

# Dentistry training: challenges for teacher development and effective inclusion in the Unified Health System

Talitha Rodrigues Ribeiro Fernandes Pessoa\*; Luiz Roberto Augusto Noro\*\*

\* PhD, Adjunct Professor, Department of Clinical and Social Dentistry, UFPB

\*\* Post-doctorate in Education, Associate Professor, Department of Dentistry and Graduate Program in Public Health, UFRN

Received March 12, 2019. Approved January 05, 2020.

## ABSTRACT

The difficulties faced in implementing the National Curriculum Guidelines for undergraduate Dentistry courses are reflections of the difficulty of operating changes in an educational system that has remained hostage to the minimum curriculum for decades and with ideological resistance in adhering to proposals based on the production of care. To face these difficulties, the present study sought to verify the applicability of evaluation criteria for training in Dentistry with a focus on training focused on Brazil's Unified Health System and the pedagogical approach. A documentary study of the Pedagogical Projects of the Courses, application of a matrix of criteria, and an interview with the coordinators of four Dentistry courses from public and private institutions was carried out. The coordinators' perception became a privileged space for reflection on the advances and limitations of the pedagogical project, serving as a self-assessment process on the main challenges to be faced. There is a clear need for new regulations providing for the mandatory formal bond with SUS, especially in the curricular internship, as well as strategies that effectively contribute to the permanent teaching development, enabling the construction of integrated curricula and effective incorporation of active learning methodologies.

**Descriptors:** Education, Dental. Curriculum. Learning. Unified Health System.

## 1 INTRODUCTION

The difficulties faced in the implementation of the National Curricular Guidelines (DCN) of undergraduate Dentistry courses are reflections both of the complexity of making changes in an educational system that has remained hostage to the definitions of the minimum curriculum for decades, and of the ideological resistance in adhering to proposals that based on the production of care in the broadest sense of the concept of health, as opposed to the hegemonic rationality based on the disease and the production of procedures<sup>1</sup>.

The strategic role could be played by graduate programs, if not with the opening of research lines in education, at least reviewing the place and the dimension that the discussion about formation has occupied in their curricula since there is almost a negligence of issues that point out the relevance of pedagogical training in this context<sup>2</sup>. One cannot expect a spontaneous transformation of academic institutions in the direction indicated by the DCN to stimulate changes in professional training in health according to the interests and needs of the population, contradictory to the hegemonic model of training in Dentistry today<sup>3</sup>.

To achieve this improvement in the quality of training, it is essential to adopt evaluation mechanisms that can induce the incorporation of the DCN assumptions in Dentistry courses. Broadly speaking, this strategy has been defined over time through the National Higher Education Assessment System (SINAES), which has self-assessment as a fundamental figure<sup>4,5</sup>.

Only a participatory self-assessment process, which accompanies the implementation of actions, can adapt them to achieve effectiveness and impact with the changes required in the formation of a differentiated professional to meet the health needs of the Brazilian population<sup>6</sup>.

Seeking to signal alternatives that go beyond official assessments, allowing higher education institutions themselves to assume a leading role in their educational proposal, The objective of the present study was to verify the validity and applicability of self-assessment criteria for training in Dentistry based on the principles of the National Curriculum Guidelines, especially in training aimed at the Unified Health System and the pedagogical approach.

## 2 METHODS

This study was carried out in three interdependent phases, in which four coordinators of Dentistry courses participated, two from public institutions and two from private institutions.

The first phase consisted of filling in a previously validated matrix of criteria, with aspects related to general training, care guidance, teaching-service integration, and pedagogical approach<sup>7</sup>.

The second phase consisted of the analysis of the pedagogical project of the participating courses, which allowed the understanding of the context, the curricular organization, and the pedagogical proposal.

In the third phase, interviews were conducted with coordinators, which were evaluated through content analysis<sup>8</sup>, having a semi-structured interview script as a reference, with questions and aspects to be detailed for each of the sub-dimensions evaluated in the first phase of the study. Strategically, for this stage the dimensions “teaching-service integration” and “pedagogical approach” were deepened, considering that they are the most challenging ones in making the DCN effective.

As for the ethical principles of research in human beings, the project followed the guidelines of Resolution 466/2012 of the

National Health Council, approved by the opinion 292.805 and Certificate of Presentation for Ethical Appreciation (CAAE): 13989213.0.0000.5292 of the Research Ethics Committee of Onofre Lopes Hospital.

### 3 RESULTS AND DISCUSSION

The analysis of the dimension's criteria matrix allowed a first approximation of the conditions of the analyzed Dentistry courses, serving as a reference for directing the research in the two subsequent phases.

The evaluation of the Pedagogical Projects of Course (PPC) represented a great challenge since all had a very similar structure. All the PPCs evaluated pointed out the DCN as a guiding axis in its construction and, mainly in aspects related to the profile of the graduate and the general and specific skills and abilities. All of them presented the fulfillment of 20% of the total workload for the curricular internships, however, in the four courses this workload includes the integrated clinics of the course, and in some of them, they represent most parts of the internships. Although the PPC emphasizes the importance of training aimed at SUS, as recommended by the DCN, the way students are inserted and the development of activities is not clearly explained in pedagogical projects.

The possibility of finding an agreement between the PPCs and the DCN beyond their writing in the project text was more evident when evaluating the curriculum structure. A closer look at this PPC component allowed the visualization of curricular integration and/or flexibility by observing the way the components are offered.

Concerning the pedagogical approach, it was frequently verified in the PPC the indication for the use of active, interactive, and student-centered methodologies as the subject of learning, and the teacher in the role of learning

facilitator with responsibility for the technical and pedagogical conduct of this process. Still, strategies such as education through research, collective and multidisciplinary experiences, diversification of learning scenarios are pointed to this innovation. However, few specifications were found on how these strategies are implemented in the daily routine of courses, being restricted to the mention of some methodologies, such as problematization.

Regarding the evaluation of the teaching-learning process, it was found that the proposed learning evaluation does not follow the innovations related to active methodologies, restricting them to the current institutional norms emphasizing the instruments used (scale of grades, frequency, and the number of records).

It was possible to identify in the PPC notes about the need to face the challenges for the implementation of teacher qualification policies that go beyond *stricto sensu* training and include pedagogical updating.

In the third phase of the study, aspects highlighted in the PPC and concepts emitted in the initial matrix could be deepened, considering the difficulties in operationalizing what is proposed in the document. For a better understanding of these analyses, they were defined in two categories, represented by the dimensions Teaching-Service Integration and Pedagogical Approach. Coordinators are identified from C1 to C4.

#### Category Teaching-Service Integration

Concerning internship activities, the integration of teaching and service was verified by the establishment of agreements between HEIs and services, in addition to the planning and agreement of activities

*“We have an agreement between the university and the state government, and this is what regulates our service to the*

*regional CEO ... and concerning to the city hall, there is an agreement between the university and the city hall” (C1)*

The activities carried out during the internships are very diverse and comprise collective and individual activities, from disease promotion and prevention in the first semesters of the course to clinical care carried out in recent years.

*“Until the 6th semester, they are conducted to direct educational activities, health promotion. But all clinical activities, that I need the supervision of the internship teacher, the dentist hired at the service of origin, the dentist at UBS or the dentist at the school that will do the supervision, there only in the last year...” (C4)*

Undoubtedly, internships are fundamental for in-service training, especially when considering SUS as a real learning scenario. The approach to Primary Care has allowed both the training of professionals who can adequately respond to the needs of the population and social commitment provided by SUS, as well as for a better understanding of the care process<sup>9</sup>. Other advantages are the achievement of autonomous work, bringing dentistry students closer to the reality of services, other health professionals and community care<sup>10,11</sup>.

Within the criterion “Experiences in SUS”, several scenarios could be identified as an internship field, with limitations mainly regarding the insertion of students in the tertiary level of care, but it was emphasized that, as far as possible, there is integration between the experienced levels. In one of the courses evaluated, all clinical activities take place within the SUS.

*“At the primary and secondary level, yes, almost entirely. The tertiary is a little more complicated because we didn't have*

*a service that was specific tertiary care until then.” (C1)*

Despite clear advances concerning teaching-service integration, it was not a consensus among the research coordinators that students can understand the complexity of SUS in its organization, principles, and guidelines, often worked only in the area of public health.

*“The aspects related to SUS are worked out theoretically in the classroom, and even for us who have much less experience in public health management.” (C4)*

It is no longer possible to think about the change in the training of health professionals without the discussion about the teaching-service articulation with the community. It is essential to understand that in health education there is a process that should allow the opening of paths, which, in addition to identifying the limitations, is committed to the consolidation of the SUS and the social demands<sup>12</sup>.

### **Category Pedagogical Approach**

It was found that the more active and problematizing methodologies are worked on and implemented in the course, the greater the tendency to perceive changes in the conduct of the learning process, the opposite being also true.

*“Today, we work a lot with active methodologies, but I wouldn't know if it is the predominant one. Because we have replaced this traditional teaching-learning model.” (C2)* *“The predominant one is still the lecture, discussed as far as possible.” (C1)*

However, the tendency of the courses to work with pre-defined models of active methodologies was not verified, always being at the judgment of the teacher the methodological definitions to reorient the conduct according to your initiative and creativity.

*“...so we made the option to work more with the methodology focused on problematization because it would depend much more on the initiative, creativity, teacher involvement than an institutional determination.” (C2)*

However, even in the face of new approaches, some aspects that underlie active methodologies were still incipient, such as, for example, providing opportunities and/or stimulating student autonomy and accountability over their learning process.

*“We still have this as a very fragile thing, I don't know if, from the student's profile, or by the student-teacher relationship, we see that this autonomy of the search for the student's knowledge is not something like the way we wanted.” (C2)*

Another aspect that draws attention due to the resistance of the courses to changes with regard to teaching methodology is the relationship between theory and practice, in which there was a predominance of the traditional dichotomy and fragmentation of contradictory knowledge to the integrated and problematizing training that is proposed nowadays. In theoretical activities, the main approach remains the lecture, most of the time, with the guidance of only one teacher for a large number of students.

*“Usually, the theory comes first. We try to integrate or sometimes anticipate the practice, see what the problems are and address them in theory, but our schedules in college they do not allow” (C1)*

Active methodologies cannot be confused with merely a new teaching technology. It is really about understanding the learning process that allows all actors involved, especially students and teachers, to be protagonists. For this, the teacher's posture should privilege the exercise of the student's freedom of expression

and action, based on critical reflection and research, allowing praxis that contemplates the collective construction of learning<sup>13</sup>. The student is encouraged to seek solutions to impasses, promoting his own scientific and social development<sup>14</sup>, producing both intrinsic changes and in their relationship with users and the general community<sup>15</sup>.

Regarding the curricular integration recommended by the DCN, there are integration initiatives in the new curricular proposals, still very limited with the basic cycle and with the humanities, but more present among the dental specialties, mainly through the integration clinics of increasing complexity over the course.

*“It is a very fragile integration because we do not have integration of the basic areas of the course. The other areas of human sciences inform the course, but they are not part of the course, these disciplines are punctual where they are, there is no type of project, an articulation together. I see that the integration took place between specialized clinics.” (C2)*

In practical activities, greater emphasis is placed on laboratory and clinical spaces, and there was a trend to maintain the traditional sequence in technical training in dentistry: theoretical classes, activities in pre-clinical laboratories, and finally the clinics.

*“In the collective health disciplines, I think there is a theory concomitant with the practice regarding the visitation of services. In the others, more technical disciplines, have theory and students go to the laboratory or clinical laboratory” (C1)*

In the clinical activities of the course, the prioritization of qualified planning of clinical cases before the execution of procedures was reported, even though the latter is still a practice for the clinical training of the student.

*“At least it has the guideline that no treatment is performed before planning. Not planning as a sequence of operative acts, but also with studies of retaking the literature to support the decision.” (C2)*

However, it was found that, even in integrated clinics, the teaching guidance is based on the teacher's area of knowledge, which is opposed to the perspective of integrality assumed in the preparation and execution of clinical plans. In practical activities, the relationship is usually one teacher for every ten students, but this can be affected by the fact that each teacher only guides his specialty in integrated clinics.

*“...We have not built this effective integration over these years of experience. Then it turns out that each specialty enters in a moment of training. Very little has been achieved in this articulation...” (C2)*

The perspective of integrality in student education is one of the biggest challenges considering the education of dentistry teachers based on clinical specialties. This approach results in teaching restricted to the techniques of discipline, also strongly influenced by the teacher's clinical professional practice, most of the time endorsed by his performance in this type of labor market<sup>16</sup>.

Regarding the teacher's role, the predominance of a centralizing teacher's role was noticed, even though some advances are already noticeable.

*“I see that it is a role that is being built. We have a transition process of that teacher we have internalized, that traditional teacher, holder of knowledge, that of transmitting and we are becoming that teacher who is the mediator of knowledge, who stimulates the student, who arouses interest and who in a certain way it works with the individual potential*

*of each student. (C2)*

The greatest difficulties in changing teachers' posture seemed to be related to their previous experience in experiencing traditional teaching in their training, in addition to the feeling of mastery and convenience of being a teacher using traditional teaching methodologies. Another difficulty pointed out concerning the teacher's role was the multiple attributions that must be assumed by the teachers in the institutions.

*“The traditional teacher is very comfortable in that sense, which is little questioned, we are less susceptible to issues that we do not control... it is difficult to break the authoritarianism that we bring with us.” (C2)*

Therefore, it was found that the teacher has full autonomy to conduct the teaching processes in their curricular components because of the legal and institutional guidelines established.

*“Despite having a menu, having a PPC, but then the role of the coordinator is to check if those contents that are on the menus are present in the disciplines.” (C2)*

It was also possible to verify the perception that the role of the teacher in professional training is also of an ethical and humanistic nature.

*“Our actions have spoken much more than what is on paper. I think the student reflects a mirror of his faculty, and he will become what his faculty transmits to him as a man, as a human being.” (C4)*

Questions were raised about the insufficient training of dentists to practice teaching, even those who completed stricto sensu training. Additionally, difficulties were also raised regarding the training for the clinical orientation of these research professors.

*“Teachers start to be “teachers”,*

*sometimes very young and usually with research training. So, I think that dentists graduate and conclude their master's, doctorate, there is no teaching discipline in the postgraduate course.” (C1)*

Undoubtedly, the dentistry teacher with his limited pedagogical training, when faced with the challenge of providing adequate and meaningful experiences capable of taking the student to an investigative attitude of curiosity before the world<sup>17</sup>, practice to which he was not exposed in his formative process, most of the time he chooses to repeat the form and values that were transmitted to him in his formation. It is clear the radical need to re-signify the teacher's role since he should appropriate pedagogical knowledge of didactics, the strategies for responsible teaching, the subjective dimensions of students as active subjects of their learning, the educational context, objectives, purposes, and educational values, in addition to the philosophical and historical foundations of Education<sup>16</sup>. Understanding that the health teacher seeks coherence with his role as an educator, he agrees with the perception of Silva and Ferreira<sup>18</sup> for whom “the road now has more curves and has become longer, but the goal may not be just to reach the destination but enjoy the trip”.

Teacher development, in addition to a professional career, must be integrated with the possibility of revolutions at different times in a teacher's life, associated with the perspectives of human development<sup>19</sup> and formal teacher training, including collaborative work, in a work context to challenge professional cultures marked by isolation<sup>20</sup>.

Still, from the perspective of the pedagogical approach, the traditional model for assessing student performance in the learning process was predominant, in which written tests and the assignment of theoretical and practical grades are used. Some initiatives for the

implementation of a more coherent evaluation with the pedagogical proposal recommended in the DCN and in the PPC of the course were signaled but still in a very incipient way.

*“This varies according to the disciplines. In general, they are tests, theoretical and practical evaluations. In clinics, the assessment is done daily, teachers launch concepts, and these concepts are taken into account to obtain a grade.” (C3)*

By reducing the evaluation process to a set of instruments to measure knowledge or accumulation of information, the perspective of evaluation as an inducer of significant learning is drastically reduced. It is, therefore, fundamental to reflect on the real characteristics of an evaluation process that concerns our pedagogical practices<sup>21</sup> and not only promoting responses to the institutional process, allowing consistency between the achievements made possible by collaborative learning, clearly identifying investment by teacher and student to achieve the desired goal. For this, the evaluation must be seen as a daily, continuous, and integrating process of educational action, which respects the student in his learning process and stage of development<sup>22</sup>.

Curricular flexibility is mainly provided by the provision of optional curricular components or by taking advantage of the workload of complementary activities carried out at the discretion of the students. It was possible to notice that sometimes these resources are weakened in the courses and, at other times, enhanced.

*“Currently, any activity that our student does, they are counted hours, we don't have a limit, although he has to do at least 100 hours, he doesn't have a ceiling. So we compute all the certificates he takes: research project, extension project, community action, participation in*

*congress organization, presentation of papers, everything he takes is used and played in the system as a complementary activity.” (C2)*

Many barriers could be perceived in the exercise of curricular flexibility, mainly related to the physical structure of the course and the lack of time available by students to carry out other activities, either due to the high workload of the course or for personal reasons and interests.

*“Today we hardly manage to have this flexibility due to the difficulties we are facing with the physical space. As there is a difficult time, the grids are very tight; there is not much flexibility for that.” (C1)*

Curricular flexibility is one of the most interesting mechanisms to allow students to make their way, considering their interests and expectations, in addition to enabling the exercise of autonomy, both in the form of optional didactic components and in extension projects, research, and monitoring.

Finally, there was a clear gap in the results of the interviews between the pedagogical proposal expressed in the PPC and guided by the DCN and the reality performed in professional training in each course, in each area, in each curricular component.

*“A lot of what we put on paper, and we put it on paper as we believe it should be, when it comes to practice, I think that the personality of the faculty influences the action more than the word on the paper.” (C4)*

The present study did not have the objective of comparatively evaluating the participating courses, mainly considering that it is a sample for convenience, which makes quantitative analyses of this nature unfeasible.

#### 4 CONCLUSIONS

It was possible to identify the potential of

the triangulation of the methodological procedures used when providing greater clarity in the aspects observed in the preliminary filling in of the matrix, in the deepening of the documentary reading of the elements of the pedagogical project and the possibility of identifying elements with partial clarity, from the interviews.

Besides, in the coordinators' perception, it was a privileged space for reflection on the advances and limitations of the pedagogical project of their course, serving as a self-assessment process on the main challenges to be faced in the search for what is recommended in the DCN of Dentistry courses.

The results obtained made it possible to identify the importance of the pedagogical project of a Dentistry course for the development and conduction of all orientation strategies in the training of dentists. At the same time, as it is a document used not only for planning and structuring, but also as a reference for the regulation of courses (authorization, recognition and renewal of recognition), the PPCs of all courses guarantee the legality provided for in these processes.

When analyzing the dimension of Teaching-service integration, there is a clear need for new regulations that are consistent with the internship legislation and with the precept of considering articulation with the Unified Health System. For this, it is essential that this inclusion in the SUS is mandatory for all courses, with an adequate workload and institutional commitment that links the university to the services through an agreement, as already defined in the National Curricular Guidelines for undergraduate courses in Medicine<sup>23</sup>. Also, training in the Unified Health System must go beyond the curricular components linked to Public Health, considering all the dynamics of dental care, in addition to health promotion and disease prevention.



In the analysis of the Pedagogical Approach dimension, it was possible to verify that there are still several barriers that hinder principles foreseen for more than 10 years in the DCN of Dentistry courses. Such limitations have as the main element the lack of pedagogical training of teachers and course managers, most of the time limited to participation in isolated subjects in their graduate training. The courses (especially the Structuring Teaching Nucleus) must organize activities that effectively contribute to the permanent teaching development, allowing access to contemporary alternatives in health education, with the essential perspective of collaborative work among teachers, which favors strengthening interpersonal relationships and curricular integration, as well as coherence with the context experienced by the actors of the course, especially in the perspective of solving the main problems of the community assigned to it.

The construction of integrated curricula, with a strong contribution from the evaluation process in inducing the quality of learning, through the use of active learning methodologies that appeal to the understanding of the citizen role to be played by a health professional can only be achieved from the articulation of all these knowledge and practices.

## RESUMO

### **Formação em Odontologia: desafios para o desenvolvimento docente e efetiva inclusão do Sistema Único de Saúde**

As dificuldades enfrentadas para a efetivação das Diretrizes Curriculares Nacionais dos cursos de graduação de Odontologia são reflexos da dificuldade de operar mudanças num sistema educacional que permaneceu por décadas refém do currículo mínimo e com resistência ideológica em aderir a propostas que se baseiem na produção do cuidado. Visando enfrentar essas dificuldades, o presente estudo buscou verificar a

aplicabilidade de critérios de avaliação da formação em Odontologia com foco na formação voltada para o Sistema Único de Saúde (SUS) e na abordagem pedagógica. Realizou-se estudo documental dos Projetos Pedagógicos dos Cursos, aplicação de matriz de critérios e entrevista com os coordenadores de quatro cursos de Odontologia de instituições públicas e privadas. A percepção dos coordenadores configurou-se espaço privilegiado para reflexão sobre os avanços e limitações do projeto pedagógico, servindo como processo de autoavaliação sobre os principais desafios a serem enfrentados. É nítida a necessidade de nova regulamentação prevendo a obrigatoriedade de vínculo formal com o SUS, em especial no estágio curricular, assim como estratégias que contribuam efetivamente para o desenvolvimento docente permanente, viabilizando a construção de currículos integrados e incorporação efetiva de metodologias ativas de aprendizagem.

**Descritores:** Educação em Odontologia. Currículo. Aprendizagem. Sistema Único de Saúde.

## REFERENCES

1. Casotti E, Ribeiro VMB, Gouvêa MV. Educação em odontologia no Brasil: produção do conhecimento no período 1995-2006. *Hist Ciênc Saúde*. 2009; 16(4):999-1010.
2. Correa GT, Ribeiro VMB. A formação pedagógica no ensino superior e o papel da pós-graduação stricto sensu. *Educ Pesqui*. 2013; 39(2):319-34.
3. Haddad AE, Pierantoni CR, Ristoff D, Xavier IM, Giolo J, Silva LB. A trajetória dos cursos de graduação na área da saúde: 1991-2004. Brasília: Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira; 2006. 531 p
4. Lei no 10.861, de 14 de abril de 2004. Institui o Sistema Nacional de Avaliação da

- Educação Superior – SINAES e dá outras providências. Diário Oficial da União. 15 Abr 2004.
5. Polidori MM, Marinho-Araújo CM, Barreyro GB. SINAES: perspectivas e desafios na avaliação da educação superior brasileira. Ensaio: Aval Pol Públ Educ. 2006; 14(53):425-36.
  6. Lampert JB. Avaliação institucional nos cursos de graduação da área da saúde: avaliar o quê e para quê? Cadernos ABEM. 2009; 5:45-55.
  7. Pessoa TRRF, Noro LRAN. Caminhos para a avaliação da formação em Odontologia: construção de modelo lógico e validação de critérios. Ciênc Saúde Coletiva. 2015; 20(7):2277-90.
  8. Bardin L. Análise de Conteúdo. Lisboa: Edições 70, 2009.
  9. Forte FDS, Pessoa TRRF, Freitas CHSM, Pereira CAL, Carvalho Júnior PM. Reorientação na formação de cirurgiões-dentistas: o olhar dos preceptores sobre estágios supervisionados no Sistema Único de Saúde (SUS). Interface (Botucatu). 2015; 19(suppl.1):831-43.
  10. Toassi RFC, Davoglio RS, Lemos VMA. Integração ensino-serviço-comunidade: o estágio na atenção básica da graduação em Odontologia. Educ Rev. 2012; 28(4):223-42.
  11. Klelba ME, Colliselli L, Dutra AT, Muller ES. Trilha interpretativa como estratégia de educação em saúde: potencial para o trabalho multiprofissional e intersetorial. Interface (Botucatu). 2016; 20(56):217-26.
  12. Rego, C, Batista SH. Desenvolvimento docente nos cursos de medicina: um campo fecundo. Rev Bras Educ Med. 2012; 36(3):317-24.
  13. Munguba MCS. Educação na saúde: sobreposição de saberes ou interface? Rev Bras Prom Saúde. 2010; 23(4):295-96.
  14. Freitas CM, Freitas CASL, Parente JRF, Vasconcelos MIO, Lima GK, Mesquita KO, Martins SC, Mendes JDR. Uso de metodologias ativas de aprendizagem para a educação na saúde: análise da produção científica. Trab Educ Saúde. 2015; 13(suppl.2):117-30.
  15. Pedrosa IL, Lira GA, Oliveira B, Silva MSML, Santos MB, Silva EA, Freire DMC. Uso de metodologias ativas na formação técnica do agente comunitário de saúde. Trab Educ Saúde. 2011; 9(2):319-32.
  16. Franco LLMM, Soares EF, Martorell LB, Marcelo VC. O professor do curso de Odontologia: sua formação e os desafios frente às exigências atuais. Rev Prof Docente. 2009; 9(20):57-74.
  17. Medina-Moya JL, Prado ML. El curriculum de enfermería como prototipo de tejné: racionalidad instrumental y tecnológica. Texto Contexto Enferm. 2009; 18(4):617-26.
  18. Silva LHA, Ferreira FC. A importância da reflexão compartilhada no processo de evolução conceitual de professores de ciências sobre seu papel na mediação do conhecimento no contexto escolar. Ciênc Educ. (Bauru). 2013; 19(2):425-38.
  19. Gatti BA. Avaliação e qualidade do desenvolvimento profissional docente. Avaliação (Campinas). 2014; 19(2):373-84.
  20. Forte AM, Flores MA. Potenciar o desenvolvimento profissional e a colaboração docente na escola. Cad Pesqui. 2012; 42(147):900-19.
  21. Chaves SE, Ceccim RB. Avaliação externa no Ensino Superior na área da saúde: inquietações e a dimensão das margens. Interface (Botucatu). 2015; 19(55):1233-42.
  22. Guerra GKS, Machado LB. Representações

sociais de avaliação processual construídas por professoras. Ensaio: Aval Pol Públ Educ. [online]. 2011; 19(71):363-80.

23. Resolução CNE/CES no 3, de 20 de junho de 2014. Institui Diretrizes Curriculares Nacionais do Curso de Graduação em Medicina e dá outras providências. Diário Oficial da União. 23 Jun 2014.

**Correspondence to:**

Luiz Roberto Augusto Noro

e-mail: [luiz\\_noro@hotmail.com](mailto:luiz_noro@hotmail.com)

Universidade Federal do Rio Grande do Norte

Avenida Salgado Filho, 1787

59056-000 Natal/RN Brazil