Distance learning in teacher education: emergency, quality benchmarks, public policies, and the pedagogical practice

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ABSTRACT. This paper was inspired by the growth and appreciation that Distance Education (DE) has taken in recent decades in the training of teachers in Brazil. Our main goal is to point transformations regarding distance Education in Brazil, especially in teacher education. Through that, we brought what is being debated these last years about Distance Education. From the results we can say that current transformations in the Brazilian educational scenario, particularly in teacher training and distance education show us that they need to be better understood. Reflecting about many issues DE has, we may conclude that clearly we need more research to answer many of our continuing questions, especially regarding formative needs and teacher learning in the Distance Education context.

Keywords: distance education, teacher education, Brazilian educational scenario.

Educação a distância na formação de professores: emergência, referenciais de qualidade, políticas públicas e práticas pedagógicas

RESUMO. Este artigo foi inspirado pelo crescimento e pela valorização que a Educação a Distância (EaD) tomou nas últimas décadas na formação de professores no Brasil. Nosso principal objetivo é evidenciar as transformações da educação a distância no Brasil, sobretudo na formação de professores, de modo a trazer o que está sendo debatido nos últimos anos acerca da Educação a Distância. A partir dos resultados, podemos dizer que as atuais transformações no cenário educacional brasileiro, particularmente na formação de professores e na educação a distância, nos mostram que eles precisam ser mais bem compreendidos. Refletindo sobre as questões que a EaD possui, podemos concluir claramente que precisamos de mais pesquisas para responder a muitas de nossas perguntas contínuas, especialmente em relação às necessidades de formação e de aprendizagem da docência no contexto da Educação a Distância.

Palavras-chave: educação a distância, formação de professores, cenário educacional brasileiro.

Educación a distancia en la formación de profesores: emergencia, referenciales de calidad, políticas públicas y prácticas pedagógicas

RESUMEN. Este artículo fue inspirado por el crecimiento y por la valoración que la Educación a Distancia (EaD) recibió en las últimas décadas en la formación de profesores en Brasil. Nuestro principal objetivo es evidenciar las transformaciones de la educación a distancia en Brasil, sobre todo en la formación de profesores, a fin de traer lo que está siendo discutido en los últimos años acerca de la Educación a Distancia. A partir de los resultados, podemos decir que las actuales transformaciones en el escenario educacional brasileño, particularmente en la formación de profesores y en la educación a distancia, nos muestran que ellos necesitan ser mejor comprendidos. Reflexionando sobre las cuestiones que la EaD posee, podemos concluir claramente que necesitamos de más investigaciones para responder a muchas de nuestras preguntas continuas, especialmente en relación a las necesidades de formación y de aprendizaje de la docencia en el contexto de la Educación a Distancia.

Palabras clave: educación a distancia, formación de profesores, escenario educacional Brasileño.

Introduction

Brazil lives in a socio-educational moment for which teachers are being put into challenging positions and different contexts that encourage them to think and reflect about building different teaching practices.In this respect, during the last decade Brazil has experienced great social, historical, economical, and political advancement,

allowing investments to expand higher education. Within this context one of the strategies of Brazil's Government is to invest in Distance Education (DE) as a modality to democratize the Higher Education in our country (Nicolodi, 2012).

Thus, considering the many features Distance Education has, such as: to assist those who probably would not have the opportunity to earn a degree; and also given the fact that DE is expanding in Brazil and in the world as an instrument of democratization of higher education (Schlüzen Junior, 2013). This research aims to evidence transformations regarding distance Education in Brazil, especially in teacher education. This paper begins introducing a theoretical framework. With the purpose to bring what is being debated lately about Distance Education. After that, we divided our work in 4 parts: emergency, quality benchmarks, public policies, and the pedagogical practice in Distance Education. After discussing these four aspects, we highlight our concluding remarks.

Theoretical Frameworks

According to some authors, research on distance education has been subject to harsh and consistent critique (Bernard et al., 2004; Perraton, 2000; Zawacki-Richter, Bäcker & Vogt, 2009). Based on this, there is a need to create a theoretical framework with the emergency, quality references, public policies, and the didactic practice in Distance Education.

We know that distance education is not a new modality. However, it has been, by and large, poorly understood. Lee, Driscoll and Nelson, (2004) emphasize that "[...] understanding trends and issues in terms of topics and methods is pivotal in the advancements of research on distance education" (p. 225). Based on this, Clímaco and Neves (2003) bring a new approach about distance education, positing a reform in Brazil's University system:

> There are three major reasons justifying changes in higher education in Brazil. The first refers to democratization of access, the second, to contextualize the processes of teaching and learning and the third, to contribute to the solution of social problems and sustainable development of the country (Clímaco & Neves, 2003, p. 191, free translation)[1].

To clarify the definition of distance education just a little further, we found in Fidalgo and Machado (2000) unedifying response. They say that distance education is an

> Educational process that implies the absence of barriers limiting access to higher education or to other levels of learning, both in terms of prior qualification requirements, and the determination of places and times established for students attending classes (Fidalgo & Machado, 2000, p. 119, free translation)[2].

About that process, Keegan (1990) highlights some key elements of the educational process in distance education: physical distance between teachers and students; media use to connect teachers and students; exchange of two-way communication; and learners viewed as individuals, rather than groups of students. Therefore, there is a literature available in academic setting around the world, explaining this 'bomb' and 'phenomenon' called Distance Education - its emergence and urgency.

Emergence

15 years ago Garrison (2000) explained that our century would see the emergence of a postmodern era of distance education characterized by increased diversity and choice. The author also stated that the main reason is the new communication development, as exemplified by the evolution of open universities in their adoption of new models. The digital explosion has also contributed to the expansion of distance education in Brazil and in the world.

Therefore, researchers as Prado and Rosa (2008) refer to Distance Education in our country as a

> New perspective of modernizing archaic structures that ruled over and unfortunately still exists in certain network and educational institutions. It was from the 1990s that the Brazilian Federal Government began to encourage, more directly, experiences and studies in distance education that already existed in the country (Prado & Rosa, 2008, p. 170, our emphasis, free translation)[3].

Distance Education in Brazil has grown. And, in this context, Schlüzen Junior (2013) explains:

> Distance Education (DE) in Brazil maintains interesting features, with the increasing need to make initial and continuing training a cultural component, internalized by each professional. To achieve such a goal, this country of continental dimensions requires quality educational offerings to

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[1] "Há três grandes motivos que justificam mudanças na educação superior no Brasil. O primeiro refere-se a democratizar o acesso, o segundo, a contextualizar os processos de ensino e aprendizagem e o terceiro, a contribuir para a solução dos problemas sociais e para o desenvolvimento sustentável do País."

[2] "Processo educativo que implica a ausência de barreiras que limitam o acesso ao ensino superior ou a outros graus de escolarização, seja em termos de requisitos de qualificações prévias, seja quanto à determinação de lugares e tempos determinados para os alunos frequentarem as aulas."

[3] "Uma nova perspectiva de modernização de estruturas arcaicas que dominavam e, infelizmente, ainda prevalecem em determinadas redes e instituições de ensino. Foi a partir da década de 1990 que o governo federal brasileiro começa a incentivar, de forma mais direta, experiências e estudos em EaD que existiam havia anos no país."

surpass the level of its shortcomings, reaching far to those who need to study and build new knowledge (Schlüzen Junior, 2013, p. 113, free translation)[4].

This means that the power of ideas influences practice directly by focusing perspective, revealing knowledge and also suggesting some alternatives. In this regard Meyer (2002) explains that:

The enormous and rapid growth of distance education and enrollments in Web-based courses has generated interest in defining quality for online learning.

> Whether it is the federal government or state governments, accrediting associations or students, all stress the need to have a better understanding of 'what contributes to quality in distance education' (Meyer, 2002, p. 16, our emphasis).

Based on this, we will discuss what we have in our international and national academic literature about the quality benchmarks for distance education.

Quality Benchmarks

Many discussions of quality are not about quality at all, but are about basic perceptions and dedication of the status quo (Meyer, 2002). This is one more reason why in-depth and broader review of the factors that may lead to quality distance education is necessary. Silva and Tomaz (2006) state that the quality and success of distance education depend primarily on well-defined projects, trained and committed teachers, and teaching material appropriated to the needs of the student.

Green (*apud* Morrison, 1999) states we need to

> [...] acknowledge we do not yet have clear, compelling evidence about the impact of information technology on student learning and educational outcomes (Morrison, 1999, p. 3).

However, in Brazil we have an official document that marks a lot of subjects, points and issues about theoretical and practices in distance education. Called *Referenciais de Qualidade para a Educação a Distância* (Quality Benchmarks for Distance Education) this document is especially vital, because it show us concepts and means to formulate distance education in our country.

> There is no single model of distance education. The programs may have different designs and multiple combinations of languages and educational and technological resources. The nature of the course and the actual conditions of daily life and student

needs are the elements that will define the best technology and methodology to be used and the definition of the necessary and mandatory presential moments, provided by law, supervised training, practical sessions in learning laboratories, completion of course work, where appropriate, presential tutorials in decentralized on-site support venues and other strategies (Brasil, 2007, p. 7, free translation)[5].

We note the Quality Benchmarks for Distance Education indicates that every teaching institution wishing to offer courses via the distance education modality must have in its Pedagogic Policy Plan the following items:

(i)   Conception of education and curriculum in the process of teaching and learning;
(ii) Communications Systems;
(iii) eaching materials;
(iv) Evaluation;
(v)   Multidisciplinary team;
(vi) Infrastructure support;
(vii) Academic and administrative management;
Financial sustainability (Brasil, 2007, p. 8).

On this point, Belloni (2003) makes an important observation regarding distance education's student profile. To give a quality education, Higher Education must provide subsidies to encourage autonomous learning through interaction and interactivity because both complement each other and are part of DE. Thus, the author elucidates some concepts to substantiate her pedagogic applications. She says:

> It is essential to precisely clarify the difference between the sociological concept of 'interaction' - reciprocal action between two or more actors, where there is 'inter-subjectivity', that is, a meeting of two subjects - which can be direct or indirect (mediated by any technical means of communication, for example, letter or telephone); and 'interactivity', a term that has been used interchangeably with two different, generally confused, meanings: on one hand the technical potential offered by certain means (eg, referential CD-ROMs, hypertext in general, or computer games), and, on the other hand, human activity, users acting on machines, and receiving feedback in return (Belloni, 2003, p. 58, author's emphasis, free translation)[6].

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[4] "A Educação a Distância (EaD) no Brasil guarda características interessantes, com a necessidade cada vez maior de tornar a formação inicial e continuada um componente da cultura, incorporada em cada profissional. Nessa direção, esse país de dimensões continentais necessita de ofertas educativas de qualidade para atender à demanda de suas carências, chegando até onde estão os que precisam estudar e construir novos conhecimentos."

[5] "Não há um modelo único de educação à distância. Os programas podem apresentar diferentes desenhos e múltiplas combinações de linguagens e recursos educacionais e tecnológicos. A natureza do curso e as reais condições do cotidiano e necessidades dos estudantes são os elementos que irão definir a melhor tecnologia e metodologia a ser utilizada, bem como a definição dos momentos presenciais necessários e obrigatórios, previstos em lei, estágios supervisionados, práticas em laboratórios de ensino, trabalhos de conclusão de curso, quando for o caso, tutorias presenciais nos polos descentralizados de apoio presencial e outras estratégias."

[6] "É fundamental esclarecer com precisão a diferença entre o conceito sociológico de 'interação' – ação recíproca entre dois ou mais atores onde ocorre

Alonso (2014) explains that the *Documento de Recomendações – Ações Estratégicas em Educação Superior a Distância em Âmbito Nacional* (Recommendations Document - Strategic Action for Higher Distance Education at National Level) offers a lot of subsidies "[...] to formulate strategic actions for Distance Education to be implemented in universities" (Brasil, 2005, p. 1, free translation)[7]. Also, the document has the purpose "[...] stimulate new actions within guidelines and quality principles" (Brasil, 2005, p. 1, free translation)[8]. Alonso (2014) also says that.

> Optimizing the use of human, financial resources, the democratization of access to higher education, as well as take care of the 'quality of this expansion', capital requirements are in order to carry out the distance education as a concrete possibility and relevant training alternative for those seeking higher level training (Alonso, 2014, p. 45, our emphasis, free translation)[9].

We cannot understand Distance Education, if we not pay attention to the public policies in Brazil focused to this modality.

Public Policies

Some important events marked the history of distance education in Brazil, such as the creation of the *Lei de Diretrizes e Bases Nacionais* (Law of National Guidelines and Bases) in 1996, law number 9.394/96. According to this law, DE acquires recognition in many documents, which define criteria and standards for the creation of distance education courses and programs. Article 80 states that the government is responsible for encouraging the development of this modality. Zanatta (2008) realizes that there is an increase in the amount of research since then, after regulationof Distance Education in Brazil, observing its potential to respond to higher demand and to reach a larger population of students.

In the Decree number 5.800/2006 (Brasil, 2006), it is possible to determine that the priority of distance education in Brazil is geared toward initial training and continuing education of teachers. In a single paragraph, Article 1 establishes the purposes of distance education in Brazil:

> I - most importantly, offer undergraduate and initial and ongoing training of basic education teachers;
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> II - offer degree courses for the training of leaders, managers and employees in basic education of the States, the Federal District and Municipalities;
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> III - offer degree courses in different areas of knowledge;
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> IV -increase access to public higher education;
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> V - reduce higher education opportunity inequalities between different regions of the country;
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> VI - establish a comprehensive national system of higher distance education; and
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> VII - promote institutional development for the type of education. The Role of Distance Education in the National Plan of Distance Education and Research in Innovative Methodologies (Brasil, 2006, sole paragraph of Article 1).

Thus, Pedrosa (2003) explains that:

> Matter of priority, public policies need to meet the demands of training and continuous updating of teachers. Largely because the democratization of education requires teachers with values, knowledge, skills, skills to meet the challenges that everyday presents to them. Thus distance education can help teachers overcome the barriers of time, space and the lack of financial resources (Pedrosa, 2003, p. 13, free translation)[10].

When the subject is the public policies in Distance Education, it is necessary

> [...] to outline problems, draw attention to a review to reconsider aspects and elements when the establishment of a specific public policy (Alonso, 2014, p. 49, free translation)[11].

Based on this, this author says that it is necessary a policy readjustment to the development of distance education. In this respect, other authors say that

> [...] financial and managerial autonomy of distance learning courses in public universities are still a serious issue to develop in the public educational policies (Faria, Lima & Toschi, 2013, p. 29-30).

Another important feature, when we are talking about Distance Education, is the didactic practice

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'intersubjetividade', isto é, encontro de dois sujeitos – que pode ser direta ou indireta (midiatizada por algum veículo técnico de comunicação, por exemplo, carta ou telefone); e a 'interatividade', termo que vem sendo usado indistintamente com dois significados diferentes em geral confundidos: de um lado a potencialidade técnica oferecida por determinado meio (por exemplo, CD-ROMs de consulta, hipertextos em geral, ou jogos informatizados), e, de outro, a atividade humana, do usuário, de agir sobre a máquina, e de receber em troca uma 'retroação' da máquina sobre ele."

[7] "[...] oferecer subsídios para a formulação de ações estratégicas para a Educação a Distância (EAD) a serem implementadas nas universidades."

[8] "[...] estimular novas ações dentro de diretrizes e princípios de qualidade."

[9] "A otimização do uso de recursos humanos, financeiros, a democratização do acesso ao ensino superior, bem como cuidar da qualidade dessa expansão, são requisitos capitais no sentido de efetivar a EaD como possibilidade concreta e alternativa de formação relevante para os que buscam formação em nível superior."

[10] "Prioritariamente, as políticas públicas precisam atender às demandas de formação e contínua atualização de docentes. Sobretudo, porque a democratização do ensino requer professores com valores, conhecimentos, habilidades, competências que lhes permitam responder aos desafios que o cotidiano lhes apresenta."

[11] "[...] esboçar problemáticas, chamar a atenção para uma avaliação que reconsidere aspectos e elementos quando da instauração de uma política pública específica."

used in this modality. To better understand DE, we must also study its didactic and pedagogic practices.

Pedagogical practice

Concerning didactic and pedagogic practices in Distance Education, it is known that this modality is proceeding to adapt new pedagogic theories innovatively with Information and Communication Technologies (Oliveira & Sobrinho, 2010). Information and Communication Technologies have been closely connected to pedagogic practices in Distance Education.

Tarouco, Moro and Estabel (2003) explain that you cannot concentrate only on technological developments, but you must also consider pedagogic practices that are used in distance education, because

> [...] experience in this area has shown that it is not only technology that ensures the success of this type, but the pedagogy concerned with the teacher's role that needs to 'know how to apply' distance education (Tarouco et al., 2003, p. 31).

About this, it is necessary to assume a pedagogic attitude that allows overcome some of the limitations of traditional education, and establish a consistent relationship between the scientific challenges and requirements, and the pedagogical challenges and requirements of distance courses (Trindade, 2014). Thus, we need to reflect about the pedagogic impact of the TIC's use in Distance Education. About that, in her paper, Trindade (2014, p. 230) found that the pedagogical use of TIC (Information and Communication Technology) can 'serve old ways of doing' as you can contribute to enlarge the sharing possibilities of dialogue, discovery and training, knowing which are the intentions, assumptions and curricular concepts that shape the instructional and learning cycles where ICT fall that determine their teaching potential.

According to Mallmann (2010) professors/teachers in distance education need to advance in the ways that they understand the processes of teaching and learning, overcoming a technicist perspective. Thus, we observe the abandonment of a pedagogic practice overcentered in the teacher/professor in favor of a more reflexive and interactive practice, where the student leaves the spectator role to become the protagonist in his own system of teaching and learning. Oliveira (2008) explains that for good pedagogical practices in this modality, DE needs to focus on its process of teaching students, verifying cultural examples, regionality, and familiarity, with adopted methods, among other characteristics.

Almeida and Silva (2014) say that:

> In teacher training as well as in classroom, it is possible to identify in the degree of distance courses, the prevalence of curricula that still dichotomize theory and practice, even when most of the students carries on teaching basic education and would have better opportunities to reflect on the authentic practice that perform in the classroom and to seek theories to better understand it (Almeida & Silva, 2014, p. 134, free translation)[12].

This suggests that the disjunction problem between theory and practice does not lie upon the course modality, but in the teacher conception. And to confront this issue requires clear public policies, consistent and articulated actions (Almeida & Silva, 2014).

How distance education influence teacher training?

As we have seen, DE (distance education) has increased in Brazil. The impact of DE over teacher education shows how powerful this educational system is. Many countries have adopted distance education as part of their education system, because its capacity of increasing access to the mass population (Belawati & Wardani, 2010). We believe that is why distance education has been playing an important role in teacher education in many countries, including developing countries as Brazil. As a low cost system – economically speaking – distance education appears as an instrument of democratization of Higher Education. Mayes & Burgess (2010, p. 36) state that Open and Distance Learning (ODL) approaches in initial teacher education "[...] have been identified as having major advantages over conventional programs that require residency in terms of cost, scale and access". Besides, we can say that distance education methods in response to the crisis of qualified teacher shortages, make reasonable the use of this educational system, when the numbers of teachers required exceeds the number of teacher available. That is how we understand distance education has not only influenced teacher education in Brazil, as it has establishing a new concept of University and Higher Education not only here, but all over the world.

Another point that comes to mind, when we ask ourselves the question of this topic is: how does distance education must be performed by its students? According to UNESCO (2002), the primary task of distance education in initial teacher

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[12] "Da mesma maneira como ocorre na formação de professores na modalidade presencial, é possível identificar, nos cursos de Licenciatura a distância, a prevalência de currículos que continuam a dicotomizar teoria e prática, mesmo quando grande parte dos alunos exerce a docência na educação básica e teriam melhores oportunidades de refletir sobre a prática autêntica que realizam em sala de aula e de buscar teorias para melhor compreendê-la."

education is to train well-qualified and highly skilled teachers. To have success, a distance education program needs to be designed to impact on access and equality. About this, teacher education programs in Eritrea, for example, were aimed at creating opportunities for females who, because of cultural or religious reasons, were unable to move away from their home and families, and for those people in remote rural communities whose economic and domestic difficulties prevent them for leaving their localities (Renan, 2007 apud Mayes & Burgess, 2010). What are the challenges for distance education in Brazil? How can Government provide a qualified High Education to its population? We truly believe that DE is just one way not to get solved all problems about education, but to achieve many results from Brazil's context.

Teacher Education in DE needs to be performed in a way that leads to opportunities for the integration of theory and practice. Also, is has to be enhanced monitoring of individual progress, improving quality of learning. More than that, from the student - in a DE system – is required to know how to use technology and internet. Some authors (Barrows, 2002; Van Niekerk, 2004; Mashile, 2008; Mayes & Burgess, 2010), consider this as a modelling issue of distance education. And, because of that, DE programs designers have to create viable pedagogy interfaces that take into account people there are not so familiar with technology. The university curriculum can reflect at this point to bring a discipline that help students to manage this kind of technology. Unesco report (2002) says that "[...] programmes that combine conventional and distance methods are likely to be better than those that rely in a single approach" (Unesco, 2002, p. 19).

Laurillard, points that:

> If universities are to rethink their methods of teaching, they need a management structure that is capable of supporting innovation [...] a top down management structure is inimical to successful innovation precisely because management does not have the knowledge necessary (Laurillard, 2006, p. 3).

The skills and abilities that those future teachers must have at the end of their graduation should be thought and reflected in their *curriculum*. We believe that the e-learning plataform used for students and teachers in a teacher education, for example, can provide experiences that help them to develop their abilities. Mayes and Fowler (1999, p. 2) say that "[...] the software must make the learner think". This phrase has drawn a discussion about knowledge construction. According to the authors, we should think how graduation engages the learner in

performing tasks in "[...] active problem solving, questioning and conceptual manipulation" (Mayes & Fowler, 1999, p. 3). Teacher education curriculum must be challenged by the potential to make teachers reflect on their practice. Queiroz (2011) understands that we cannot ignore challenges that emerge from distance education when we talk about pedagogical practices. In this sense, Cerly (2001), explain that the DE teacher education courses need to be better understood as to what raises - both in relation to training needs, and teaching learning.

There is a pedagogical innovation, when we talk about teacher education through distance learning. According to Peixoto (2008), this innovation regards to Information and Communication Technology (ICT). The author says that the ICT can be viewed as instruments capable of pedagogical transformations in teacher education courses. We understand to be really necessary understand not only what the ICT is, but how to use them in a distance education course for example, especially in a teacher education through distance learning. This, because we believe ICT are closely linked with the practice in Distance Education, and that the technological explosion in the twentieth century to the twenty-first, probably contributed to increased investment in these technologies as a teaching resource, particularly in this field. About that, Nicolodi (2012) reflects on the pedagogical mediation processes that teachers need to develop in distance education contexts. The author says that one of the skills and competencies needed for someone is working with distance education in teacher education context is the ability of knowing how to use ICT to awake in the students a reflective and critical mind. This is what Queiroz (2011, p. 56) understands for "[...] problematizing the pedagogical reality [...] in order to solve conflicts, building and rebuilding their role in professional practice". After this discussion, we may recognize that depending on how it is performed and / or applied, especially in teacher training context distance education, pedagogical practice can invent and reinvent the teacher training courses not only here in Brazil but all over the world.

Final considerations

As we can note, current transformations in the Brazilian educational scenario, particularly in teacher training and distance education show us that they need to be better understood. Distance education is somehow, theoretically challenged to give insightful frameworks. These frameworks will show, and

guide us, not just in what it is distance education, but in a new era for it. According to Garrison (2000), these challenges face the construction of theories addressing specific components and concerns of distance education. However, we want to bring some discussion-questions for the further works will be done in this perspective.

One of the biggest challenges of distance education today is when you speak about quality benchmarks. There is no single simple definition of quality (Meyer, 2002). Because,

> [...] quality is a complex and difficult concept, one that depends on a range of factors arising from the student, the curriculum, the instructional design, technology used, faculty characteristics, and so on (Meyer, 2002, p. 115).

So, first: the distance education courses in Brazil are following the Quality Benchmarks for Distance Education? Is this document really updated with the transformations in our educational scenario? Second, the didactic and pedagogic practices used on DE, are being reflected? In what way we could (and should) follow these practices aiming to ensure the best quality for DE? Third, current public policies are following the challenges that DE in our days? And fourth, has been distance education an instrument of democratization of education in a country with continental size as Brazil?

After reflecting about these issues, we can see clearly that we need further research to answer many of our continuing questions, especially regarding formative needs and teacher learning in the Distance Education context.

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