INVESTIGATING THE STRUCTURE OF THE OPEN UNIVERSITY OF BRAZIL

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Introduction

The Open University of Brazil (UAB) was officially created in 2006, inspired by a number of previous experiences in distance education in Brazil, notably the CEDERJ consortium in the state of Rio de Janeiro, and other pioneering experiences in Mato Grosso and Minas Gerais (COSTA 2007). Its main goal was to provide opportunities for higher education in regions not served by traditional institutions.

UAB offers courses primarily to in-service teachers and those involved with K-12 education, in order to provide them with formal education to meet the demands of their profession. The existence of teachers without a higher education diploma, or without a diploma in the one's actual area of work was (and to an extent still is) a problem in Brazilian basic education.

The enactment of an education bill in 1996 (LDB; Lei de Diretrizes e Bases) recognized the importance of distance education in Brazil and set up initial parameters for regulation. Distance education was seen as significant contributor towards providing the necessary qualification of in-service teachers, for teachers in a country with continental dimensions such as Brazil, which a strong concentration of population and educational opportunities in large cities and metropolitan areas.

In the UAB system, the IPES are responsible for pedagogical and operational aspects of courses implementation. Local and state delegates have the role to be the maintainers of the presence support poles. And the federal government, in particular the Coordination for Higher Level Staff Improvement Foundation, responsible for funding and establish official rules.

In order to answer these demands UAB functions as a consortium, articulating existing institutes of higher education (IHE), such as the federal universities. These are responsible for the pedagogical and operational aspects of course implementation. The federal government, under the auspices of the Ministry of Education is responsible for costs incurred by the IHEs, including the necessary costs associated with infrastructure and personnel. The local

government, state and/or municipality, is responsible for providing the infrastructure (building, equipment, human resources) for the functioning of the municipal support centres which are places that provide face-to-face support, resources, tutoring, access to the internet, and places for testing.

As of September 2012, UAB had 264,390 enrolled students, with more than half focused on teaching degrees (129,249, *licenciatura* and 59.177 in *pró-licenciatura*) and others in general bachelors (24,667), and post-graduate (59,177, non-masters) degrees and a small group engaged in a newly approved mathematics masters degree (2800 students) (Teatini, 2012).

The study presented here aimed to provide a broad overview of a research program focused on two important aspects of the UAB system – the university and the municipal centres. It began with a mapping of the field and the professionals with whom this student has his first touch when he entered the UAB system (municipal centres). At the current stage of our research, we are working with the study of distance learning offices located at the universities (usually termed NEADs). We are also traversing these two spheres (the centres and NEADs), studying the production and dissemination of educational resources throughout UAB. Our goal is to enrich the discussion regarding the UAB, and more broadly, an understanding of the practices and regulation of distance learning education in Brazil.

Research project

This project is part of a larger research agenda focused on investigating UAB, an under-researched project and, as with many other governmental projects, on which suffers from a lack of up-to-date, reliable information. Initial research focused on the municipal centres (*pólos*), which form the capillarity of the UAB system. These are comprised of a physical setting (such as a library, a school or a dedicated space) in both large and small cities around Brazil, created in partnership between the federal government and the municipalities. To date, over 600 such centres exist (data provided in 2012; a map can be seen here http://educacaoaberta.org/uab). Considering that Brazil has 5565 municipalities, the penetration is of approximately 11%. Our investigations began by researching the structures, and especially the profile of the coordinators of the centres (Duran et. al., 2012)

The second phase of this project turns towards the university systems, in order to describe and provide an initial profile of the distance education centres (known generally as NEAD, *Núcleos de Educação Aberta e a Distância*). The UAB system currently involves 103 institutions of higher education from around Brazil. Each of these institutions has a coordination centre dedicated to be the interface between the federal government, higher education institutions and the local centres. They are responsible for creating, conducting, evaluating and promoting the courses, which are offered, at a distance, to the municipal centres, sometimes in multiple locations around the country simultaneously. To date there is little beyond institutional data to help us understand to how the NEADs formed in each university, and how they established a legal, political and academic relationships with the existing traditional structures of the university. In this project, we aimed to investigate this

timely issue as *existing* universities in Brazil and worldwide begin to look at new, more open models for online teaching. As such as worked to 1) provide a profile and descriptive information on the NEADs in order to begin characterizing the diversity of implementations and how we could characterize the "institutionalization" of the UAB; and 2) investigate the use, production and policies regarding the use of educational resources, with a particular look towards the Open Educational Resources (OER) movement. In this article, we present some of this preliminary data.

Open Educational Resources

The movement towards OER has provided impetus for serious change in IHEs around the globe. The growth of MOOCs in their many formats is just the most recent manifestation of a movement that is aimed at "openness" in education, and which has, in the last ten years, been catalyzed by OER:

> *"OER are teaching, learning and research materials in any medium that reside in the public domain and have been released under an open licence that permits access, use, repurposing, reuse and redistribution by others with no or limited restrictions" (Atkins, Brown & Hammond, 2007)*

> *"The use of open technical standards improves access and reuse potential. OER can include full courses/programmes, course materials, modules, student guides, teaching notes, textbooks, research articles, videos, assessment tools and instruments, interactive materials such as simulations and role plays, databases, software, apps (including mobile apps) and any other educationally useful materials. The term 'OER' is not synonymous with online learning, eLearning or mobile learning. Many OER — while shareable in a digital format — are also printable." (UNESCO/COL, 2011)*

The tendency towards "opening up" resources is evident not only in developed nations, but has also captured the attention of universities in Brazil. Even though only a handful (5) institutions are members of the Open Courseware Consortium (OCWC), Brazil has been the setting for vibrant discussion regarding OER in policy at all levels, and a number of IHE are investigating the possibility of integrating OER and open practices into their agenda (see for example, http://www.oportunidadproject.eu/pt). OER have the potential to not only decrease textbook costs (a common and important concern) but also promote increasing outreach and capillarity, which is at the core of the mission of an institution such as the "Open" university in Brazil.

Municipal Centres

Between 2011 and 2012, research concerning the municipal centres was carried out. In this study 68 municipal centre coordinators from the northern, north-eastern and southern regional centres were interviewed. They were asked to define their career, analyzing the

official systems of evaluation and indicating procedures to optimize these evaluative processes. Through interviews, the career and profile of centre management was investigated. Then, regional pairs of coordinators were set to visit each other's centres' simulating an evaluation. The process was incremented via an online support system (LMS), where a *netnography* was carried out to help enrich the categorization of facilities and to help us identify the difficulties faced by these important actors within UAB. This represents approximately 7% of the UAB centres, and the majority of these were established since 2008.

Within the UAB system, these municipal centres are the locus of student activity. They are equipped with laboratories, libraries, offices, classrooms and conference rooms where distance learning tutors/facilitators and students meet. This blended regime is a characteristic of the UAB system. The centre coordinator is responsible for the academic and administrative management of the centre. Coordinators must be a public school teacher, a graduate with at least 3 years of experience in teaching basic or higher education. Multiple IHEs that are part of UAB can offer courses to students in the same municipal centre, though increasingly these institutions are focusing on centres within their state. A coordination effort exists to plan for the proper use of the centre considering the multiple courses offered simultaneously.

On average, these poles serve 70,000 teachers. The majority is concentrated in cities among 20-30 thousand inhabitants (relatively small cities). Regarding the distances between these cities and the capitals of their states, we find a heterogeneous picture: approximately 1/3 is situated about 63 miles from the capital, 1/3 about 187 miles and 1/3 are about 310 miles.

The total number of courses offered at the time of the interview was 908. The average number of courses offered in each of the centres was 13.3. These courses are divided in initial and continued training. 43 of 68 centres under analysis (63%) offered courses in mathematics; 75% offered pedagogy, represented by 51 centres. The majority of centres, which offered continuing education, were situated near larger cities and the majority of these courses were about distance education (35 poles).

We identified three types of municipal centres:

- First, centres with a large number of vacancies. These poles are situated near of capitals, in cities with 70-150 thousand inhabitants and have an emphasis on continued education.
- Second, in cities of 20-30 thousand inhabitants, offering a mix of initial and continued education courses.
- Third, the poles are located in towns that are more distant. Approximately 310 from the capital of their states, with about 10 thousand inhabitants, offering between 5 to 10 courses, focused on initial training. Curiously, the third type of centre meets the highest proportion of student to inhabitants in the cities/regions where they are located.

This initial typology of centres helps us began an investigation of an important aspect of the UAB. The data collected here can provide interesting avenues for cross-case analysis between the centres and the NEADs, which serve them, as we shall see below.

NEADs

An investigation into the NEADs began in 2011, when a semi-structured protocol for an interview/focus group was drafted to identify relevant questions related to the production, access and dissemination of educational resources within UAB from the perspective of the IHE, their NEADs, and their relationship to the municipal centres. By approaching the research from the perspective of educational resources we aimed to go beyond the resources themselves, understanding the dynamic relationship between the different stakeholders and institutions. The questionnaire was aimed at eliciting information in the

1. production of educational resources,

2. access to the resources,

3. relationship between the NEADs and the municipal centres,

4. dissemination and distribution of resources and finally

5. rights related to resources.

Semi-structured interviews were conducted the staff of three NEADs, one located in the northern, another in the central, and yet another in the southern part of the county. These data were analyzed using software for qualitative analysis in order to investigate emerging categories *within* the five areas of interest. Reports were compiled for each of the universities, which helped provide a general panorama regarding the five criteria in each university.

These data and analysis were used to expand and re-visit the protocol. We found it important to dwell into the relationship between the NEAD and its academic and political relationship to the institutions they served. Questions regarding educational resources were refined based on the types of production and dissemination practices we surveyed in these two institutions. For Phase 2, during the second semester of 2013 and early 2014 ten IHEs participated in a focus group or interview (at times done face-to-face and others, at a distance) using the expanded and reviewed questionnaire. The initial three institutions participated once again in order to update and expand data. Below we present data on the research conducted for Phase 1 with the three universities.

NEADs are implemented differently at different institutions. A simple way to notice this is the nomenclature these organizations take in each IHE even though the agency, which is responsible for UAB (CAPES) at the federal government, has created a norm regarding their naming in its financing spreadsheets.

In some places the NEAD is known as SEAD, signifying that this is a department or secretariat (*Secretaría*), connected directly to the rector's office, functioning much like a university administrative body. In others it is known as CEAD, as a centre for teaching or service, and its

administration is connected to a collegiate group (a group of professors that administer the centre). This is usually the case when certain institutes or schools within the university already have a leadership role in distance education.

It is important to highlight this discussion as it speaks to how the NEAD relates and is seen within the overall structure of the university. Many universities present an internal demand and pre-existing experience with distance education, in others it can exemplify a response to governmental demands. CAPES terms these structures NEADs in the sense that they could function as cohesive centres for research, teaching and service within the institutions, able to solicit and be responsible for external funds (government) and internal funds (through a university foundation). In this sense, an inductive policy focused on the concept of an integrated nucleus was meant to promote the type of structure that would allow for an integrated and efficient approach to the management of funds.

We highlight the experience of three institutions in Brazil. The first functions in a decentralized fashion, whereby each academic unit preserves its autonomy in the development of activities within distance education. Each academic unit promotes graduate, undergraduate and extension courses through special projects, with the support of the SEAD. As highlighted above, in this case the SEAD functions as a secretariat or office, articulating projects approved by the collegiate faculty in each unit. It has no collegiate body of its own, with a small working group, under the auspices of the university administration (*reitoria*). The articulation between different projects is conducted at the SEAD through monthly consultations to the EAD Forum (Distance Education Forum) – a group constituted of representatives from the undergraduate and graduate offices and each academic unit (SEAD, nd).

The rector's office foments distance education initiatives in each academic unit through special calls for proposals. Between 2003 and 2013 many projects were aimed that fomenting distance education courses within a) traditional (face-to-face) curriculum; b) development of new processes and technologies, research in distance education and c) production of educational resources, such as learning objects. The SEAD has a group dedicated to publications, in partnership with the university press so as to publish textbooks and reference books focused on distance education, financed primarily through funds from UAB. In 2009, the NAPEAD (Nucleus for Pedagogical Support for Distance Education) was created, aimed at the production of digital educational resources (SEAD, nd). An intention exists to create a central open repository of educational resources, which has not yet taken place.

The second university has a long-term experience with distance education, and in 2009 opened the AEDI, an *assessoria* (Office for Distance Education Support, in free translation) connected directly to the rector's office. In a Brazilian university, an *assessoria* is generally a place with extreme bureaucratic flexibility, as its members can be nominated directly by the rector of the university and the activities can be demanded of the academic units as a demand from the rectory, without the demand for a collegiate decision in each unit, and only by the highest university body to which it is connected.

At the second university the *assessoria* (AEDI) has as its function to direct the distance education policy at the university at all levels of teaching. It has qualified technical staff focused on distance education, for pedagogical and LMS support, as well as content creation (video, animations, and others). The AEDI is responsible to negotiate incoming resources, and for the elaboration and supervision of distance education projects. It also supports a collegiate group formed by distance education course coordinators (UFPA, 2011, p.108). This represents a more centralized model, and is characterized by concentrating resources and actions, as well as promoting the articulation between UFPA and other national programs.

From the beginning the university articulated its distance education strategy in partnership with other universities, partially due to strategy, and partially due to a lack of funds. Partnerships took place to provide educational an initial set of resources for its courses. Some resources were created in consortiums of universities, with rotating responsibilities. Others originated from other institutions, and made available through cooperative agreements. Such agreements include the Open University, UNED (Spain) and CEDERJ (a pre-UAB consortium from the state of Rio de Janeiro, mentioned above), especially material for the mathematics course from UFF (Leite & Teixeira, 2008). In many cases the resources (such as those brought through the CEDERJ consortium) were adapted to local conditions and contexts.

The academic units at the university have decentralized centres for the production of educational resources, but can call on AEDI for support and partnerships. In each case, the course professors the collegiate faculty from the units control the process and have ultimate responsibility for the resources. Even though no single prescription exists for the resource, the courses offered by the university include a printed booklet, an online environment (LMS), web and video conferencing tools. The printed material is produced exclusively for each course and is made available only to the matriculated students in the LMS (AEDI, nd), with plans to develop an open portal that would provide access to a wider range of resources created under the auspices of AEDI.

A third university created its NEAD in the 1990's (pre-UAB) in order to target the demand for teachers at the initial levels of schooling. The course, a pioneering initiative in Brazil, followed a blended format (much like the UAB model), aiming to introduce alternative pathways to higher education, optimizing human and financial resources (Alonso & Neder, 1996). In 1996, the NEAD already offered courses in pedagogy, natural sciences and mathematics, and in 2000 opened up a line of research focused on distance education within a master's program in public education (Possari & Neder, 2009, p.4).

Contrary to the other two examples, in this university, NEADs were created, over time and through local demand, in each academic unit. It is currently located within the School of Education. Since 2013, a central Office for Education Mediated by Information and Communication Technologies was established to help direct, foment and coordinate a university-level effort to integrate educational technologies. These include, but are not exclusive to UAB-related initiatives. This model demonstrates the possibilities of more

bottom-up and decentralized (but coordinated) approach to the integration of NEADs within the university system.

Since no document exists to formalize the NEADs within the university system, the attributions of those working with the NEAD are not formally recognized within the university Preti (2009). Partnerships made it possible to acquire resources and equipment, and financial resources were reverted maintain technical staff and educators without depending on the institution's funding limitations.

The NEAD has established multiple international partnerships (Neder, 2000, p.150), which includes a pedagogy course offered to Brazilian students who work in schools in Japan (UFMT, 2010).

Educational resources are focused on printed resources produced mainly by local faculty and printed locally, but importantly, not by the university press. This speeds up the process, but it also leads to high costs, since only a small number of booklets are printed to fulfil the demand of the offered courses. The resources are not openly offered, only being available to the matriculated students of the specific target course.

Conclusion

The initial data presented here aimed at demonstrating a multifaceted research project that is being conducted to investigate the Open University of Brazil. As a large, national and cooperative project, the UAB has been able, in relatively little time, to expand the outreach of distance education, particularly to in-service teachers, throughout Brazil through a publicly funded project.

We aimed to present an introduction to the research currently being conducted, to demonstrate the complexity of the UAB system and how a centralized but flexible system has lead to multiple implementations. We can highlight the challenge of openly providing access to resources in these higher education institutions. Though all institutions demonstrate an interest in open resources, challenges related to licensing and academic culture still hamper or slow down the plans to make these resources widely available.

Additionally, universities have found different implementation models as they strive to integrate UAB and other distance education initiatives into their fold. These challenges can help provide guidance to future initiatives and promotes reflection as to the role of universities in an increasingly "open" system of higher education.

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