

The university that was, that is and that there may be in the future university education in Brazil



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ABSTRACT

The formation of the university in Brazil was a consequence of the need for modernization of the

growing Brazilian civilization engendered by the growing Western Greek Scientific Renaissance and its Revolutions and Capitalism opposites to the principles of Mercantilism and Monarchy, which had expanded and taken ascension in Europe, in North America and its colonies. But then what is the university that existed and exists in Brazilian territory? And, what future university could there be in Brazil? To answer these questions two methodological criteria were adopted: the study of recent bibliographic sources and the critical, analytical and relational capabilities of the true and current facts under study in this article.

Keywords: University, Renaissance, Teaching, Modernization.

1 INTRODUCTION

1.1 HISTORICAL OVERVIEW OF BRAZIL AND THE WORLD

To answer these questions (doubts) presented in the abstract and title of this article, it is necessary to have in mind the historical, political, economic and social panoramic moment of Brazil and the world, both past and present, which surrounded the development of Brazilian civilization. Thus, it is possible to have the causes and consequences that form the university in Brazil and its present state. In this sense, it is well known that Brazil is within the group *of countries of the New World* and its initial formation was founded as a Colony of Exploration by countries (peoples) of the *Old World* essentially, more strongly by Europeans and North Americans (USA). The initial interest was not in forming a permanent Settlement Colony, but in forming a Colony that would provide the Mercantilist World with the basic raw materials, that is, wood, minerals and other complementary natural products for the economic, industrial and social development of the great nations of that time.

In this Mercantilist relationship, Brazil was inserted not to share in the economic, scientific and social development, but to serve those nations that were becoming great economic, political, social and scientific powers in the *Old World*. Therefore, scientific development in Brazilian territory was not convenient for the large nations in Mercantilist expansion. Thus, the ruling population in Brazil



was in formation and had its studies obtained abroad, in the great metropolises of Mercantilism. Beyond that, the Brazilian territory was vast and the people were too few to carry out a rapid exploration, occupation and development.

With the Eastern Greek scientific Renaissance that broke out little by little in Europe and North America (USA), these nations formed on the basis of theological principles began to undergo internal political, economic, social and scientific revolutions (internal wars) and external conflicts (wars between nations), which transformed them and induced the emergence of a new political-economic relationship, namely: Capitalism, which modified commercial, social, and labor structures to incorporate liberal ideals with Capitalist and Scientific foundations (DA SILVA, 2017). The expansionism of these Revolutions, of Capitalism and of foreign Wars required the great nations to modify the political and economic relations with their Colonies of Settlement, and also with their Colonies of Exploitation (for example, with Brazil), where, in pieces, these governing societies had already become aware of the Revolutions of Capitalism and the Scientific Revolutions about their thinking of the relational way and environment in which they lived.

In the Foreign Wars, Napoleon Bonaparte (France) expanding his dominions in Europe gave an ultimatum to the king of Portugal and subjected him to an economic political blockade. As the years passed, Napoleon decided to invade Portugal. Fearing French domination, in 1808, King João VI with his family, his Court and a large group of advisors and military personnel set out to flee to his vast Colony of Exploration: Brazil (VICENTE, 1993). At this time, Brazil as the seat of a Royalty in its territory underwent drastic political, economic and social modifications to accommodate the interests of the Portuguese Royalty, which brought many rapid benefits; but they also brought great losses from the point of view of Scientific Revolutions and Capitalism.

At that time, in Europe and North America (USA) there were already several excellent universities: the Universities of Oxford and Cambridge founded in 1096 and 1209, respectively, the University of Paris founded in 1178, the Harvard University founded in 1637, among many others. With the separation of the power of the *State* from *the Theological power*, because of those Revolutions, a new social class was enriched and ascended to power: the bourgeoisie (GIOVANAZZI, 2014). This social class made use of the universities and over the years three bases of university organizations were constituted: I) the Napoleonic Model, where the State prevails with its interests over the objectives of the social institution university, II) the Anglo-Saxon Model, where civil society or private society prevails with its interests over the objectives and administration of the university, and III) the Germanic Model, where there is autonomy of the community over the objectives and forms of organization and administration of the university (CHAVES, 2019; MINGUILI et al., 2008).



2 CAPITALIST AND SCIENTIFIC EXPANSION IN THE "COLONY OF BRAZIL"

But in Brazil, until the beginning of the century. In the nineteenth century, there was no higher education. From 1808 onwards, D. João VI, surrounded by most of his advisors, his court, his military, his family members and a part of the Portuguese bourgeoisie, induced the Brazilian population to become better established and permanent. Its establishment in Brazilian territory required freedom of self-development in the former colony, which now passed to a political, economic, social and administrative status of a mixture of half Colony and half Metropolis to serve the interests of the *modernizing Old World* (the Modern Age). In this context, the freedom of development was linked to the interests of the Monarchy, and at the same time, to the interests of the Scientific Renaissance and its development and of Capitalism in the *Old World* strongly embraced by the new social class: the bourgeoisie. In this conflict, the Monarchy found itself in need of modernization, but without losing its privileges and powers. Thus, in 1815, King João VI signed a decree creating the United Kingdom Portugal, Brazil and the Algarves; therefore, Brazil ceased to be a Colony and began to be treated as a Royal part of the Kingdom of Portugal. Thus continuing, in the education sector, the Royals allowed the construction and operation of schools and some colleges; for example, the Faculty of Medicine founded in the territory of Bahia, where the Portuguese Royalty first arrived (CHAVES, 2019; MINGUILI et al., 2008).

With the halt of Napoleon's advances in Europe, the Porto Revolution of 1820 and the convocation of the Cortes idealizing the return of the Royal family and the Portuguese Court itself, D. João VI returned to Portugal on April 26, 1821. However, he left his minor son, D. Pedro (14 years old), in Brazilian territory as Prince Regent under the care of his guardians, essentially the Andrada family. Thus, in the following periods of Regencies and Empire, more schools and Faculties of Medicine and Law were built in the territories of Salvador and Rio de Janeiro. In the territories of São Paulo and Olinda, the Faculties of Law were built. In the territory of Rio de Janeiro, where the Royalty and its government were transferred, the Polytechnic Faculty was built. These faculties functioned as social institutions, in the style of the Model that prevails the interests of the State of Monarchical Government (PEREIRA et al., 2014). Most of the higher education, which required the ruling class in Brazilian territory, was still achieved abroad: Europe and North America (USA). But in 1870, in the style of the Anglo-Saxon Model (USA), the American School of the Mackenzie Presbyterian group was founded. And in 1896, that school became *Mackenzie College*, which became affiliated with the State University of *New York*.

3 CAPITALIST AND SCIENTIFIC EXPANSION IN POST-MONARCHY BRAZIL

Only in the twentieth century, after the proclamation, rise and institution of the Republican, Federative and Presidential government, on November 15, 1889, by a class in constant growth,



development and confrontation with the Monarchy in Brazil, mainly formed by military personnel, inspired by the ideals of the Western Greek Renaissance in the style of North America (USA), was the first university institution built in Brazilian territory; however, after two decades of the Federative Republic. Thus, in 1909, the Federal Technological University of Paraná (UTFPR) and the Federal University of Amazonas (UFAM) were founded in the states of Paraná and Amazonas, respectively. In 1912, the Federal University of Paraná (UFPR) was founded, also in the State of Paraná. The University of Alfenas (UNIFAL-MG) was founded in 1914, in the State of Minas Gerais and in the city of Alfenas. Only after six years, in 1920, was the Federal University of Rio de Janeiro (UFRJ) founded, in the city and state of the same name, where the Royalty had remained. Seven years later, in 1927, the Federal University of Minas Gerais (UFMG) was founded in the state of the same name and in the city of Belo Horizonte. Then, seven years later, in 1934, the University of São Paulo (USP) was founded, in the city and state of the same name, and the Federal University of Rio Grande do Sul (UFRGS) in the state of the same name and in the city of Porto Alegre (MEC, 2021; WIKIPEDIA, 2021). These eight universities were the first institutions of university higher education for centers of scientific and cultural training and professional training, which would meet the needs of modernization of the country, the dominant social class and the Brazilian government and with the aim of attracting foreign investment capital from the North American (USA) or European. In this way, the university model adopted was the one dominated by the needs of the government (Napoleonic model). But, over the decades, there was already a North American influence (USA) on higher education in Brazilian territory: some higher education institutions began to adopt characteristics of the Anglo-Saxon model of university and others were founded adopting this model (SANTOS, 2005).

After World War II, from 1945 onwards, in parallel with the expansion of public higher education, there was the initiation and expansion of private higher education, mainly due to the influence of the North Americans (USA) with their victorious Capitalism of the war and defensive against the expansion of Russia with its Socialism (beginning of the Cold War). In this context, continuing the construction of universities, in 1946, the Pontifical Catholic University (PUC) was founded, a private institution of higher education in the territory of São Paulo. Another private institution of higher education, founded in the eastern area of the State of São Paulo, in the city of Mogi das Cruzes, in 1964, was the University of Mogi das Cruzes (UMC). Two other important public universities in the modernization of cities in the State of São Paulo were founded in 1962 and 1976, respectively, the University of Campinas (UNICAMP) and the São Paulo State University "Júlio de Mesquita Filho" (UNESP) (MEC, 2021). From 1968 onwards, there was an expansion of private universities in the Brazilian territory, but with their objectives preferably focused on teaching and not on research and extension. In this expansion of higher education in Brazil, some public and other private universities were created and extinguished because of the conflicts between the defenders of



the liberal, positivist and theological sociological tendencies of different models of university education and their conflicts with the government's policy in relation to university education in Brazilian territory (PEREIRA et al., 2014, p. 121; DE SOUZA et al., 2019). In this conflict, it is worth remembering that, in 1964, the Brazilian armed forces staged a coup d'état, disfigured the elected government and took over the government of Brazil.

After 1984, there was a political, economic and social opening with the fall of the Berlin Wall, at the turn of 1989 to 1990, which contributed to the fall of the military governments in the Americas, and higher education in Brazil began to undergo changes in the referential of its interests. Among several other important changes, it incorporated measures that would enable the Brazilian popular class to enter public higher education, which was not occurring, but with the imposition of no loss of quality of education (PEREIRA et al., 2014). It was a beginning to popularize a part of the higher education already consolidated *in the Old World* and necessary to modernize the popular classes, that is, to modernize the impoverished *New World* through the new neoliberal capitalism or neocolonialist financier, in order to be qualified as specialized labor to meet the needs of a civilization driven by industries, machines and technologies. In this sense, public and private universities of proven quality continued to be one of the important institutions for holding the knowledge, teaching and techniques of higher learning of science and technology in constant development.

In 1991, the end of the Cold War occurred. The world order has undergone changes again. The world enters another period of reorganization, from the closing to the opening of borders: it is the attempt at controlled globalization in the Western world. At this time, the Brazilian territory, already quite occupied in terms of population, with a vast popular class, with a Federative Republican form of government and a Capitalist form of commercial economy, began to have more political and administrative freedom in relation to the outside world, because the threat of the Socialist World had entered into changes in ideals of political, economic and social relations. In this context, Brazilian universities, which had already been slowly undergoing changes in their mission and management objectives because of the identity crisis, that is, the crises of hegemony, legitimacy and institutional (SANTOS, 2005), received acceleration in this direction. Currently, in 2022, and a few years ago (PEREIRA et al., 2014), there is a tendency to mischaracterize public universities in the sense of making them not *a social institution*, but a social *organization*, which allows the control of itself as a management structure, contract arbitration, teaching, research, and extension.

4 NUMBER OF HIGHER EDUCATION INSTITUTIONS PER APPLICANT INHABITANTS

Regarding the number of higher education institutions in Brazil, even after the attempts to modernize its territory and civilization, the 2018 higher education census, in its statistical notes, reveals that there are 2537 higher education institutions. Of these, 217 and 1929 are University Centers and



Private Colleges, respectively; 139 and 13 are public Colleges and University Centers, respectively; 40 are Federal Centers for Technological Education (CEFET) and Federal Institutes of Education, Science and Technology (IF); and only 92 and 107 are private and public universities, respectively (INEP, 2018). On the other hand, the 2022 demographic census, in its estimates, estimated that there is a total population of more than 214 million people in Brazil (IBGE, 2021). And by its age pyramid, it can be seen that there are around 183 million Brazilian inhabitants aged over 15 years and under 69 years (IBGE, 2010); therefore, potentially candidates for some higher education course. Thus, it is evident that 183 million people is a lot of people to be accommodated in the 2537 higher education institutions established in Brazilian territory, that is, there are around 72 thousand candidates (183 million people ÷ 2537 institutions) for a single higher education institution. Even if we subtract from these 72,000 the number of people already with higher education, this result will not undergo major changes in Brazilian territory.

This relationship between the number of higher education institutions and the number of candidate inhabitants can be significantly mitigated or not through technological advances in computer science (SILVA et al., 2013; TEZANI, 2014). With this technology, after the inventions of the second generation of Microprocessors, Operating Systems (OS) and Audio and Video Storage and Processing Software, plus the union and mastery of these technologies in a single small machine, it was possible to manufacture the personal computer (PC), (CAFEZEIRO et al., 2016; WIKIPEDIA, 2022). This fact aroused *in the Old World*, especially in the USA, around 1977, the political, economic and educational interest in inserting the personal computer (PC) in the form of commerce (sales) in the various sectors and homes of contemporary civilization. Thus, the populations and all sectors of the USA and some European countries (France, the United Kingdom, among others) began to use computers, which were previously only restricted to the use of some institutions and the government. In these countries, computers have been continuously and systematically inserted in all sectors of education to provide a new relationship between teacher, student, means and methods of learning. In the U.S., the use of computers in the education sector has been inserted in a completely decentralized way and independent of government decisions. On the other hand, in France, the use of computers in the education sectors was inserted in a completely centralized way and dependent on government decisions (VALENTE, 1999). In Brazil, the personal computer (PC) was introduced commercially on a large scale in the population around 1997. But in Brazilian universities, the computer was already used as an instrument to perform calculations, write publications, carry out scientific research in providers of other institutions, and send messages to other distant people. However, today, with the population's access to personal computers and microcomputers, a new perspective of the teacher-student relationship, means and methods of learning has been opened. For this reason, Brazilian public and private institutions of higher education have modified their programs and means of teaching to accommodate



the new reality of computer computing in universities, colleges and schools. In this direction, for example, the Brazilian Ministry of Education and Culture created the Secretariat of Distance Education and several other institutions to develop this new relationship in higher, secondary and elementary education (ALVES, 2011; MARTINS, 2016). Therefore, with distance learning courses, it may be possible to increase the number of graduates, masters and doctoral students in a university organization or institution, and even accelerate the training period, as long as there is no loss of qualified higher education literacy. However, increasing the number of higher education institutions or organizations in Brazil is essential to meet this approximate number of 72,000 candidates for higher education courses, if the government, foreign investors and Brazilian leaders are interested in making higher education knowledge universal to the population. Also, it is worth noting that this measure should not be taken in isolation, because it is closely related to the economic and social characteristics of the Brazilian popular class.

5 CONCLUSION

5.1 THE UNIVERSITY THAT WAS, IS AND COULD BE IN BRAZIL

Observing what has been exposed in the previous paragraphs, Brazilian universities, regardless of whether they are public or private, had their origins, formations and objectives to meet the needs of the internal government of the country lacelinked to the interests of external government (the World order); which has been undergoing constant transformations, where science and technology, through universities and industries, They have become instruments not only of development, but also of the power of those who hold them. However, the observer should notice that in Brazil, through universities and large industries, there were no inventions of technology and science. In Brazilian territory, the transfer of technology and even science was implemented: *assembly lines* were implemented from abroad, coming from Europe or North America (USA). Technology or science was not invented in this territory, it was assembled. And so it was as one of the items to secure the modern tie of dominion that the *Old World needed* over the *New World* in the order of development and growth.

5.2 THE UNIVERSITY IN BRAZIL

In this directional sense, the ruling class, much less the Brazilian *popular class*, did not found the university they wanted. But they received a university project with a mission to fulfill and uncharacterized from the science of interpreting the world and the people who surround it, uncharacterized from overcoming the challenges that arise for the management of itself, uncharacterized from reflecting and revolutionizing the model of research and higher education that they received, ..., until reaching a tolerable level of acceptance and perception of this reality. However, a university provided with the necessary characteristics to carry out the mission it received: To help



modernize Brazilian civilization by promoting the training of qualified professionals in the national territory in all areas of science and reproducing technologies that would serve the interests of the government and some multinational industries. Thus, it did not take long to become a public university, and some private ones, with a high quality of teaching and scientific research. This process of modernization in Brazil, without loss of generalization, lasted from 1909 to 2009; Therefore, approximately, a period of *100 years* of Brazilian university. Therefore, universities in Brazil are young in relation to all the others in the world that made them reborn (for example: 1117 was the beginning of the formation of the University of Paris, in 1637 Harvard University was established, in 1096 the University of Oxford was founded, among others, (MINGUILI et al., 2008)).

5.3 THE UNIVERSITY THAT COULD EXIST IN BRAZIL

During the 100-year *period of* the Brazilian university, several political, economic and administrative changes were introduced in the direction of public and private higher education, some even originating within the institution itself (SANTOS, 2005). Among these changes, some were edited that provided an opening of access to public and private higher education to those of the *popular class* (PEREIRA et al., 2014). Thus, approximately in 2018, it was found that the *popular class* was graduating professionally in public and private higher education through scholarships. However, it should be remembered *that the popular class is numerous in quantity, there are records indicating that there are around 120 million people in the popular class (state of poverty)* and regardless of any definition adopted to characterize what is the state of poverty of a Brazilian citizen, this amount does not vary to make a significant difference in its absolute or relative total. The total Brazilian population is in the order of 214 million people (IBGE, 2021) and through the age pyramid of the population (IBGE, 2010) it is found that 31 million people are under the age of 15. Therefore, there are approximately 183 (214 million – 31 million) million Brazilian people, including the rich, middle and *popular* classes, aged over 15 and under 69 years old, and all of these should be potential candidates for higher education courses in Brazilian universities. But, even from the 120 million people of the popular class, subtracting the 31 million people under the age of 15, which includes the rich, middle and popular classes, *we still get in the order of 90 (120 million – 31 million) people of the popular class aged over 15 and under 69 years*. Therefore, all of these should be potential candidates from the *popular class* for higher education courses in Brazilian universities. Now, in the best estimate of the number of people from the *popular class* who managed to graduate from a higher education course in Brazil, it is still around *one thousand* (INEP, 2018; SIMÕES, 2018). Therefore, the percentage benefited from *the popular class* that has risen to university is insignificant compared to its total who should be candidates for a higher education course, the hope is that it grows, but very slowly and decreases at times. Thus, the Brazilian *popular class* in its entirety continues to be unknown (illiterate)



of higher education, even after the claims for industrial modernization in the Brazilian territory that began at the beginning of the twentieth century (after the First World War). But, since that time, the new social class emerging in Brazil, the middle class, in its totality, was formed in public and private higher education, therefore, benefited from the presence of universities in Brazilian territory, it is no longer necessary to seek training in higher education abroad, that is, in Europe or North America (USA). However, from what has been exposed here, realize that Brazil is far from ensuring the universal appropriation of public and private higher education to the 120 million people of its total population, who should all be candidates for some higher education course today. Gradually, and in the long run, it may reach this harvest with its measures of democratization and massification of access to higher education and with the changes in interest in the *Old World order*.

In this direction or not, a few years ago, a more robust trend was established than before regarding the mischaracterization of the Brazilian public university: to transform it from *a social institution* to a social *organization* (CRISTOFANI et al., 2021). The causes for this trend are not only internal to Brazil, but strongly external. It is the result of the great political, economic and mercantile transformations that have been taking place in recent decades in *the Old World* with its neoliberal capitalism and changing globalization, which is also related to the old conflict between the defenders of neoliberal capitalism and their modified socialist opponents, theological or not, opposed or resistant to this sociology of capital (DE SOUZA et al., 2019; PEREIRA et al., 2014, pp. 128-131; SANTOS, 2005, pp. 141-161). Consequently, in this direction, Brazilian public higher education institutions will become national or non-national private social organizations and decapitalized from state funding. It should be noted that this solution alone does not solve the crises that are spreading in Brazilian public universities, it only relieves the economy of the State and transports from one side to the other the crises of hegemony, legitimacy and institutional in public universities and the reality of quality and accessible higher education for all Brazilian citizens or people. So, from one side to the other, it is also convenient to have both types of university structures in the same university through the creation of institutes that are different in their forms of management, contract arbitration, teaching, research and extension to obtain capital to sustain research, teaching and extension. And in this way, without loss of quality and safety, to guarantee the universal appropriation of the knowledge of higher education and to contain in its mission, among others, the constant revolutionary study of nature, the transformation of the world, people, technology and teaching inserted in the Brazilian civilization itself. Or to keep the universities public, but modified to carry out the missions that are proper to them in a human civilization and not just of machines.



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REFERENCES

- ALVES, L. (2011). “Educação a distância: Conceitos e história no Brasil e no mundo”. Revista Brasileira de Aprendizagem Aberta a Distância, ABED, São Paulo, 10 (1), pp. 83-92. Disponível em: <https://doi.org/10.17143/rbaadv10i0.235>
- CAFEZEIRO, I.; COSTA, L. C.; KUBRUSLY, R. S. (2016). “Ciência da computação, ciência da informação, sistemas de informação: Uma reflexão sobre o papel da informação e da interdisciplinaridade na configuração das tecnologias e das ciências”. Revista Perspectivas em Ciência da Informação, Belo Horizonte, MG, 21 (3), pp. 111-133. Disponível em: <http://dx.doi.org/10.1590/1981-5344/2681>
- CHAVES, A. J. F. (2019). *Algumas reflexões sobre a mudança da realidade social*. [IEP3]: 1 vídeo (30 min). Disponível em: <https://www2.unesp.br/portal#!/iep3>. Acesso em: 4 maio 2022.
- CRISTOFANI, S. A. O.; ROSA, Á. M. V. (2021). “Administração escolar e neoliberalismo: Um estudo sobre a relação entre direção e corpo docente”. Revista Científica Eletrônica de Pedagogia da FAEF, Garça, 2 (37), pp. 1-18. Disponível em: <http://faef.revista.inf.br/site/c/pedagogia.html>
- DA SILVA, O. V. (2017). “A idade moderna e a ruptura cultural com a tradição medieval: Reflexões sobre o renascimento e a reforma religiosa”. Revista Científica Eletrônica da Pedagogia da FAEF, Garça, 1 (28), pp. 1-7. Disponível em: http://faef.revista.inf.br/imagens_arquivos/arquivos_destaque/P4zxYBJG5YWskHR_2018-3-17-11-31-51.pdf
- DE SOUZA, D. G.; MIRANDA, J. C.; SOUZA, F. S. (2019). “Breve histórico acerca da criação das universidades no Brasil”. Revista Educação Pública, Fundação Cecierj, 19 (5), pp. 1-10. Disponível em: <https://educacaopublica.cecierj.edu.br/artigos/19/5/breve-historico-acerca-da-criacao-das-universidades-no-brasil>
- GIOVANAZZI, M. C. P. M. (2014). “Renascimento: uma ruptura medieval ou continuidade moderna?”. Revista História, Imagem e Narrativas, Rio de Janeiro, 1 (18), pp. 1-12. Disponível em: <https://docplayer.com.br/7139169-Renascimento-uma-ruptura-medieval-ou-continuidade-moderna.html>
- IBGE (2021). “População do Brasil 214.554.344, estimada”. In: Instituto Brasileiro de Geografia e Estatística. Disponível em: <https://www.ibge.gov.br/apps/populacao/projecao/index.html>. Acesso em: 4 fev. 2022.
- IBGE (2010). “Censo demográfico do Brasil 2010”. In: Instituto Brasileiro de Geografia e Estatística., 2 dez. 2010. Disponível em: <https://censo2010.ibge.gov.br/>. Acesso em: 6 fev. 2022.
- INEP (2018). “Censo da educação superior 2018: Notas estatísticas, Brasil, 3 abr. 2018”. In: Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira. Disponível em: <https://www.gov.br/inep/pt-br/areas-de-atuacao/pesquisas-estatisticas-e-indicadores/censo-da-educacao-superior>. Acesso em: 10 mar. 2022.
- MARTINS, S. L. B.; MILL, D. (2016). “Estudos científicos sobre a educação a distância no Brasil: um breve panorama”. Revista Inclusão Social., Brasília,, DF, 10, (1), pp. 119-131. Disponível em: <https://revista.ibict.br/inclusao/article/download/4176/3647>
- MEC (2021). “Cursos e instituições”. In: Ministério da Educação e Cultura, 3 jan. Disponível em: <http://portal.mec.gov.br/pec-g/cursos-e-instituicoes>. Acesso em: 14 abr. 2022.



MINGUILI, M. G.; CHAVES, A. J. F.; FORESTI, M. C. P. P.; LOPES, A. A.; PINHO, S. Z.; CHAVES, A. J. F. (Coord.) (2008). Universidade brasileira: visão histórica e papel social. In: *Oficina de estudos pedagógicos: Reflexões sobre a prática do ensino superior*. São Paulo: Edidora Cultura Acadêmica, Cap. 2, p. 31-47.

PEREIRA, T. I.; MAY, F.; GUTIERREZ, D. (2014). “O acesso das classes populares ao ensino superior: Novas políticas, antigos desafios”. *Revista Pedagógica*, Unochapecó, 16 (32), pp. 117-140. Disponível em: <https://doi.org/10.22196/rp.v16i32.2726>

SANTOS, B. S. (2005). “A universidade no século XXI: Para uma reforma democrática e emancipatória da universidade”. *Revista Educação, Sociedade & Culturas*, Portugal, 23, pp. 137-202. Disponível em: <http://www.boaventuradesousasantm:os.pt/pages/pt/artigos-em-revistas-cientificas.php>

SILVA, A. M.; LIMA, C. M. (2013). “O uso do computador no processo de ensino e aprendizagem: Questões de representação social”. *Revista Linhas*, Florianópolis, 14 (27), pp. 158-178. Disponível em: <http://dx.doi.org/10.5965/1984723814272013158>

SIMÕES, C. F.; AMARAL, S. C. S. (2018). “A relação entre a escolaridade e a pobreza: Uma análise das políticas para democratização do acesso ao ensino superior no Brasil”. *Revista Brasileira de Ensino Superior*, 4 (2), pp. 01-15. Disponível em: <https://doi.org/10.18256/2447-3944.2018.v4i2.2392>

TEZANI, T. C. R. (2014). “Discutindo a EAD no ensino superior: Dando voz aos alunos”. *Revista Ibero-Americana de Estudos em Educação*, Unesp, 9 (1), pp. 49-59. Disponível em: <https://periodicos.fclar.unesp.br/iberoamericana/article/view/6856>

VALENYE, J. A. (org) (1999). *O computador na sociedade do conhecimento*. 1. ed. Campinas: Editora Unicamp, 156p. Disponível em: <https://www.nied.unicamp.br/biblioteca/o-computador-na-sociedade-do-conhecimento/>

VICENTE, A. P. (1993). “Política exterior de D. João VI no Brasil”. *Revista Estudos Avançados*, USP, 7 (19), pp. 193-214. Disponível em: <https://www.revistas.usp.br/eav/article/view/9634>

WIKIPÉDIA (2021). “Lista de universidades federais do Brasil”. In: a enciclopédia livre. [São francisco, CA: Fundação Wikipédia], 6 jun. Disponível em: https://pt.wikipedia.org/wiki/Lista_de_universidades_federais_do_Brasil. Acesso em: 6 jun. 2022.

WIKIPÉDIA (2022). “Computador doméstico”. In: a enciclopédia livre. [São francisco, CA: Fundação Wikipédia], 22 fev. Disponível em: https://pt.wikipedia.org/w/index.php?title=Computador_doméstico&oldid=63071974. Acesso em: 10 mar. 2022.