sala de aula. Participaram oito professoras, divididas em três grupos: quatro videntes, duas com visão subnormal e duas professoras cegas. Foram realizadas entrevistas individuais, com todas as participantes, que responderam a seis perguntas semidirecionadas, previamente elaboradas, que abordaram o tema da comunicação entre professor especializado e o aluno com deficiência visual, no ambiente de sala de aula. Depois de transcritas e analisadas, foram estabelecidas três categorias de respostas: o trabalho da professora, vivência diária, e apoios necessários. A atuação pedagógica subsidia-se nos princípios de fornecer todos os possíveis detalhes e informações a respeito do conteúdo, adaptar materiais, orientar quanto à mobilidade, entre outros, por meio dos recursos vocais e corporais. A importância da voz para o desenvolvimento de uma pessoa com deficiência visual foi explicitada nos relatos que a consideram essencial para a convivência no contexto social e escolar. Observou-se a importância da interação, em sala de aula, favorecida pelos recursos vocais e corporais, tanto das professoras quanto dos alunos, para haver uma comunicação mais clara e objetiva. O sentido atribuído à voz, de acordo com as participantes, contribuiu para reconhecê-la como principal meio de comunicação com seus alunos.

**Descritores:** Voz; Docentes; Portadores de deficiência visual; Educação especial; Saúde pública

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