Didactics in higher education: challenges and perspectives of Dentistry teachers of the State University of Ponta Grossa

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ABSTRACT
The objective of this study was to evaluate the perception of teachers of the Dentistry course regarding the main difficulties faced and the skills essential for the exercise of the higher education teaching profession. For that, a qualitative research was carried out with 47 professors of the Dentistry course at the State University of Ponta Grossa, divided into two groups: a) less than 5-year teaching experience; b) over 5-year teaching experience. After the validation of the questionnaire, it was sent to the participants of the research to answer open questions about teaching in higher education. After data collection, a descriptive analysis of the information, exploration of the material and interpretation of the results were carried out. Among the challenges faced, teachers with more than 5 years of work experience cited the responsibility to train a professional, difficulty motivating students and developing self-confidence for teaching as the main points. On the other hand, teachers with less than 5 years of experience pointed out the relationship with the student, professional insecurity and obtaining a balance between theory and practice as the main challenges. With regard to the difficulties currently faced, the responses were similar for the two groups, namely, students’ lack of interest, lack of infrastructure and support material to teach classes were the most cited. The most mentioned skills by the teachers as essential to the practice of the profession included patience, didactics and the need for constant updating. The results led to the conclusion that teachers face difficulties in teaching practice regardless of the time of performance.

Descriptors: Health Education. Higher Education. Education in Dentistry.
1 INTRODUCTION

Reflecting on the challenges that teaching presents in higher education is important so that teachers, in performing their role, can understand it clearly and achieve a better performance. In addition to the challenges of the institution, which require qualification, preparation and good performance, perhaps the greatest concern and need is for the professional, working in the area of teaching, to develop his own identity1-3.

Questions such as "why should one become a university professor? and what is the role of this professional?" should be analyzed by anyone who wants to perform this function, so that they can begin to build their identity as teachers4. Another question raised is whether being a teacher depends on learning, a choice, or a gift. However, there is no single answer to this question. It is assumed that, from the choice of being a teacher and doing this job, one learns how to be a teacher and, with the advancement of knowledge and acquired experience, breaks the perspective of teaching as a pure vocation or innate gift. As soon as these questions are answered, it is up to the individuals to treat themselves as teachers and act accordingly, to make their classes a choreography in which their students can follow the steps and, together with the teacher perform the show1,2. Exactly, the word show is used to describe a lesson, because, to paraphrase Zabalza (2004)5, teachers are students choreographers in the learning environment, they conduct their students' learning, just as a choreographer conducts a dance. However, the show only takes place with the collaboration and involvement of all6.

Teaching in higher education is mediated by the functions of teaching, research and extension, without which one does not become a university professor. However, one should not only get stuck in this tripod, since teaching is to communicate, to stimulate and, as Nóvoa (2007)7 quoted in "Challenges of teacher's work in the contemporary world," teaching goes beyond, since the teacher should not stand in the common sense, presenting the same classes daily, based on the same strategies observed in their own teachers in other situations and realities or, letting themselves be convinced by opinions of others that the students are not interested.

Basing one’s work on the experiences of other teachers, parents, colleagues or even past experiences is not bad, on the contrary, they are factors that enhance a teacher's education, build it up, because living with people and sharing such experiences expands the baggage of knowledge. However, in addition, teachers must combine their knowledge with as many tools as possible, establishing dialogues, dynamics, and questioning. It is necessary, therefore, to be a bridge between knowledge and the students, inspiring them to seek answers, to value doubt, awe, curiosity and, above all, stimulating the student to think8.

The teacher teaches from his experience as a student, inspired by his former teachers. [...]is based on historically constructed practices, outlining representations of the profession of teacher established in common sense. It is a very present process in university teaching, since the teacher of this level of education, usually not having professional training for the teaching profession, tends to repeat naturalized practices in their culture9.

However, it is necessary that the teachers overcome the difficulties that the teaching practice presents, which seem to be more present at the beginning of their professional trajectory1,2; There is a need to explore the situation of university teachers and details of their daily work so that they can contribute to the improvement of the training offered at this level of education. In
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addition, other major challenges of higher education are related to problems faced in Brazil, such as: broadening access and greater equity in access conditions; quality training; diversification of courses and levels of training; qualification of teaching professionals; guaranteed funding, especially for the public sector; employability of trainees and graduates; social relevance of the programs offered; and stimulating scientific and technological research. The overcoming of these difficulties can be achieved by means of questions about the beginning of the teaching experience, about what the differences are between the ones with the longest time and the shortest time of action in the experience and practice of the profession, along with the relations between the different agents (students and teacher) in the process of professional training.

For this purpose, this study aimed to evaluate, through an open-question questionnaire, the perception of teachers of the Dentistry course of the State University of Ponta Grossa, regarding the main difficulties faced and the essential skills for the exercise of the higher teaching profession. Teachers were divided into two groups: a) less than 5 years’ teaching time and b) over five years’ teaching time; carrying out a descriptive and comparative analysis of the responses received by the two groups.

2 METHODS
Participants
This study was approved through opinion nº 1,616,341 by the Commission of Ethics in Research (COEP), State University of Ponta Grossa. After the signing of the free and informed consent form (TCLE), forty-seven professors of the undergraduate course in Dentistry of the Ponta Grossa State University participated in the study. From these, ten teachers had been teaching for less than 5 years in higher education, while 37 teachers had over 5 years of experience in the profession. To explain the research objectives, there was a previous contact with the teachers to request their collaboration in completing the questionnaire and scheduling the data collection. The study participants were those who agreed to participate in the study and those who had availability of time and ease of contact.

Instrument and procedures
To carry out a qualitative research, a previous investigation was made to identify the difficulties of teachers in higher education, and then a questionnaire was elaborated. For the classification of the time of the teachers’ performance into less than 5 years or more than 5 years in the higher education teaching, an item was added at the end of the questionnaire, in which the teacher should indicate the corresponding time of action. The questionnaire was validated by specialists, and small changes were made, following the guidance of the evaluators. After the adjustments, the questionnaire was finalized to be applied in the study.

The questionnaire addressed aspects related to the challenges and perspectives of didactics in higher education with open questions, which were: 1) What are the greatest challenges encountered by you when you move from the position of a dentist to that of a teacher at a Higher Education Institution? 2) What are the greatest difficulties that a higher education professor of the dental course faces? 3) List three essential skills for teaching in higher education; 4) How long have you been working as a lecturer at the University? The relevant theme was approached offering the participants the freedom to construct a narrative, associating it to other themes that are also relevant in their personal experience.

The participating teachers were identified by

the letter D, followed by the number corresponding to the chronological order of participation and, finally, the letter indicating the time of teaching in higher education: letter "a" being indicative of less than 5 years and letter "b" more than five years. Thus, D3a refers to the third teacher to complete the questionnaire in the group of teachers with less than 5 years of teaching and D2b refers to the second teacher to complete the questionnaire in the group of teachers with more than 5 years of experience.

After the data collection and transcription of the questionnaires, the information was analyzed in a descriptive way, in relation to the theme found in the content, and a pre-analysis was carried out by means of the general reading of the material, followed by the exploration of the material, its classification into categories and, finally, the treatment and interpretation of the results obtained.

3 RESULTS

The sample consisted of 47 teachers from a public institution with a mean age of 46.8 years. The characteristics are shown in table 1.

Table 1. Characteristics of participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of work as a university professor</td>
<td></td>
</tr>
<tr>
<td>Less than 5 years</td>
<td>10</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>37</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>22</td>
</tr>
<tr>
<td>Male</td>
<td>25</td>
</tr>
<tr>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>10</td>
</tr>
<tr>
<td>PhD</td>
<td>36</td>
</tr>
<tr>
<td>Full Professor</td>
<td>01</td>
</tr>
<tr>
<td>Weekly Workload</td>
<td></td>
</tr>
<tr>
<td>20 hours</td>
<td>08</td>
</tr>
<tr>
<td>40 hours</td>
<td>12</td>
</tr>
<tr>
<td>Exclusive contract</td>
<td>27</td>
</tr>
<tr>
<td>Subject taught</td>
<td></td>
</tr>
<tr>
<td>Dentistry</td>
<td>9</td>
</tr>
<tr>
<td>Prosthesis</td>
<td>7</td>
</tr>
<tr>
<td>Periodontics</td>
<td>5</td>
</tr>
<tr>
<td>Pediatric Dentistry</td>
<td>4</td>
</tr>
<tr>
<td>Collective Health</td>
<td>4</td>
</tr>
<tr>
<td>Endodontics</td>
<td>3</td>
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<tr>
<td>Surgery</td>
<td>3</td>
</tr>
<tr>
<td>Integrated Clinic</td>
<td>2</td>
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<tr>
<td>Occlusion</td>
<td>2</td>
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<tr>
<td>Orthodontics</td>
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<td>Pathology</td>
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<tr>
<td>Implantology</td>
<td>1</td>
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<tr>
<td>Microbiology</td>
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<td>Pharmacology</td>
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<td>Radiology</td>
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</tr>
</tbody>
</table>
After analyzing the answers of the participants of the research, their conceptions regarding teaching in higher education were organized and interpreted. In each question, the reports were transcribed with the aim of exemplifying the most frequent and / or most divergent answers.

1. What are the greatest challenges encountered by you when you move from the position of a dentist to that of a teacher at a Higher Education Institution?

In the group of teachers with more than five years of practice, the answers were diverse, with reports even of having no difficulty in the transition. Among the challenges cited are: the responsibility to train a professional, the motivation of students to perform humanization in dentistry, the realization of the teaching-learning process and the acquisition of confidence in the work being developed.

D7b: "No difficulty. I loved the transition."
D10b: "Motivate students with regard to humanization in dentistry."
D17b: "One of the biggest challenges is always thinking about giving a good lesson, getting the teaching-learning process to occur."
D22b: "Mastery of a class of students is quite challenging, whether in relation to behavior, to maintaining attention or to the process of teaching and learning itself."
D28b: "Responsibility, fear of not being able."
D36b: "Challenges were related to city (state) change; adaptation to standards."

On the other hand, the answers of the professionals with less than 5 years of performance were more homogeneous, mainly emphasizing the relationship with students, regarding the establishment of a hierarchy to enable the teacher to demand from students and to be respected by them. In addition, they cited insecurity and balancing theory and practice with the degree of requirement of the student.

D2a: "I think it was a break-even point between the charging/learning requirement and the personal relationship with the students."
D5a: "My greatest difficulty was to put myself at a level of hierarchy capable of demanding attitudes and being respected."
D7a: "To have the respect of the students, since I was almost the same age as them."
D9a: "I believe that insecurity is an important difficulty at this time of transition mainly because it is the moment that your way of presenting the content will be tested in practice. In addition, beginner professors believe that it is their duty to know everything about the subjects addressed, something that only time will deconstruct, since learning is constant."
D11a: "Pass on knowledge without seeming banal."

Analyzing the answers, we observed a difference between the reports of teachers with more or less experience. For the most experienced teachers, the main challenges were related to the expected results of their performance, that is, the teaching-learning process, training professionals with a humanized view of dentistry. On the other hand, the less experienced teachers pointed to the challenges related to their own performance in relation to the relationship with the student in the classroom and the balance between theory and practice. The challenge cited by both groups was the...
attainment of professional confidence.

2. What are the greatest difficulties that a higher education professor of the dental course faces?

The participants' responses revealed that the obstacles faced by those with more or less teaching time were very similar. They elected the two main ones: students' lack of interest and lack of adequate infrastructure and support material to teach the classes. A reported difficulty, very specific in the dental area, is about being able to train a professional that combines theoretical knowledge with manual skills. Other points discussed by the teachers were the number of students in each class and the difficulty of communication. Only one teacher said he was not able to answer that question

D5a: "It is the physical environment such as lack or limitation of classrooms, lack of maintenance of work equipment."

D6a: "Lack of ability to transfer theory to practice, they think that the subject they have already completed will never be used again. They cannot combine the knowledge of the various subjects and cannot bring them to practical use. For them, it is all very abstract. Students at very different levels of learning. Lack of financial resources to acquire necessary equipment."

D7a: "To make students understand that course subjects are not inert, independent or static since they are directly related to the care of another human being."

D9a: "Because dentistry is an area of knowledge that requires practice, conciliating theoretical content and research with the clinical skill of the clinic becomes a challenge. For the Collective Health, which is my area of action, the challenges in dentistry are even greater, since students' disinterest is observed routinely, since it addresses topics which are out of the clinical practice, which is highly revered by the undergraduates."

D2b: "Lack of support material to teach classes, disinterest on the part of most of the students."

D3b: "The biggest difficulty is not getting the students to learn, I guess that's not the big point. The greatest difficulty we have today is to make students acquire competence for the development of activities. To make the student apply what they have learned, acquiring the skills and abilities to solve the problems that they will encounter, so that they do not need a teacher to be able to tell them what to do."

D7b: "Lack of financial resources and adequate infrastructure."

D18b: "Infrastructure due to lack of working condition."

D27b: "The behavioral control of the student. Disability in basic training."

3. List three essential skills for teaching in higher education.

Regardless of the time of performance, the skills most cited by teachers as essential to the practice of the profession were patience, didactics, knowledge, communication and the need for constant updating. In addition, they also mentioned: creativity, good relationship with the students, clarity and attractiveness to transmit knowledge, humility and with that do not be afraid to make mistakes, perseverance, charisma, and ability to correlate the subjects.

D1a: "Patience, good communication, creativity."

D2a: "Integrating related subjects,
transmitting knowledge in a clear and accessible way to students, readiness to keep up to date.”
D4a: "Patience, didactics, having good interpersonal relationships (student and faculty)."
D11a: "Patience, ability to communicate and taste for study."
D2b: "Not being afraid of making mistakes, trying to use teaching practices that stimulate the student's autonomy, trying to effectively reconcile the pillars: teaching, research and extension.”
D4b: "Patience, didactics, desire to be always studying and learning."
D10b: "Dedication to always want to update, to understand individual differences within a single room, to make the lesson attractive even to those who do not really identify with the subject and be creative."
D18b: "Patience, perseverance, tolerance."
D31b: "Full knowledge of the area taught. Didactics and willingness to teach. Integration, sensitivity and patience with students."

4 DISCUSSION
The relatively recent consolidation of postgraduate studies in Brazilian universities has attracted interest in teachers with advanced training to dedicate more to postgraduate studies, leaving the undergraduate degree to younger and less qualified professors. In view of this, undergraduation has undergone discredit and disregard for the more experienced and often more educated teachers13.

Thus, both groups, with more or less teaching time, have faced challenges in the professional practice, sometimes by the lack of preparation of younger teachers, by the saturation of some teachers with more experience, or by the increasingly challenging task of being a university teacher in Brazil, due to the uncertainty of the country and the different expectations created by the modern and transforming educational environment13-15.

According to Guarnieri, in 200516, in a critical perspective, the beginning of teaching is seen as a clash with reality, especially in relation to curricular content and students, generating a strong insecurity. Nóvoa, (2007)7, stated that the first challenge of the teacher in higher education is to put into practice the idea of a better organization of the teaching profession, that is, the teacher in front of a classroom associated with the students' attentive eyes on their movements.

In the present study, when teachers were questioned about the major challenges encountered at the moment of moving from student to teacher position, divergences were observed in the responses of teachers with less than five years of teaching in higher education compared to teachers with more of 5 years of teaching. The younger group reported two main points: the meeting of the balance between theory and practice and the level of hierarchy between teacher-student. This theoretical-practical balance is challenging for the teacher, since Lisita, (2006)17, already affirmed that teaching is a theoretical and practical activity transforming reality, rather, it is necessary to analyze what happens with teaching inside and outside the classroom and how it relates to the social function of work.

In the dental area, this challenge becomes even greater, since the student need this theoretical-practical combination in theoretical, laboratory and clinical activities from the beginning of their education, so that trained
professionals can be enabled to carry out research and their functions in dental practice, based on what they have learned in theory18. Fernandes and contributors, (2003)19, affirmed that pedagogical actions must find this balance to stimulate teachers and students to seek new knowledge in response to the questions posed by their practice.

Another important point reported by the teachers in this study is the establishment of the hierarchy level. From the pedagogical point of view, educators should not only instruct, but encourage students to make decisions and make observations. Teachers being facilitators for the students, so that students develop skills and attitudes. "What you cannot do is lose sight of the differences of knowledge between these two subjects of learning (teacher-student natural hierarchy)20."

On the other hand, for the group of teachers with more than five years in teaching, an important item observed was the responsibility of training professionals. It can be said that this responsibility of the teacher is the ability to train people to produce knowledge and make it accessible to the society21.

When the responses between the groups of this study were evaluated, the word insecurity reported by some teachers was observed. This insecurity usually occurs at a time when the content exposed will be tested in practice. Isaia & Bolzan (2008)22 observed some important perceptions in the teacher-student transition period, such as: pedagogical solitude, insecurity towards students and the subject taught, both in terms of class management and mastery of subject content. Insecurity in the face of students or subject is a common characteristic early in the career, due to the lack of preparation of teachers for higher education, since when they receive this preparation, it is in the form of sparse subjects in undergraduate and postgraduate courses - graduation "lato or stricto sensu", and also, when it occurs, it is given in the form of a teaching internship, a superficial preparation for teaching at the higher level. It can be said, therefore, that this insecurity, reported by the teachers, is linked to both lack of experience and lack of support and theoretical foundation that guarantee them confidence against the challenge of the teaching learning process.

When teachers were asked about the major difficulties that a higher education teacher faces, there was an association of answers with the first question, such as the balance between technique and practice, noting that, besides being an initial challenge, this difficulty persists over time in the teaching practice.

Another response given by the teachers was the students’ lack of interest, which is in line with the results obtained in the research carried out by Franco (2013)23, in which most of the teachers interviewed also cited students’ lack of interest, which can be attributed to the students' lack of preparation to follow the lessons. In his study Franco points out some of the teachers' statements, such as: "students do not know how to write anymore, they cannot communicate their ideas"; "They do not know what they are doing at the university! Most do not read, do not study and do not want to learn. " This lack of interest may be due to the opening of new places and new courses, resulting in exhausted teachers with a new reality: students who did not have opportunities to become readers, become critical, and seek science in an interested way, as reported by Charlot in 200624. However, it is important to emphasize that teaching is also characterized by the role of the teacher in awakening in the student the interest to seek more information 25.

Oliveira (2006)26 calls the disinterest and demotivation of the students, as a teacher
"malaise" related to the professional environment of the teacher. That said, we associated it with another difficulty found by the teacher in this study, that was the physical environment and lack of resources. Exposure of teachers to a poor working environment, lack of human and material resources, violence in the classrooms and physical exhaustion, will favor a psychological erosion of the educator. In this answer we must consider that the research was conducted in a public university, which has a greater precariousness of work, devaluation of the image of the teacher, low salaries and lack of material resources. All these situations constitute factors that can generate overloads of physical and mental work, bringing consequences to the satisfaction, health and well-being of teachers and students.

In the question related to the abilities in the exercise of teaching in higher education, the most cited word was "patience", since this is not a practical skill but a quality, a virtue to be practiced by the teacher because as already mentioned above, there are several factors that negatively affect the teaching and learning process. Some interviewed teachers reported more on their characteristics than on skills, according to Goldberg (1974), skill is the ability to know how to do something through orderly actions to achieve a goal. This ability is developed through the learning of techniques, methods, rules, strategies, exercises and training, which can be derived from innate or developed personal characteristics. Therefore, patience is a personal characteristic that assists in the development of certain abilities, such as "transmitting knowledge clearly," according to D2a.

Another skill cited by the interviewees was didactics, essential for a higher education teacher. Didactics is "the science and art of teaching". As art, didactics does not only aim at knowledge, but seeks to apply its own principles in educational instruction. Other responses related to didactics in this study were: "to make class attractive even for those who do not identify with the subject" and "didactic for the construction of knowledge" (D5b). Teachers need to take into account the environment in which the students live and adapt to it, seeking their culture and reality. For this, it is necessary a lot of creativity, another skill mentioned by the teachers interviewed, indispensable for every professional who does not want to make their daily routine boring and without purpose, besides creativity, they also emphasized transfer of knowledge, didactic transposition, since the teacher cannot simply reproduce the contents of the training programs.

Santos (2010) points out that the correct practice of higher education teachers must be supported by three main points: content of the area in which they are specialists; their vision of education, of mankind and of the world; and the skills and knowledge that will allow an effective pedagogical action in the classroom. Thus, according to the dictionary, skill is the "quality of one who is skilled; ability, dexterity, agility: ability for manual labor". This conceptualization is in accordance with what the author Perrenoud (1999) wrote, that is, skill is a sequence of operative modes, a series of mental procedures that the individual triggers to solve a real situation where he needs to make a decision. In the dental area, a good example is when a student of dentistry is learning to restore a tooth using the manual work ability that they already have to return the anatomy to that tooth.

Thus, based on this study, we intend to take the difficulties pointed out by the teachers, to the meetings of the Department of Dentistry of the University, so that everyone is aware and can
jointly develop strategies to tackle the challenges encountered.

Also, the study confirmed the importance of the teaching role in higher education, in which according to Zabalza (2004)\(^5\), three dimensions must be taken into account: professional dimension, such as the construction of identity and the dilemmas of professional practice; personal dimension, sources of satisfaction and dissatisfaction in the work that accompany the teachers, situations and personal problems that accompany the exercise; and administrative dimension: contractual conditions, incentives and obligations linked to the professional activity.

5 CONCLUSION

With this study, through the analysis of the questionnaires, it was observed that the professors face difficulties in the teaching practice, even those with more time of teaching. The need of the teacher to keep up to date was also noticed, and that teacher training aiming at qualifying educators rather than specialists is a way to reduce the insecurity that many professors reported as a challenge in the higher education teaching career.

RESUMO

Didática no ensino superior: desafios e perspectivas dos docentes de Odontologia da Universidade Estadual de Ponta Grossa

O objetivo deste trabalho foi avaliar a percepção de docentes do curso de Odontologia quanto as principais dificuldades enfrentadas e as habilidades imprescindíveis para o exercício do magistério superior. Para tal, foi realizada uma pesquisa qualitativa com 47 professores do curso de Odontologia da Universidade Estadual de Ponta Grossa, divididos em dois grupos: a) tempo de atuação docente inferior a 5 anos; b) tempo de atuação docente maior que 5 anos. Após a validação do questionário, este foi encaminhado para os participantes da pesquisa responderem questões abertas sobre o exercício do magistério no ensino superior. Posteriormente à coleta dos dados, foi feita a análise descritiva das informações, exploração do material e interpretação dos resultados. Nos desafios enfrentados, os docentes com mais de 5 anos de atuação citaram a responsabilidade em formar um profissional, dificuldade em motivar os alunos e aquisição de segurança para docência como os principais. Por outro lado, docentes com atuação inferior a 5 anos apontaram o relacionamento com o aluno, insegurança profissional e obtenção do equilíbrio entre a teoria e a prática como principais desafios. Com relação às dificuldades enfrentadas atualmente, as respostas foram semelhantes para os dois grupos, sendo a falta de interesse dos alunos, falta de infraestrutura e de material de apoio para ministrar as aulas, as mais citadas. As habilidades mais mencionadas pelos professores como essenciais para o exercício da profissão incluíam a paciência, didática e necessidade de constante atualização. Pode-se concluir que os professores enfrentam dificuldades na prática docente, independentemente do tempo de atuação.


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