ORIGINAL RESEARCH ARTICLE　　　　　　　　　　**OPEN ACCESS**

ANALFABETISM UNDER THE DEMOGRAPHIC APPROACH: A CASE STUDY IN RIO DE JANEIRO, BRAZIL

*[1]André Gomes Barros, [1]Denise Cristina de Oliveira Nascimento, [1]Cristiane de Jesus Aguiar and [2]Fabrício Moraes de Almeida

[1]Universidade Candido Mendes – Campos dos Goytacazes – Rio de Janeiro, Brasil
[2]Doutor em Física (UFC) e pós-doutorado (DCR/CNPq). Pesquisador do Programa de Mestrado e Doutorado em Desenvolvimento Regional e Meio Ambiente (PGDRA). Pesquisador do GEITEC/UNIR, Chefe de departamento do curso de bacharelado em Engenharia Elétrica/Fundação Universidade Federal de Rondônia, Brasil

ABSTRACT

Brazil committed itself to reducing its illiteracy rate by at least 50% by 2015 by agreeing to the Dakar Framework for Action, Education for All: Meeting our Commitments, thus, the present work aims to present the demographic projection of the illiteracy in the state of Rio de Janeiro, in order to analyze compliance with the reduction. In addition, we sought to make a bibliographical review on the theme illiteracy, the focus of studies in a world panorama, through the Scopus base and the evolution of projections in Brazil, through the demographic censuses of 1991, 2000 and 2010, Literacy Indicator And National Plans by Sample of Households made available. In this context, one can conclude the illiteracy rate of Rio de Janeiro when contrasted with the national average of Brazil, which presents values less than half for the years of censuses. It was possible to observe that this rate of the female population is more accentuated than that of the male population, in addition, the rural zone also present values higher than the urban zone. It is also noted that the smaller the size of the municipality, the higher its illiteracy rate. It was also possible to conclude that, over the years, the projection of the illiteracy rate in the state of Rio de Janeiro tends to fall, as this rate can be measured by several methods, be it by age group, declared color, size of municipality, genre and location, the tendency to reduction is observed in all of them.

Citation: André Gomes Barros, Denise Cristina de Oliveira Nascimento, Cristiane de Jesus Aguiar and Fabrício Moraes de Almeida. 2018. "Analfabetism under the demographic approach: a case study in Rio de Janeiro, Brazil", *International Journal of Development Research*, 8, (09), 22954-22961.

INTRODUCTION

In 1989, at the Symposium on Population and Planning for Development in Riga, it was seen that in order to have a control and visibility about the future, it is necessary to carry out projections, whether population, capital, labor force or indicators (UNITED NATIONS, 1993). When speaking of planning the social, economic, political and environmental development of a nation, demographic projection is considered by the United Nations as one of the most used demographic techniques (UNITED NATIONS, 1978). Although data on the illiteracy rate among those over 15 years of age have declined

*Corresponding author: André Gomes Barros
Universidade Cândido Mendes – Campos dos Goytacazes – Rio de Janeiro, Brasil

in the last decade, Brazil ranks among the ten countries with the largest number of adult illiterates, which is in the eighth position among the ten, behind India, China, Pakistan, Bangladesh, Nigeria, Ethiopia and Egypt, ahead of Indonesia and the Democratic Republic of Congo (DRC), as reported in the EFA Global Monitoring Report (UNESCO, 2013/4). In 2000, 164 countries met at the World Education Forum in Dakar, Senegal, and agreed to the Dakar Framework for Action, Education for All: Delivering our Collective Commitments, and the six broad-based educational goals by 2015. Brazil committed itself to reduce its illiteracy rate by at least 50% by 2015, representing the percentage of 6.7%, but the rate obtained was 8%, so it can be said that the goal was not fulfilled (UNESCO, 2015). In this context, in view of the aggravating issue of illiteracy in Brazil, the present work aims to present the demographic projection of the illiteracy rate of

the state of Rio de Janeiro, in order to map and analyze compliance with the reduction of illiteracy rate

Theoretical Foundation

Bibliometry: In order to carry out the mapping of scientific publications on illiteracy in Brazil, Scopus, a database that indexes multidisciplinary scientific publications from around the world, has been used as a source of information. It is scientifically recognized both for the quantity and quality of indexed scientific journals, since the data collected from Scopus are sufficient to provide a satisfactory bibliographical map of the surveyed area and it was decided to use only that base. The research was carried out in the Scopus Elsevier database during the month of December 2017. After choosing the database, the search criteria were established. In order to carry out a wide coverage of the publications on the subject of illiteracy in Brazil, the area as a whole was investigated in order to collect all the possible studies developed. Thus, the searches performed, using the expression ("Illiteracy" AND "Brazil"), in the search field corresponding to "title, keywords, summary".

From the expression used, 172 records were returned by the base, being possible to generate a file with the bibliometric information of the works. Graph 1 shows the time distribution of the works, only the years that obtained at least four publications on the theme were considered. It should be noted that the year with the greatest publication in the area was 2014, followed in 2015. In 2016, there was a decrease, and until the current date of this survey, 2017 follows the same principles as the previous one. Afterwards, the periodicals with the highest frequencies of published articles on the subject were analyzed. Graph 2 presents the ones with the highest number of publications, those with at least three were considered. The following stand out:
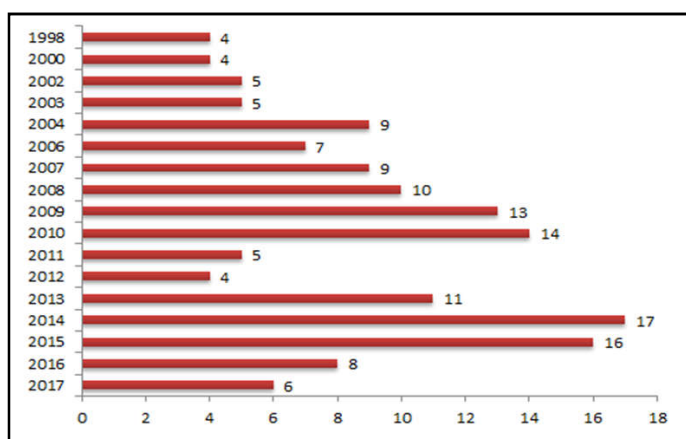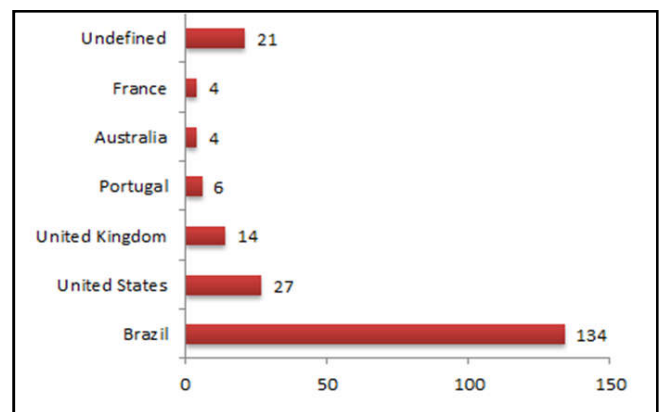

Source: Own elaboration, 2017

Graph 1. Frequency of publications per year in the period 1998-2017

Afterwards, the periodicals with the highest frequencies of published articles on the subject were analyzed. Graph 2 presents the ones with the highest number of publications, those with at least three were considered. The following stand out: As for the countries of origin of publication (Graph 3), Brazil, as expected, leads the list, with 134 articles published. After Brazil, the United States, the United Kingdom and Portugal stand out. It is noteworthy that only countries with at least four publications on the subject.
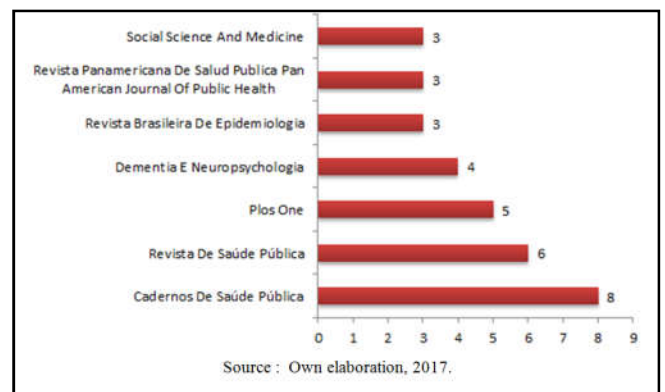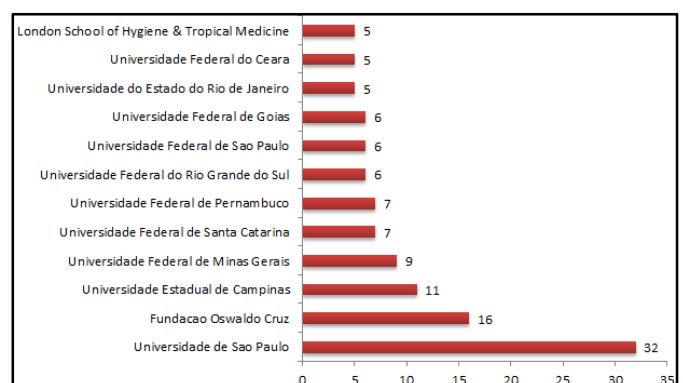

Source: Own elaboration, 2017

Graph 2. Periodicals with higher frequency of publications

Source: Own elaboration, 2017

**Graph 3. Countries with the highest frequency of publications**

Among the institutions that study illiteracy in Brazil, those with at least five publications were considered. Of particular note are the Brazilian universities, University of São Paulo, with 32 publications, the Oswaldo Cruz Foundation with 16, the State University of Campinas with 11, and the Federal University of Minas Gerais with 9. There is a presence of a London institution with 5 publications, as shown in Graph 4.

Source: Own elaboration, 2017

Graph 4. Institutions with the highest frequency of publications

The authors with the highest number of published works on the subject are presented in Graph 5. The authors with at least three publications in the area of illiteracy in Brazil are those that stand out are Nitrini, R .; Caramelli, P .; and Rodrigues, L.C. As for the type of publication, as shown in Graph 6, the articles with a volume of 151 publications are highlighted, followed by the articles presented in congress, with 7 publications.
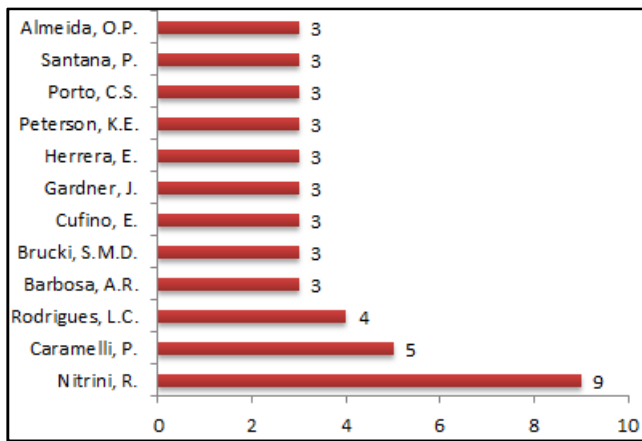
Source : Own elaboration, 2017

Graph 5. Authors with more publications
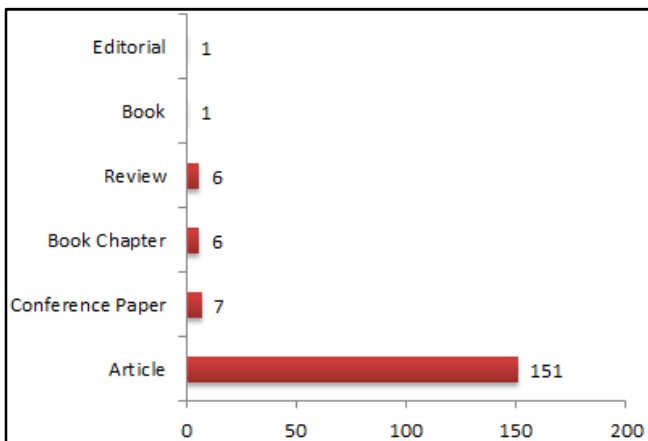
Source: Own elaboration, 2017

Graph 6. Types of publications

The predominant area of knowledge among the publications found in the research was Medicine with 103 papers published, followed by Social Sciences with 41 publications and Arts and Humanities with 16, as can be observed in Graph 7.

Source : Own elaboration, 2017

Graph 7. Areas of knowledge with the largest number of publications
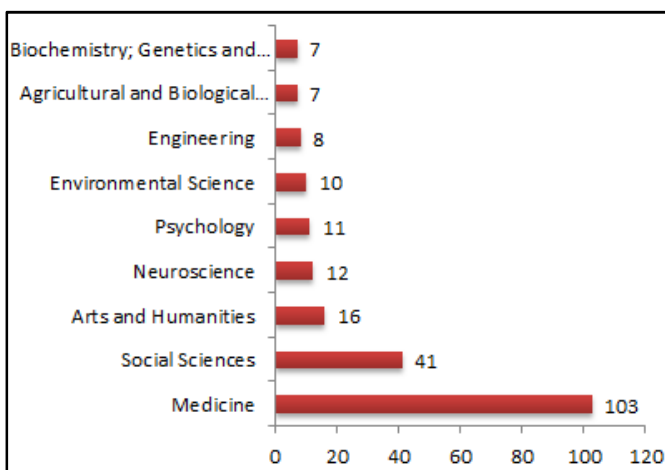
Analfabeism in Brazil

The Demographic Census, prepared every ten years by the Brazilian Institute of Geography and Statistics (IBGE), which presents the publication of the characteristics of population and

households: results of the Universe, is of the utmost importance since society has the possibility of to know better its evolution of the territorial distribution of the population of the Country and the main socioeconomic characteristics of people and their households. According to the 2010 Demographic Census, a person considered to be literate is the one who can write and read a simple ticket in the language he or she knows. And the illiterate person is one who learns to write and read, however, because he has been exposed to an unconsolidated literacy process and only signs his name. The illiteracy rate is "the percentage of illiterate people (of an age group) in relation to the total number of people (of the same age group)" (IBGE - PNAD, 2011). According to him, a fundamental factor for the reduction of illiteracy in Brazil is to ensure that children attend primary school at the appropriate ages, since the illiteracy rate in the age group between 10 and 14 indicates the lack of literacy in the ages to the first grades of elementary school. When we speak of the international context, the illiteracy rate that is primarily monitored is the age range of 15 or over (IBGE - DEMOGRAPHIC CENSUS, 2010). Graph 8 will show, in percentage, the illiteracy rate of people aged 15 or over in Brazil.
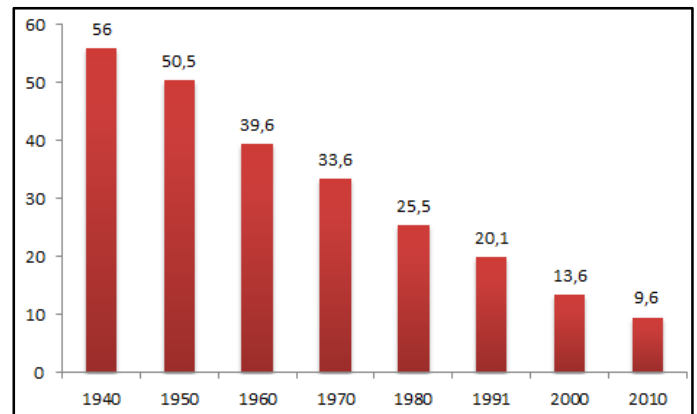
Source : Adapted from IBGE, Demographic Census 1940/2010, 2017.

Graph 8. Illiteracy rate of persons aged 15 or over Brazil -1940/2010

It is possible to observe the process of reducing this rate over the years, both in the urban area and in the rural area. However, illiteracy is more present in the rural area, due to the difficulties of access to school, a fact that has been gradually overcome. Table 1 shows a comparison of the illiteracy rate in three age groups, differentiating between genre and the household situation (urban or rural). Table 1. Illiteracy rate of persons 10 years old and over and 15 years of age or over, by genre, household status and age groups. The disparity between urban and rural illiteracy rates is observed, with people living in rural areas showing a much higher rate of illiteracy. When analyzing the total percentage of this rate in all age groups, it is possible to observe that these values decreased from 2000 to 2010. The same comparison of the illiteracy rate in relation to the household situation was performed for the great regions of Brazil, as shown in Table 2. Like the Demographic Census, the IBGE elaborates the National Household Sample Survey - Synthesis of Indicators (PNAD), for this study will be considered the PNADs from 2011 to 2015. The PNAD seeks to investigate the general characteristics of residents and households, education, migration, labor and income, child labor, fecundity and information technology (IBGE - PNAD, 2011). In Graph 9 it is possible to observe the illiteracy rate of people aged 15 or over, an analysis of the year 1900 to the year 2015.

Table 1. Illiteracy rate of persons 10 years old and over and 15 years of age or over, by genre, household status and age groups Brazil - 2000/2010

Ano	Taxa de analfabetismo (%)				
	Total	Sexo		Situação do domicílio	
		Homens	Mulheres	Urbana	Rural
10 anos ou mais de idade					
2000	12,8	13,2	12,5	9,6	27,7
2010	9,0	9,4	8,7	6,8	21,2
10 a 14 anos de idade					
2000	7,3	9,1	5,3	4,6	16,6
2010	3,9	5,0	2,7	2,9	8,4
15 anos ou mais de idade					
2000	13,6	13,8	13,5	10,2	29,8
2010	9,6	9,9	9,3	7,3	23,2

Source: IBGE, Demographic Census 2000/2010.

Table 2. Illiteracy rate of persons 10 years old and over and 15 years of age or over, by genre, household status and age groups, according to Major Regions Brazil - 2000/2010

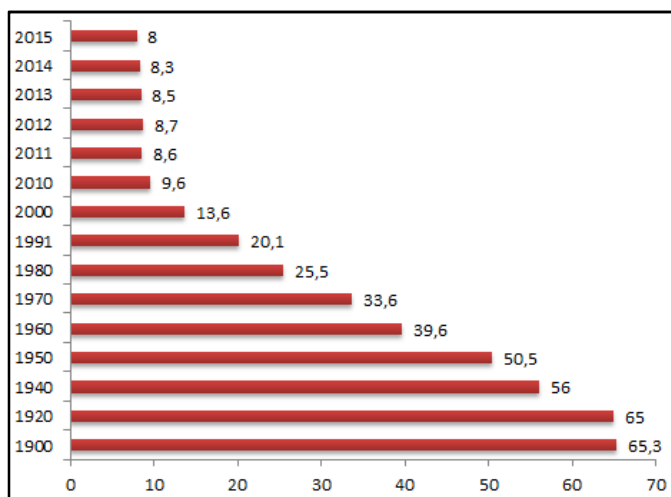| Grandes Regiões	Taxa de analfabetismo (%)					
	2000	2010	Situação do domicílio			
			Urbana		Rural	
			2000	2010	2000	2010
10 anos ou mais de idade						
Brasil	12,8	9,0	9,6	6,8	27,7	21,2
Norte	15,6	10,6	10,4	7,4	28,7	20,0
Nordeste	24,6	17,6	18,3	13,3	39,5	29,8
Sudeste	7,5	5,1	6,5	4,5	17,2	13,4
Sul	7,0	4,7	6,0	4,1	11,2	8,2
Centro-Oeste	9,7	6,6	8,5	5,8	18,0	13,3
15 anos ou mais de idade						
Brasil	13,6	9,6	10,2	7,3	29,8	23,2
Norte	16,3	11,2	11,2	7,9	29,9	21,3
Nordeste	26,2	19,1	19,5	14,3	42,7	32,9
Sudeste	8,1	5,4	7,0	4,8	19,3	14,7
Sul	7,7	5,1	6,5	4,4	12,5	9,0
Centro-Oeste	10,8	7,2	9,4	6,3	19,9	14,6

Source : IBGE, Demographic Census 2000/2010.

Table 3. Illiteracy rate of persons 10 years old and over, in descending order, according to the Federation Units Brasil - 2000/2010

Unidades da Federação	Taxa de analfabetismo das pessoas de 10 anos ou mais de idade (%)		Unidades da Federação	Taxa de analfabetismo das pessoas de 10 anos ou mais de idade (%)		Unidades da Federação	Taxa de analfabetismo das pessoas de 10 anos ou mais de idade (%)	
	2000	2010		2000	2010		2000	2010
Rondônia	11,5	7,9	Ceará	24,7	17,2	Rio de Janeiro	6,3	4,1
Acre	23,1	15,2	Rio Grande do Norte	23,7	17,4	São Paulo	6,1	4,1
Amazonas	15,3	9,6	Paraíba	27,6	20,2	Paraná	8,6	5,8
Roraima	12,0	9,7	Pernambuco	23,2	16,7	Santa Catarina	5,7	3,9
Pará	16,3	11,2	Alagoas	31,8	22,5	Rio Grande do Sul	6,1	4,2
Amapá	11,2	7,9	Sergipe	23,5	17,0	Mato Grosso do Sul	10,1	7,1
Tocantins	17,2	11,9	Bahia	21,6	15,4	Mato Grosso	11,1	7,8
Maranhão	26,6	19,3	Minas Gerais	10,9	7,7	Goiás	10,8	7,3
Piauí	28,6	21,1	Espírito Santo	10,6	7,5	Distrito Federal	5,2	3,3

Source: IBGE, Demographic Census 2000/2010.

Like the Demographic Census, the IBGE elaborates the National Household Sample Survey - Synthesis of Indicators (PNAD), for this study will be considered the PNADs from 2011 to 2015. The PNAD seeks to investigate the general characteristics of residents and households, education, migration, labor and income, child labor, fecundity and information technology (IBGE - PNAD, 2011). In Graph 9 it is possible to observe the illiteracy rate of people aged 15 or over, an analysis of the year 1900 to the year 2015. Graph 10 shows the illiteracy rate of people 10 years old or older according to the capital of each Brazilian state. It is possible to observe that Rio de Janeiro, when compared to the other units of federation, has a small illiteracy rate. Table 3 shows the illiteracy rate of people 10 years of age or older according to the capital of each Brazilian state. It should be noted that Rio de Janeiro has the third lowest rate in Brazil, followed by the Federal District and Santa Catarina, as observed in Graph 10.

Functional Illiteracy: The United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1958 defined a functionally literate person as "one who participates in all activities in which literacy is necessary for the effective functioning of your group and community and also to enable you to continue to use reading, writing and calculating for your own development and community. " That is, the functional illiterate usually knows how to write simple sentences, read, count, but he does not have the ability to put his ideas on paper or to interpret text. In general, they are individuals with less than four full years of study. The Paulo Montenegro Institute (IPM) and the NGO Acción Educativa have devised a research, the Indicator of Functional Illiteracy (INAF), which carries out a special study on illiteracy and the world of work, measuring the level of illiteracy among the Brazilian population in a range of 15 to 64 years, analyzing the practices and abilities of writing, reading and mathematics applied to the day to day.

of mastery of reading, writing and mathematics skills, being these: Functional and literally literate Illiterates. The group of functional illiterates is subdivided into two, the illiterate, people who are not able to perform activities that involve reading words and phrases, even being able to read familiar numbers; and rudimentary level literacy, which can extract information from short, familiar texts, read / write usual numbers, and perform simple operations such as handling money (IPM, 2017). There is still the basic level and full level alfabestim. The basic level corresponds to people who are functionally literate, can read and understand medium-length texts, can extract information from texts, solve simple operations, read numbers in the millions and have notions of proportionality. The full level corresponds to those whose abilities no longer impose restrictions to understand and interpret the usual elements of the literate society (INAF, 2007). Graph 11 shows, in percentage, the evolution of the literacy index in Brazil of the population aged 15-64 years, between 2001 and 2002 up to 2015. The data of "Illiteracy and Rudimentary" and "Functional illiterates" were considered.

Source: IBGE, Demographic Census, 2010.

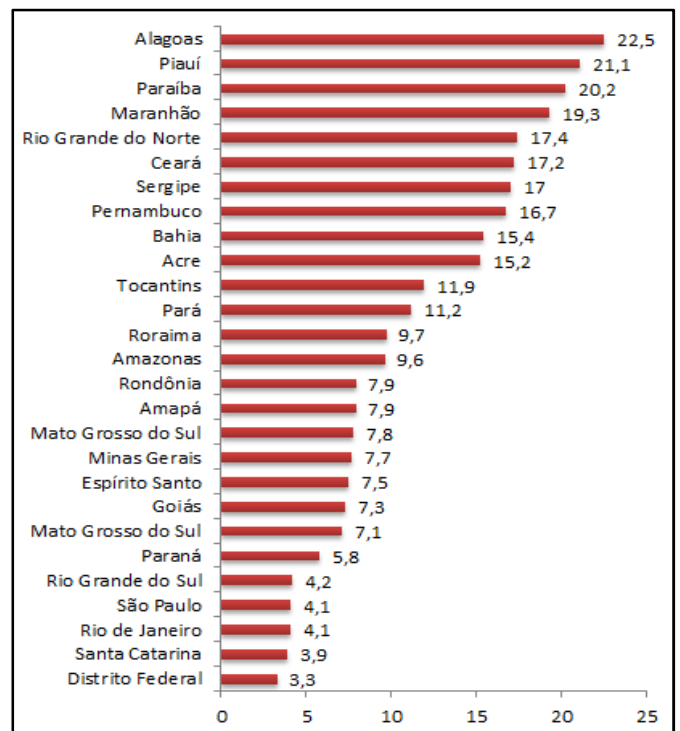**Graph 10. Illiteracy rate of persons aged 10 years and over, according to the Federation Units - 2010**

Source : IBGE, PNAD 2011/2015 & Demographic Census 1900/2010.

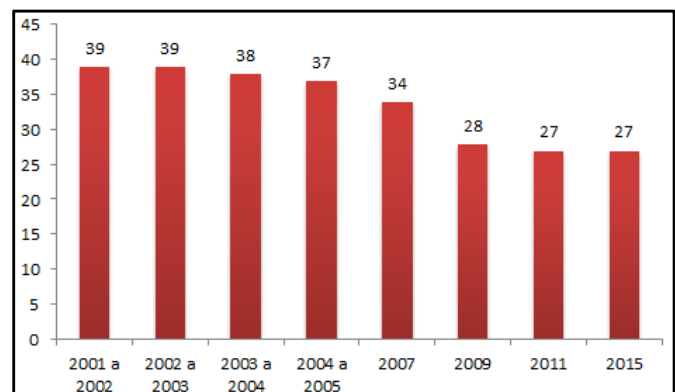**Graph 9. Illiteracy rate of persons aged 15 or over Brazil - 1900/2015**

The INAF was first released in 2001, but has undergone changes in methodology since then. In 2007, he began to measure literacy and numeracy skills. The following editions were those of 2009, 2011 and 2015. Thus, for the present study, data will be considered in the following INAFs: 2007, 2009, 2011, 2015, published in the year 2016. The INAF divides the population into two groups according to the degree

Source: INAF, 2001 a 2002/2015.

Graph 11. Evolution of the literacy indicator of the population aged 15-64 Brazil - 2001 to 2002/2015

Table 4. Estimated and Projected Total Fertility Rates Rio de Janeiro - 2000/2030

Federation Unit	Total Fertility Rates			
	Estimated		Estimated	
	2000	2010	2020	2030
Rio de Janeiro	2,06	1,68	1,52	1,45

Source: IBGE - Population Projection by Genre and Age for Brazil, Major Regions and Federative Units, 2013.

Table 5. Estimated and projected life expectancy at birth by genre Rio de Janeiro - 2000/2030

Federation Unit	Life expectancy at birth					
Rio de Janeiro	Estimated					
	200			2010		
	Total	Homens	Mulheres	Total	Homens	Mulheres
	70	65,3	74,8	74,2	70,3	78
	Designed					
	2020			2030		
	Total	Homens	Mulheres	Total	Homens	Mulheres
	77,3	74	80,4	79,4	76,4	82,2

Source: IBGE - Population Projection by Genre and Age for Brazil, Major Regions and Federative Units, 2013.

Table 6. Observed and projected internal migration balances Rio de Janeiro - 2000/2030

Federation Unit	Migratory balances			
	2000	2010	2020	2030
Rio de Janeiro	8272	2311	1170	-482

Source : IBGE - Population Projection by Genre and Age for Brazil, Major Regions and Federative Units, 2013.

Table 7. Projection of population Rio de Janeiro - 2000/2030

Federation Unit	Population			
	2000	2010	2020	2030
Rio de Janeiro	14.802.363	16.074.006	16.946.541	17.441.020

Source: IBGE - Population Projection by Genre and Age for Brazil, Major Regions and Federative Units, 2013.

As observed in Graph 8, it is possible to note the process of reduction of illiteracy in Brazil due to the decrease of the percentages.

National Education Plan

The National Education Plan (PNE), of Law 13,005, sanctioned on June 25, 2014, from 2014 to 2024 includes ten guidelines: Eradication of illiteracy; Universalization of school attendance; improving the quality of teaching; training for work; humanistic, scientific and technological promotion of the country; and establishment of a target for the application of public resources in education as a proportion of gross domestic product. The ninth goal of the PNE Law is the Literacy of the population aged 15 years or over / Eradication of absolute illiteracy, which proposes "to raise the literacy rate of the population aged fifteen or more to ninety-three integers and five tenths per cent until 2015 and, by the end of this PNE, to eradicate absolute illiteracy and reduce the functional illiteracy rate by fifty percent. " To this end, 12 strategies were proposed to achieve this goal, such as "ensuring free provision of youth and adult education to all those who did not have access to basic education at their own age" and "implementing literacy actions for young people and adults with guaranteed continuity of basic schooling " (PNE, 2014/2024).

RESULTS

Parameters and hypotheses adopted in the projection of the population by genre and age of the state of rio de janeiro: According to the Population Projection by Genre and Age for Brazil, Major Regions and Federative Units (2013), it is possible to observe in Table 4 the total estimated fertility rates projected for Rio de Janeiro. The level and the pattern by genre and age of mortality were extracted from the abbreviated tables of mortality by genre age of 2000 and 2010 elaborated by IBGE. Table 5 shows the life expectancy at birth for the state of Rio de Janeiro. Table 6 shows the migratory balances observed and projected for the state of Rio de Janeiro from 2000 to 2030. Based on the hypotheses adopted for each demographic component, the population projection was obtained between 2000 and 2030, as shown in Table 7.

The illiteracy and the Rio de Janeiro

All the data presented below are related to the age group of 15 years or older, since, as previously mentioned, the predominantly monitored illiteracy rate in the world is the age group 15 or older (IBGE - CENSO DEMOGRÁFICO, 2010). Rio de Janeiro, when compared to the national average, presents a very optimistic picture in the projection of the reduction of the illiteracy rate, as can be seen in Table 8. The illiteracy rate can be given by the age group (Table 9), the declared color (Table 10), the size of the municipality (Table 11), the female population (Table 12), the male population (Table 13), the area (Table 14) and the urban area (Table 15). Table 9 shows that over the years all age groups had their projection of illiteracy rate reduced. When we look at Table 10, we can see the reduction in illiteracy rates of all declared colors, but there was a drastic increase in the indicator of those who did not declare their color. Another factor to be observed is that the black color is the one with the highest rate after the undeclared ones. Table 11 shows that the lower the number of inhabitants per municipality, the higher will be the illiteracy rate and it is also possible to visualize that over the years, all municipalities had their rates projected with reduced values.

Table 8. Comparison of the illiteracy rate between Rio de Janeiro and Brazil

Year	Rio de Janeiro	National average
1991	9,17	19,33
2000	6,13	12,8
2010	4,16	9,37

Source: DEEPASK, 2017.

Table 9. Illiteracy rate by age group

	1991	2000	2010
15 to 24 years	4,37	1,96	0,95
25 to 59 years	8,48	5,38	3,26
60 to 69 years	19,39	14,3	9,32
70 to 79 years	24,33	17,87	13,23
80 years and over	31,09	23,29	16,49

Source: DEEPASK, 2017.

Table 10. Illiteracy rate by declared color

	1991	2000	2010
Black	16,73	10,57	6,56
Indigenous	13,68	9,36	5,65
Brown	11,15	7,39	4,93
White	6,57	4,5	2,9
Yellow	5,86	4,55	4,2
No declaration	12,1	7,73	47,96

Source: DEEPASK, 2017.

Table 11. Illiteracy rate by municipality size

	1991	2000	2010
5 to 10 thousand Hab.	25,57	13,72	11,76
10 to 20 thousand Hab.	19,94	13,07	9,72
20 to 50 thousand Hab.	18,83	12,22	8,28
50 to 100 thousand Hab.	14,95	9,1	6,32
100 to 500 thousand Hab.	10,62	6,63	4,54
More than 500 thousand Hab.	7,09	4,75	3,16

Source: DEEPASK, 2017.

Table 12 shows the illiteracy rate of the female population in the state of Rio de Janeiro, when compared to the male population (Table 13). It is also observed that the rate has been reduced.

Table 12. Female illiteracy rate

Ano	Rio de Janeiro
1991	10,26
2000	6,72
2010	4,39

Source: DEEPASK, 2017.

Table 13 shows the reduction of the illiteracy rate of the male population, showing a more positive projection than the illiteracy rate of the female population.

Table 13. Illiteracy rate of the male population

Year	Rio de Janeiro
1991	7,94
2000	5,47
2010	3,89

Source: DEEPASK, 2017.

The situation of domicile can be rural or urban. Table 14 shows the illiteracy rate for the rural area, which had been very low in 2000, but increased again, almost tripling in 2010. Table 15 shows the rate for the urban area, which in 2010 rose from double of 1991, but it had a drastic reduction in 2010.

Table 14. Illiteracy rate - Rural area

Year	Rio de Janeiro
1991	30,86
2000	5,63
2010	13,86

Source: DEEPASK, 2017.

Table 15. Illiteracy rate - Urban area

Year	Rio de Janeiro
1991	8,19
2000	19,12
2010	3,84

Source: DEEPASK, 2017.

Conclusion

Analyzing the projections presented in the chapter above, Rio de Janeiro presents an optimistic picture, as well as the Federal District and Santa Catarina, since in 2010 it presented an illiteracy rate of 4.16, in addition to presenting a constant reduction of this over the decades. The National Education Plan (PNE), among its ten guidelines, calls for the eradication of illiteracy among young people and adults. In view of the above, it can be stated that Rio de Janeiro presents favorable conditions for the fulfillment of PNE's ninth goal, since its illiteracy rate, analyzed from various angles, has tended to decrease, proving that its projections are positive for compliance with PNE guidelines. It is suggested as a suggestion for future work the continuation of the research with the intention of mapping and observing the reduction of illiteracy rates in Rio de Janeiro in the years to come, in order to certify that it complied with the National Education Plan.

REFERENCES

DEEPASK - O mundo e as cidades através de gráficos e mapas. Disponível em: <http://www.deepask.com/ goes?page= Confira-a-evolucao-da-taxa-de-analfabetismo-no-seu-estado> Acessado em: 11/12/2017.

GEORGE, M. V.; SMITH, S. K.; SWANSON, D. A.; TAYMAN, J. Population Projections 2004. In.: Siegel, Jacob. S. e Swanson, David A. (eds.). Methods and Materials of Demography. 2nd Edition, San Diego: Elsevier, Academic Press, pp. 561-602.

IBGE – CENSO DEMOGRÁFICO 2010. Disponível em: <http://www.brasileirosnomundo.itamaraty.gov.br/a-comunidade/estimativas-populacionais-das-comunidades/estimativas-do-ibge/censo-demografico-ibge-2010.pdf> Acessado em: 06/12/2017.

IBGE – CENSO DEMOGRÁFICO 2010. Disponível em: <https://ww2.ibge.gov.br/home/estatistica/populacao/censo2000/populacao/censo2000_populacao.pdf> Acessado em: 06/12/2017.

IBGE – Plano Nacional por Amostra de Domicílios, 2011. Disponível em: <file:///C:/Users/Administrador/ Downloads/ sintese_pnad2011.pdf> Acessado em: 06/12/2017.

IBGE – Plano Nacional por Amostra de Domicílios, 2012. Disponível em: <file:///C:/Users/Administrador/ Downloads/ PNAD%20-%202012.pdf> Acessado em: 06/12/2017.

IBGE – Plano Nacional por Amostra de Domicílios, 2013. Disponível em: <https://biblioteca.ibge.gov.br/ visualizacao/ livros/liv94414.pdf> Acessado em: 06/12/2017.

IBGE – Plano Nacional por Amostra de Domicílios, 2014. Disponível em: <https://biblioteca.ibge.gov.br/ visualizacao/ livros/liv94935.pdf> Acessado em: 06/12/2017.

IBGE – Plano Nacional por Amostra de Domicílios, 2015. Disponível em: <https://biblioteca.ibge.gov.br/ visualizacao/ livros/liv98887.pdf> Acessado em: 06/12/2017.

IBGE – Projeção da População por Genreo e Idade para o Brasil, Grandes Regiões e Unidades da Federação, 2013. Disponível em: <ftp://ftp.ibge.gov.br/Projecao_da_Populacao/ Projecao_ da_Populacao_2013/nota_metodologica_2013.pdf> Acessado em: 07/12/2017.

INAF – Indicador de Alfabetismo Funcional 2007. Disponível em: <http://acaoeducativa.org.br/wp-content/uploads/ 2016/10 /inafresultados2007.pdf> Acessado em: 06/12/2017.

INAF – Indicador de Alfabetismo Funcional 2009. Disponível em: <http://www4.ibope.com.br/ipm/ relatorios/ relatorio _inaf_2009.pdf> Acessado em: 06/12/2017.

INAF – Indicador de Alfabetismo Funcional 2011. Disponível em: <http://www.institutocyrela.com.br/site/arquivos/ geral/ informe_resultados_inaf2011_versao-final_12072012b.pdf> Acessado em: 06/12/2017.

INAF – Indicador de Alfabetismo Funcional 2015. Disponível em: <http://acaoeducativa.org.br/wp-content/uploads/ 2016/ 09/INAFEstudosEspeciais_2016_Letramento_e_Mundo_do_T rabalho.pdf> Acessado em: 06/12/2017.

IPM, Instituto Paulo Montenegro – Metodologia do INAF. Disponível em: <http://www.ipm.org.br/inaf> Acessado em: 06/12/2017.

OLIVEIRA, Juarez de C. e FERNANDES, Fernando. Metodologia e Considerações acerca da Projeção de População do Brasil: 1980-2020. In: São Paulo Em Perspectiva (Tendências Demográficas: Reestruturação Produtiva). São Paulo, Fundação SEADE, Vol. 10, Ano II, p 116-123, abr – jun, 1996.

PNE – Plano Nacional de Educação 2014-2024. Disponível em: <http://www.observatoriodopne.org.br/ uploads/reference/file/439/documento-referencia.pdf> Acessado em: 06/12/2017.

UNESCO – Organização das nações Unidas para a Educação, a Ciência e a Cultura; Relatório de Monitoramento Global de EPT – Ensinar e Aprender: Alcançar a qualidade para todos, 2013/2014. Disponível em: <http://unesdoc. unesco.org/ images/0022/002256/225654por.pdf> Acessado em: 10/12/2017.

UNESCO – Organização das nações Unidas para a Educação, a Ciência e a Cultura; Relatório de Monitoramento Global de EPT – Educação para Todos 2000-2015: Progressos e Desafios, 2015. Disponível em: <http://unesdoc.unesco.org/ images/0023/002325/232565por.pdf> Acessado em: 10/12/2017.

****