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Pedagogical actions of inclusive university education for the attention of deaf students with cochlear implants

Acciones pedagógicas de formación universitaria inclusiva para la atención a educandos sordos con implante coclear

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ABSTRACT

In the context of the transformations of inclusive education systems, it is a priority to offer an educational response to school diversity, which is why we need university teacher training in correspondence with historical-cultural demands. The objective of this work is to establish pedagogical actions aimed at the university formation of infant education professionals for the educational attention to deaf students with cochlear implants of the University of Pinar del Río. The use of theoretical level methods such as: historical-logical analysis, system approach; empirical level methods such as: analysis of content in its empirical variant, observation, interview pedagogical test; as and well as mathematical statistical methods made it possible to verify the limitations of the initial state of this process, due to the unintentionality in the formation of these professionals as part of Study Plan E. The use of theoretical level methods such as: analysis, historical-logical system approach; empirical level methods such as: analysis of content in its empirical observation, variant, interview and pedagogical test; as well as mathematical statistical methods allowed to verify the limitations of the initial state of this process, due to the unintentionality in the formation of these professionals as part of Study Plan E. The pedagogical actions that are presented as a possible response, recognize educational attention to deaf students with cochlear implants as a specific pedagogical professional problem, which in articulation with the substantive processes of the university, the interdisciplinary relations and the flexibility of the curricular design contribute to the training of professionals in early childhood education to solve situations inherent to the profession once they graduate from the different children's institutions. It concludes by explaining the importance of adjusting each of the actions to the particularities of each career and the academic years, recommending their application in order to verify their effectiveness in accordance with the new requirements of Plan E.

Keywords: pedagogical

actions; educational attention; university formation; inclusion; cochlear implant; interdisciplinary; professional problems; deaf.

RESUMEN

En el contexto de las transformaciones de los sistemas educativos inclusivos constituye una prioridad ofrecer una respuesta educativa a la diversidad escolar, por lo que se necesita la formación universitaria docente en correspondencia con las exigencias histórico-culturales. El presente trabajo tiene como objetivo establecer acciones pedagógicas dirigidas a la formación universitaria de los profesionales de la educación infantil para la atención educativa a los educandos sordos con implante coclear de la Universidad de Pinar del Río. El empleo de métodos de nivel teórico como: el análisis histórico-lógico, el enfoque de sistema; los métodos de nivel empírico como: el análisis de contenido en su variante empírica, la observación, la entrevista y la prueba pedagógica; así como los métodos estadísticos matemáticos permitieron constatar las limitaciones del estado inicial de dicho proceso, debido a la poca intencionalidad en la formación de dichos profesionales como parte del Plan de Estudio E. Las acciones pedagógicas que se presentan como una posible respuesta, reconocen la atención educativa a los educandos sordos con implante coclear como un problema profesional pedagógico específico, que en articulación con los procesos sustantivos de la universidad, las relaciones interdisciplinarias У la flexibilidad diseño del curricular contribuyen a la formación de profesional de la educación infantil para resolver situaciones inherentes a la profesión una vez que egresen las diferentes а instituciones infantiles. Se concluye

exponiendo la importancia de ajustar cada una de las acciones a las particularidades de cada carrera y los años académicos recomendando su aplicación para constatar su efectividad.

Palabras clave: acciones pedagógicas; atención educativa; formación universitaria; inclusión; implante coclear; interdisciplinariedad; problemas profesionales; sordos.

INTRODUCTION

Several international events and educational goals for 2021, ratified by UNESCO (2015), address issues related to educational inclusion and attention to diversity. In Cuba, state policy has been an example of will in terms of inclusive educational practices and equal opportunities for each person with special educational needs, associated or not with disabilities, including the deaf with a cochlear implant.

Currently in Cuba there are more than 440 deaf people with cochlear implants, those who receive rehabilitation through an organized and progressive program of activities, which allows them from detection, discrimination, identification, recognition, understanding of sound to the establishment of dialogues (Alonso, 2018).

The consolidation of several years of scientific work has allowed four provinces to lead the Sequenced Auditory Development Program (SEDEA) in their capitals, in Pinar del Río, 41 people of different ages and municipalities are particularly treated (Cuban News Agency, 2019).

The conception of the Program ponders the university education of children education professionals to assume educational practices with high humanistic and inclusive values. In this sense, the importance of the development of oral communication in deaf students with primary cochlear implants is highlighted and guides are offered for executives and teachers in practice (Leyva & Barreda, S. A). Their offers also consider the need to project actions towards the initial training process, as it is a momentous moment in the subsequent professional performance.

The formation of the professional of the infantile education is modeled in accordance with the delimitation of common theoretical nuclei (according to the interests of this investigation) in the careers: Degree in Primary Education and Degree in Preschool Education. This in turn responds to the improvement of the educational process for educational attention to children, adolescents and young people in different contexts (Castro Pérez & Sierra Socorro, 2018).

That is why the educator of these careers must be prepared to understand personal and social needs, know how to deal with initiatives to solve the problems of educational practice and integrate scientific and technological advances into the training process; so that students must ensure that they find in the process of university education, the mechanisms that stimulate the motivation for the adjustment of the educational response of each and every student, specifically those that present barriers in their learning or participation, given by the special educational needs associated with hearing disabilities (Ministry of Higher Education, 2016).

Foreign and Cuban researchers have addressed in their inquiries the initial

training of the child education professional for the attention of students with educational needs from different edges. On an international scale, Echeita Sarrionandia (2012); Vélez Calvo, Tárraga Mínguez, Fernández Andrés, & Sanz Cervera (2016), among others, agree on the knowledge necessary for training programs. Their proposals tend to be general and do not stop in modeling the training of professionals for specific disabilities, an issue that restricts their scope.

Cuban authors such as Cobas, Granados and Cok (2018) as cited in Castro Pérez & Sierra Socorro (2018), are pronounced by the relationships between professional problems, curriculum and pedagogical professional skills, directed towards pedagogical professional performance, without revealing the articulation with the substantive processes of the university.

The aforementioned criteria, together with the exploratory study conducted at the University of Pinar del Río since 2017, specifically in careers through theoretical and empirical inquiries (observation and interview) and doctoral studies, allowed to determine strengths between them: the existence of the Main Discipline Integrative Investigative Labor Training that enhances the work with the academic, labor and research organizational components.

However, in the daily educational practice, the coexistence of a problematic situation is appreciated, given that the training of knowledge and skills related to educational attention to deaf learners is often insufficient in university education With a cochlear implant, the scientific work limits the preparation of the students of the careers for the solution to the professional problems in the educational attention to said students, motivated in many occasions by the limited mastery of the theoretical and methodological elements by of the professors of the races.

Corresponding to what has been described, the objective is to propose pedagogical actions aimed at the university education of the Primary Education and Preschool Education courses for the educational attention of deaf students with cochlear implants.

The importance of the research presented is evidenced in the particularities of pedagogical actions, which conceives educational attention to deaf students with cochlear implants as a specific pedagogical professional problem.

The actuality of the topic corresponds to the priorities of the Ministry of Higher Education and the Cuban Educational Policy, the requirements of Study Plan E and responds to the line of research of the area of the Infant Education Faculty related to the attention to diversity in the context of socio-educational inclusion.

MATERIALS AND METHODS

In keeping with the objective, a sample was intentionally selected, consisting of 29 third-year students of the Primary Education and Preschool Education, of the regular day course, in the School of Early Childhood Education. The criteria for the selection of the sample were determined, taking into consideration that in this academic year the students, during their initial training, acquire the general anatomophysiological, psychopedagogical and didactic knowledge to achieve the integral attention of the students' personality development. In addition, 6 professors of the General Pedagogical Training discipline were selected on an intentional basis, for being the total of professors of the discipline in the careers and with a meritorious research trajectory in the training of professionals.

The present investigation assumes the general materialistic dialectical method, which allowed the study of the object as a process, from its genesis, with its internal and external contradictions, as well as the selection of methods of the theoretical, empirical and statistical-mathematical levels.

Among the theoretical level methods used are the historical-logical analysis, which allowed the study of the trajectory under investigation and the approach to theoretical references, establishing the internal logic of development, as well as taking positions at respect. The system approach facilitated general guidance in the development of pedagogical actions and the determination of the relationships between them.

As for the empirical level methods, content analysis was used in its empirical variant, the selection, treatment and in interpretation of documents such as: Professional Models, Study Plans E, programs, methodological work plans and educational projects of years. The observation to classes and labor practices verified the level of development of the universitv training process of the professionals of the infantile education for the educative attention to the students with deaf people with cochlear implant.

On the other hand, the interview with the professors of the General Pedagogical Training discipline confirmed the information obtained about the university training process for the educational attention of deaf students with cochlear implants, as well as the influence they exert. The pedagogical test to the students evidenced the level of knowledge related to educational attention to deaf students with cochlear implants.

The methodological triangulation technique revealed the coincidence or dispersion of the information from the data obtained. Descriptive statistics were used to process the information.

RESULTS

For the analysis of content in its empirical variant, different sources were used: Professional Models, Curriculum E of the careers of the Infant Education School, methodological work plans, educational strategies, educational project, subject programs and methodological preparations.

In the Plans of Study E from the disciplines General Pedagogical Training and Labor Training Investigative some contents have been projected in the subiects Pedagogy, Anatomy and Physiology of Development, Didactics, Psychology, among others, based on the theoretical nuclei that support the conception of a common trunk and the determination of the basic link in early childhood education. The subject Educational Inclusion is introduced; In spite of this, the depth of the contents addressed in the educational attention to deaf students with cochlear implants is still insufficient, based on the possibilities offered by the elective and / or elective elective curriculum.

General objectives and career skills are stated, related to diagnosing, designing

and directing, among others, although in the years, in the case of diagnosing and designing, they are not required. Professional problems for the attention to diversity are explained in a general way. Educational inclusion and attention to special educational needs associated or not with disabilities are conceived as an important theoretical and practical construct in the horizontal vision of the discipline General Pedagogical Training; but interdisciplinary relationships with the Investigative Labor Training discipline remain insufficient.

The analysis of the methodological work plans of the careers, of the mentioned disciplines and of the years, as well as of the educational strategies of the career, the years and the educational project of the group, made it possible to verify the lack of systematicity and coherence in the actions aimed at initial training in topics related to the basic contents of deafness and the cochlear implant.

With regard to the link between academics, work, research and university extension, few activities are verified, both in careers and in the disciplines analyzed, in order to contribute to the initial training of the child education professional, for Treatment of content related to professional problems regarding educational attention to deaf students with cochlear implants. In the interdisciplinary work, activities in the methodological order that contribute to the direction of the teaching-learning process from inclusive practices are not developed, as part of the attention to deaf students with the cochlear implant, taking advantage of the possibilities of the mentioned disciplines.

In the analysis of the programs of the aforementioned disciplines and the preparations of the Psychology I and II subjects, it was found that the contents around the regularities of the development of deaf learners appear very general. The main objectives and skills that are proposed are based on diagnosing, modeling, directing, among other skills.

In the subject Anatomy and Developmental Physiology, sensory systems, morphofunctional bases, peculiarities in school age and pedagogical addressed, implications are among others; however, it is not singled out in the most frequent disorders of the auditory system, classification and major advances in biotechnology related to hearing impairment, nor are skills related to diagnosing and designing. In Pedagogy the educational methods, the Cuban educational policy, role, functions and tasks of the teacher are introduced in the educational process, among other contents; In spite of this, it is not explicit what is related to the psychopedagogical and specialized diagnosis from the attention to diversity.

Psychology includes the techniques for diagnosis, the characterization of the school and the group, strategies, styles and types of learning, the curricular adaptations for the attention to the educational needs of the students, the background and actuality of the Special Education and the sensory educational needs. In addition, the general concepts of exclusion-inclusion are addressed, but the number of hours is insufficient to address the contents, they are used for treatment between 6 and 8 h / c.

In Didactics, the teaching-learning process is developed, among other elements, and there is no reference to the particularities of this process in the educational attention of deaf students with cochlear implants from inclusive practices.

In curricular activities, the links between academic, work, research and university extension are limited. The location of the students in the labor practice is in institutions where there are no deaf students with cochlear implants, so the treatment of the tasks related to the diagnosis. the psychopedagogical characterization, the use of the types of supports for the teaching-learning process as part of the educational attention to these students. The scientific student work is insufficient around the research lines associated with the subject being analyzed; There are no student scientific groups that treat these lines.

15 observations were made to classes and work practices. The indicator related to the level of knowledge about the types of support for educational attention to deaf students with cochlear implants was assessed as inadequate, as was the level of application of knowledge and skills in solving specific pedagogical professional problems. The aspect related to the level of action towards educational attention to deaf students with cochlear implants, within the attitudinal dimension was evaluated as inadequate.

In the interview with the professors of the General Pedagogical Training discipline, the following elements were found:

100% add that educational attention to deaf students with cochlear implants is an important issue as part of the university education of the child education professional, taking into account the increase in these students, as well as those who are Waiting for technology.

The sample interviewed agrees that students have some knowledge about deafness and their psychological regularities. As for the skills, they state that they can characterize the regularities and variability of development from the anatomophysiological, sociological, psychological and pedagogical points of view of the students who attend children's institutions, as they are leading skills in the early years of the careers. The level of application of the basic knowledge for the elaboration of the psychopedagogical characterization, the design of the strategies and the types of support for the educational attention to the deaf students with cochlear implant is not adequate.

The intervieweds agree that the greatest difficulties of students in the careers of the School of Early Childhood Education are identified with the scarce curricular activities from academics, work, research and extracurricular activities in the brigade, career or teaching unit. The actions they take to solve professional problems around educational attention to deaf students with cochlear implants are located according to the objectives of the academic years, in the classes some tools are offered to identify the problem and propose Solution paths circumscribed in the same way for all students.

83.3% consider that the main difficulties of students to offer educational attention are found in the few hours that are dedicated to the treatment of these contents from the General Pedagogical Training discipline, 66.6% alleges that others are prioritized contents, the bibliography is very scarce and 100% states that few methodological activities are carried out in the year and discipline group in this regard.

In the pedagogical test the most affected indicators were related to the level of knowledge about the methods, procedures for diagnosis, characterization, design of the strategies; and the types of support for educational attention to deaf students with cochlear implants. The results of the initial diagnosis were integrated by the methodological triangulation technique, agreeing to evaluate the level of knowledge about the diagnosis, procedures for methods, characterization and design of the strategies; the types of support for educational attention to deaf students with cochlear implants, as well as the level of application of knowledge and skills in curricular activities, in which the link between academics, work, research and in the solution of specific professional problems for educational attention to deaf students with cochlear implants.

The results of the initial diagnosis made it possible to elaborate the pedagogical actions aimed at the university education of the Primary Education and Preschool Education careers for the educational attention of deaf students with cochlear implants, from the University of Pinar del Río.

The actions that are presented in the short, medium and long term have a sequenced and interrelated character, to be able to consciously and intentionally direct the process under investigation, which will in turn allow the identification of its current state, with its strengths, Weaknesses and regularities in the solution of educational attention to the deaf with a cochlear implant as a specific pedagogical professional problem, its articulation with the substantive processes of the university from an inclusive perspective, as well as interdisciplinary relationships.

The actions will also allow to assess in the cognitive, procedural and attitudinal order the changes generated in the process of university education for educational attention to deaf students with cochlear implants.

Actions to develop in the short term

- Develop methods and techniques.
- Diagnose the level of preparation in the selected sample, regarding knowledge, skills, values and attitudes.
- Characterize the main regularities detected in the diagnosis.
- Plan conversations with students about the work undertaken by the province in relation to the participation of deaf learners with direction in community activities.
- Plan visits to children's institutions that have deaf students with the screening of documentaries about the experiences of teachers in the exercise of the profession.
- Identify the interdisciplinary articulation nodes for the treatment of the content of educational attention to deaf students with targeted......

Actions to develop in the medium term

- To reconcile with the pedagogical groups of the disciplines object of analysis and the student group the strengths, needs and regularities detected, in a climate of communication and respect.
- Select the specific pedagogical professional problems, the objectives for years, the contents in the disciplines and some of their subjects.
- To determine the specific pedagogical professional problems and the contents, according to the objectives of years and according to the intra and interdisciplinary relations (precedents, concomitants and perspectives), for the treatment of the content on

the educational attention to deaf students with cochlear implants.

- Forecast changes and adjustments in the design of the curriculum itself and optional/ elective.
- Organize the methodological work system and the activities that allow the demonstration of the treatment of the content related to the educational attention to deaf students with cochlear implants, in the pedagogical groups of the disciplines studied and of the academic years.
- Design and integrate the objectives for academic years.
- Schedule activities in the workresearch component that access students' experiential learning.
- To project in the student scientific work, problems related to the educational attention to deaf students with cochlear implants.
- Create the student scientific group to undertake research related to the subject.
- Plan, from the university extension process, community activities in which students link with associations, educational and institutions, health SO that attitudes of acceptance, respect for attention to diversity, as well as relationships collaborative are promoted. With other professionals.
- Design the analytical program «Educational attention to deaf students with cochlear implants», study practice guides, work practice, consultations and research-extension activities in the educational project of the groups.
- Design the support material «Educational attention to deaf students with cochlear implants» for self-preparation.

- To incorporate the program of the subject of the own curriculum in the Moodle platform for the accomplishment of the learning tasks, consultations and the selfpreparation of the students.
- Conceive the evaluation in an integrative way, according to skills, objectives and knowledge of the academic years.

Actions to develop in the long term (will be developed in fourth and fifth years of the career)

- Characterize the level of preparation of the groups regarding strengths and weaknesses.
- Project the monitoring of pedagogical professional problems, based on the current needs and perspectives of the III Improvement of the National Education System.
- Design in the concentrated labor practice and in the integrative exercises, the exit to the types of supports in the educational attention to the deaf students with cochlear implant.
- Follow and observe the actions planned and developed at each stage.
- Apply instruments to assess the effectiveness of the actions developed (quantitatively and qualitatively).
- Redesign the actions that are necessary from the results obtained.
- Evaluate the results of the methodological work system and the activities that allow the demonstration, in the pedagogical groups, of the analyzed disciplines and in the academic years.

DISCUSSION

The results obtained after the application of the aforementioned system of methods, the description of the pedagogical actions, as well as the theoretical systematization on the subject, demonstrate the need to deepen into this article, due to the priority and relevance of university education, since the implementation of Study Plan E, the current process of the III Improvement of Cuban Higher Education, and with a response by a humanist, universal, modern and scientific, technological, innovative and integrated university to society for the harmonious development of the country .

The debate of the training category allows us to discern about the stages in the training of professionals in early childhood education, the initial training. The UNESCO Report highlights that the quality of education depends both (if not more) on continuing teacher training and initial training, as training programs are conceived (Delors, 2018).

Academics from Spain, Ecuador, Peru, Colombia, among them, Booth & Ainscow, (2015); Hernández Garre & Avilés Soler (2017); Montañez Torres & Suárez Zarabanda (2019); Bravo Mancero & Santos Jiménez (2019) are pronounced for initial teacher training for educational inclusion in other terms: teacher training, professional skills, teacher training, initial training, university training.

Montañez Torres & Suárez Zarabanda (2019), decisively require a clear modification in the curricula of teacher education, whether in professional training processes, as a complement or specialization of their profession, and allowing education for diversity. On the other hand, Bravo Mancero & Santos Jiménez (2019) consider that the university must provide an answer according to their characteristics and needs, however Sandoval Mena, Simón Rueda, & Márquez Vázquez (2019) specify that the professional development of teachers in training It must be adjusted to solve the problems regarding spaces, resources, contents, methodology and participation.

In the analysis of their works they consider the teacher as a critical professional, with a personalized curriculum structure that adequately supports them and with didactic guidelines in correspondence with the diversity of the student; however, there is no consensus on the ideal teacher training model for early childhood education, the determination of specific professional problems and interdisciplinary work in response to offer educational attention that involves the different educational agencies.

In the design of pedagogical actions aimed at university education for educational attention to deaf learners with cochlear implants, it should be based on the budgets of Booth & Ainscow (2015), when stating that inclusion is considered «as a process without an end that has to do with the participation of people, the creation of participation systems and their adjustments, and the promotion of inclusive values" (p.24). That is, а particular way of acting, understanding and considering each person from the training model itself.

The preaching of inclusive policies and cultures is patented in the work of Cuban authors such as Borges Rodríguez et al. (2014), when they say that the idea of transforming the training of professionals is necessary, since from that process, they need tools to understand the elements related to people's rights, the distinctive characteristics in their development, become aware that They should not place limits, nor anticipate results, without having generated learning situations that favor new areas of development in each and every student, without putting their physical, intellectual and sensory conditions in the foreground, among others.

This criterion is valid, however it is important, that in the educational reality for the attention of deaf students with cochlear implants, it is necessary to transform the styles and types of support in the teaching-learning process as the space that encourages Students in their training assume the education of all from inclusive educational practices.

The initial formation of the professionals of the infantile education, from the Model of the Professional in the Plan of Study E, part of which the graduate can exert his work in the basic link of the profession, and is revealed in the educational attention of the children, adolescents and young people (Ministry of Higher Education, 2016).

When making an analysis of the term educational attention, concepts such as: stimulation, reeducation, rehabilitation, intervention, early childhood education, development stimulation are associated and this is due to the fact that the problem of this terminology is related to the conceptual approach of what should be, encompass or conclude.

Educational attention to deaf students with cochlear implants is a planned and systematic process, in which coordinated actions are designed between the different agencies and educational agents, with emphasis on the work of the teacher, in which diverse support is needed to contribute to the integral development of different personality areas and the preparation of the educational context, taking into consideration the potentialities, possibilities and needs of students in equity and equal educational opportunities (Castro Pérez & Sierra Socorro, 2018).

An interpretation particularized in the initial or university training of the child education professional presupposes providing students with the essential knowledge, skills, values and attitudes of their profession, from the educational inclusion.

In some works by international authors as Echeita Sarrionandia such (2012); Vélez Calvo et al. (2016) among others, it is highlighted that the initial training of the professional for regular education must have essential conditions, but they generalize it to the detection of all educational needs, to the most relevant associated with different disabilities without specifying types and the necessary curricular support.

instructive Another of the valuable elements that students must master and was taken into account in the proposal of pedagogical actions, are those related to the regularities and variability of the development of deaf students with cochlear implants, in the linguistic, cognitive, affective and social areas. In this regard, there is an imbalance in the special-temporal structuring, marked difficulties in oral communication in the phonic, lexical, grammatical components, errors in written language due to distorted phonemic perception, affectations in the qualities of the voice, they need the permanent support of perceptual-visual skills, impulsive behaviors with a low concept of self-regulation are frequently manifested, aspects that are mediated by the cognitive-linguistic and social problems themselves, are affectionate, observant, and sometimes persevering.

In the particular case of the design of educational attention strategies, students of the careers must bear in mind the population. heterogeneity of this highlighting the relationship between the time of onset of deafness, the time of hearing deprivation to which they were subjected and the level of oral language development reached; tempered to the socio-educational context in which it has been developed, which include the stimulations received from families and specialists and respect for their individual characteristics, including linauistic particularities (Méndez Forns, Demósthene Sterling, Campo Valdés, Zurita Cruz, & Barreda García, 2017); as long as you have full control of the age at which it was implanted, to consider your arrival at the educational institution with an accurate, timely or late cochlear implant.

A basic aspect that also enriches the design of educational strategies for deaf schoolchildren with cochlear implants is the support they need, so that students in the careers of the faculty of early childhood education must discern in the concurrence with the terms resources, strategies, aids and/or technologies.

The researchers agree with Leyva & Barreda (SA) researchers to rank support, such as resources and strategies that allow schoolchildren to interact with the school, family and community media to improve their functional abilities. In educational care for deaf schoolchildren with cochlear implants, their teachers, families and communities, they are used according to who and for what they are implemented, mediation support, advice to the primary teacher, training and or preparation are required. In the educational practice personal/professional supports are carried out, based on the action of the psychopedagogue, the psychotherapist, the speech therapist, the special school teacher, the sign language interpreter.

The didactic/curricular supports that favor access to information and adjustments to guarantee the educational response, with its curricular adaptations and access to the curriculum are also recognized; material supports such as: drawings, pictograms, schemes, objects; verbal supports such as: texts in facilitated language, sign language, facial lip reading, among others; as well as organizational support, when changes are required in the school organization with respect to groupings, spaces, time, among others.

The debate and analysis of the aspects previously addressed allowed the design of pedagogical actions, with an articulation between, educational attention to deaf students with cochlear implants as a specific pedagogical professional problem, the substantive processes of the university, the possibilities offered the main integrating discipline and the flexibility of the curricular design in the Study Plan E, so that the students of the Primary Education and Preschool education once they graduate can solve situations inherent to the profession in the different children's institutions.

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