05 - ACCESSIBILITY AT THE UNIVERSITY

ANA PAULA SCHUSTER
CÉSAR MATEUS OLIVEIRA
KARINE DOS SANTOS
PATRICIA CARLESSO MARCELINO
ULBRA Campus Carazinho-RS.
Brasil-RS
anakschuster@gmail.com

doi:10.16887/87.a1.5

Introduction

This project aims to verify some situations to be considered by the university for a better student and employee's accessibility, as well as identify point and suggest possible solutions to the institution.

In this contextualization, it was realized a data collection about physical environment and accessibility projects already partially implemented in the university. The objective is to verify, in the university context, which way is suitable to the needs and standards of the university.

After identify the points that need adaptation and execution of certain situations found on the institution, where will be possible make some proposals and actions that can be studied and adopted by the institution so that it can improve the accessibility in all edification points.

Contextualizing the university's spaces

The institution has some access ramps, however, the main difficulty for wheelchair users or people with reduced mobility, are the locations where they are installed, as well as its finishes and its inclination.

Almost all ramps of the institution have an inclination above what is required by the NBR 9050, having huge difficulty mobility for wheelchair users.

\

Front ramps of the university access (Authors' photo)

The main issue is not the dimension of the stairs, even that it isn't following some criteria, but the use of them in certain places the institution, such as the stairs to the parking bus.

Parking lot stairs of access (Authors' photo)

Because the use of this ladder goes against the concept of accessibility, even being used as an argument that if there is any disabled person, the bus will be parked at the institution's main entrance. Since the disabled person must have a suitable physical space, so she can go anywhere, and not being taken there by other people.

Tactile Floor

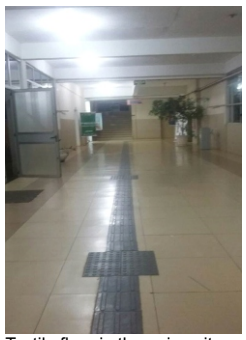
The use of tactile floor is of main importance when it comes to accessibility for visual or who has reduced vision, it is through this floor that these people will have an orientation to move around in certain environments. There are two types of tactile floor: tactile floor alert and directional tactile floor. The first floor's function is to alert the beginning or the end of ramps and stairs, the location of doors and elevators or some kind of obstacle that it isn't perceptible only by the use of cane. The second floor's function is to conduct and guide the path.

It is noticed that in the institution in question, the side entrances have no any type of signage for this audience and the two front entrances only one has the proper signaling. The routes that give access to the main functions of building in question also do not possess in its entirety the tactile floor, and as example the vast majority of classrooms, the library, the bathrooms, the cafeteria, management, administration, central calls, ombudsman, stairs and the bus stop

Handrail is a bar which is generally made of wood or metal, which is put in places where there is risk of falling as

staircases and ramps. It has the function to give support, balance and security to people, especially children, pregnant women, people with special needs and the elderly. The mandatory use of handrails is described in NBRS 9077 and 9050.

The institution's handrails of internal staircases range from 83 cm to 1 meter, thereby demonstrating a wide range of sizes and being out of standards. The external stairs have handrails at the right height. Handrails from the stairs of emergency have a handrail of 1 meter, so they are also above the measures set by NBRS.



Tactile floor in the university corridors locations (Authors' photo)

Tactile floor does not embrace the main of the university (Authors' photo)

Another point that we must highlight is that elevators are not considered means of evacuation of a building in case of emergency. It must be set one plan to meet wheelchair users. The elevators can not be available during a fire. During a fire many of the requirements are not available, depending on local regulations against fire and panic. And in the institution, there is no other way to escape if not the elevators for the upper floors.

Restrooms

The restrooms and other areas, need to be able so people with disabilities can use it, according to the NBR 9050 (2015) "The toilets and changing rooms of common use or public use must be at least 5% of each piece installed accessible, respecting at least one of each."

Building Use	**Building Situation**	**Minimum Number of Restrooms with independent entrances**
Public	To be built	5% of every sanitary fitting, with at least one for each sex on each floor, where there are restrooms
	Present	one per floor, where there is or where the law requires to have restrooms
Shared	To be built	5% of each sanitary piece with at least one on each floor, where there are restrooms
	To be expanded or remolded	5% of each sanitary piece with at least one on each accessible floor, where there are restrooms
	Present	One sanitary facility, where there are restrooms
Private Common usage area	To be built	5% of each sanitary fitting, with at least one where there toilets
	To be expanded or remolded	5% of each sanitary fitting, with at least one per block
	Present	At least one

Number of suitable restrooms according to the building- NBR 9050

It is known that not all the structural conditions are in accordance with the NBR 9050, therefore causing inconvenience to users and enhancing the lack of commitment and adequacy of facilities.

In the face of our research we found that the structure of the university it isn't compatible with what is proposed in the NBR 9050, and some areas are partially suitable according to the standard.

Location and Signaling

According to NBR 9050 (2015) "The accessible restrooms and changing rooms must be located in accessible routes, close to the main circulation, preferably near or integrated with other sanitary facilities, and be properly marked [...] ", it is necessary to have adequate signaling that way allowing less wasted time and more comfort to the user, the signaling indicating suitable restrooms for wheelchair users or people with disabilities should be also present in the building signposts.

Circulation Area

According to NBR 9050 (2015) the interior corridors must have measures greater than or equal to 1.20 meters, providing lateral remains for wheelchair movement. The university restrooms have the necessary measures; besides, some corridors extend beyond the minimum measures from NBR 9050.

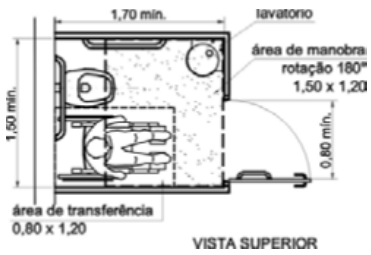
Bathroom corridor (Authors' photo)

According to NBR 9050 (2015) "The doors, including elevators, must have a minimum clearance of 0.80 m and minimum height of 2.10 m. In doors with two or more leaves, at least one of them must have a span of 0.80 m." In face of NBR 9050 the sanitary entrance doors both the external and internal have bigger measures than the necessary enabling a better wheelchair traffic.

Sanitary Boxing

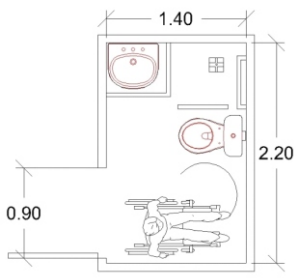
According to NBR 9050 (2015) "The boxes for sanitary bowl must ensure the transfer to diagonal, lateral, perpendicular areas, as well the maneuver area to spin 180 degrees. "The total area is 2.55m² boxing, all of which the accessories are included and are not deducted from the total measurement. The figure shows the minimum measures required by the NBR 9050:

Lavatório – Lavatory
Área de manobra – maneuver area
Área de transferência – transfer area



Superior view from the sanitary boxe – Source NBR 9050

From the survey data, we obtained that the university sanitary boxes have on average a total area of 2.80m², thereby facilitating access to users. We also notice that in the boxing you can perform 180 ° to 360 ° maneuvers without having any kind of difficulty.



University sanitary – Source: César Oliveira

University sanitary (Authors' photo)

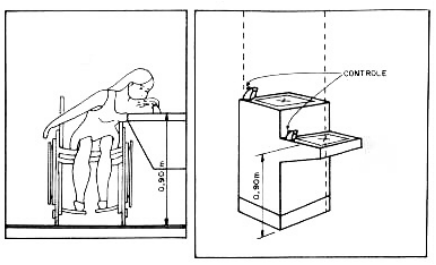
Sanitary Bowls

Sanitary bowls as well as other accessories of the restrooms must be consistent with the users. According to NBR 9050 (2015): The accessible sanitary bowls and seats toilets cannot have front opening and must be between 0.43 m and 0.45 m height from the finished floor, measures from the top edge without seat. With the seat, this height must be a maximum of 0.46 m for the adult bowls [...]. It is very important that the sanitary bowls are according to regulations, because the restroom is an accessory of the extreme importance and great use. The sanitary bowls of university adaptable restrooms are according to the rule; they have average measures 38 cm with the seat, matching the NBR 9050.

Water Dispenser

Another problem found at the university are the water dispenser. They are old and do not have shape and size required for a person with disability can use it.

The NBR 9050 (2015) emphasizes in section 8.5.1.2 that must install water dispensers with at least two different peck heights, with a 0.90 m and another between 1.00 m and 1.10 m from the finished floor. Furthermore, in the same section, 8.5.1.3, it highlights that the water dispenser height of 0,90m must have free height of 0,73m from the finished floor and must be ensured a vain for frontal approximation.



Example of a suitable water dispenser- Source NBR 9050

The university water dispensers besides not having suitable heights, they do not have the free height so the wheelchair can approach. This way it's impossible to use them.

Institution Water Dispenser (Authors' photo)

Final considerations

Through data collection made for the preparation of this research project, it is possible to realize that the Institution, despite having some elements in its physical space that fit the accessibility standards presented in NBRS, it has flaws and shortcomings that prevent it from being entitled accessible university for all kinds of people. It is important highlight that the University does not have students who need directly an accessible space yet, but it is very important to be prepared to receive people with disabilities, being it visual, physical or auditory.

It is through the accessibility that people with disabilities will have greater autonomy in their activities, having the freedom to come and go, and may develop with greater range within the University, considering not only intellectual aspects, which also depend on the building architecture, but also considering the socialization and the goal of making these people more included in all environments and situations in academic life.

The data collected at the institution in question associated with Standards Brazilian for accessibility have resulted in measures that could be taken through detailed and specific studies. Among the measures there are putting the tactile floor in most of the institution, placing signs in stairs, adjusting the handrails at the right height, an intermediate rail in external stairs and replacement of water dispenser models.

Taking into consideration that this University from Rio Grande do Sul countryside is an institution teaching with great recognition in the region, and daily receives a large number of students, teachers and employees, their suitability enable its reference teaching was extended to a larger audience. IT IS essential that the entire academic community wake up about this issue, so accessibility does not become optional, or only a criterion which makes a particular building be considered better or worse than another, but that is a must for any environment allowing free access to anyone. From the moment that full accessibility become commonplace in any construction we can then talk about equality and freedom among all citizens. Therefore, the adjustments suggested in this work would meet with the institution's mission, which is the pursuit of excellent training, through innovation, social inclusion and community development, and they would also meet the needs of students, teachers and employees who could have autonomy in its displacement by the institution.

Key Words: Education. Inclusion. Accessibility. University.

References

Brazilian Association of Technical Standards. NBR 9050: Accessibility to buildings, furniture, spaces and urban facilities. 3. Ed Rio de Janeiro:. 2015.

Brazilian Association of Technical Standards. NBR 9077: Emergency exits in buildings. Rio de Janeiro: 2001.

Brazilian Association of Technical Standards. NBR 13994: Passenger lifts - Lifts for the transport of disabled person. Rio de Janeiro: 2000.

AZEVEDO, L.. Guide for accessibility to residential buildings in the city of Rio de Janeiro. Rio de Janeiro, 2003. Available at: <http://143.107.240.111/publicacoes/Geousp15//Artigo2.pdf>. Accessed: May 13, 2016.

BARROS, Roberto Monteiro. Notions of stairs and ramps structures. Available at: <http://faculdadeinap.edu.br/materiais_didaticos_disciplinas/materiais%20e%20tecnologia/nocoes_estruturas_escadas.pdf>. Accessed on May 15, 2016.

PRADO, A. R. A. Accessibility and Universal Design. 3rd Paulista Congress of Geriatrics and Gerontology - Gerp, 2003. Available at: <http // direitodoidoso.braslink.com / pdf / acessibilidade.pdf>. Accessed: May 13, 2016.

SANTOS A. the; SANTOS, L. K. S .; RIBAS V. G. accessibility of social housing to the wheelchair: a case study. Built Environment, Porto Alegre, jan./mar. 2005. Available at: <http://www.antac.org.br/AmbienteConstruido/pdf/revista/artigos/Doc119129.pdf>. Accessed: May 13, 2016.

MEANING. Accessibility meaning: What is accessibility. 2016. Available at: <http://www.significados.com.br/acessibilidade/>. Accessed on May 15, 2016.

Accessibility University

Summary

This study aimed to present an institutional proposal, aimed at improvement of spaces in the context of a university in the state of Rio Grande do Sul had the following objectives:. Check some structural situations for better accessibility of serviced, identify, point and suggest possible solutions to include, in addition to check if the context meets the norms of accessibility. The data and images were authorized by the institution, taking into account the ethical aspects and the Ethics and Research Committee. Based on the data collected and evaluated, we observed that, despite having some elements in your physical space that fit the accessibility standards presented in NBRS, but some spaces are faulty. Thus, the adjustments suggested in the article come to meet with the mission of the institution, which is the search for an excellent education through innovation, inclusion and community development.

Key Words: Education. Inclusion. Accessibility. University.

Université Accessibilité
Résumé
Cette étude visait à présenter une proposition institutionnelle, visant à l'amélioration des espaces dans le contexte d'une université dans l'État de Rio Grande do Sul avait les objectifs suivants :. Vérifiez certaines situations structurelles pour une meilleure accessibilité des viabilisé, identifier, pointer et suggérer des solutions possibles à inclure, en plus de vérifier si le contexte est conforme aux normes d'accessibilité. Les données et les images ont été autorisées par l'institution, en tenant compte des aspects éthiques et le Comité d'éthique et de la recherche. Sur la base des données recueillies et évaluées, nous avons observé que, malgré quelques éléments de votre espace physique qui répondent aux normes d'accessibilité présentés dans NBRS, mais certains espaces sont défectueux. Ainsi, les ajustements suggérés dans l'article viennent à la rencontre avec la mission de l'institution, qui est la recherche d'une excellente éducation grâce à l'innovation, l'inclusion et le développement communautaire.
Mots-clés: l'éducation. Inclusion. Accessibilité. Université.

Accesibilidad de la Universidad
Resumen
Este estudio tuvo como objetivo presentar una propuesta institucional, orientado a la mejora de los espacios en el contexto de una universidad en el estado de Rio Grande do Sul tuvo los siguientes objetivos :. Comprobar algunas situaciones estructurales para una mejor accesibilidad del servicio, identificar, señalar y sugerir posibles soluciones para incluir, además de comprobar si el contexto cumple las normas de accesibilidad. Los datos y las imágenes fueron autorizados por la institución, teniendo en cuenta los aspectos éticos y el Comité de Ética e Investigación. Sobre la base de los datos recogidos y evaluados, se observó que, a pesar de tener algunos elementos en su espacio físico que se ajusten a las normas de accesibilidad que se presentan en Nbrs, pero algunos espacios están defectuosos. Por lo tanto, los ajustes sugeridos en el artículo vienen a cumplir con la misión de la institución, que es la búsqueda de una educación de excelencia a través de la innovación, la inclusión y el desarrollo de la comunidad.
Palabras clave: la educación. Inclusión. Accesibilidad. Universidad.

Acessibilidade na Universidade
Resumo
O presente estudo teve com o objetivo apresentar uma proposta institucional, visando a melhora dos espaços no contexto de uma universidade no interior do estado do Rio Grande do Sul. Teve como objetivos específicos: verificar algumas situações estruturais para uma melhor acessibilidade dos atendidos, identificar, apontar e sugerir possíveis soluções para a inclusão, além de verificar se o contexto atende as normatizações de acessibilidade. Os dados e imagens foram autorizados pela instituição, levando em consideração os aspectos éticos e do Comitê de Ética e Pesquisa. Com base nos dados coletados e avaliados, foi possível identificar que, apesar de possuir alguns elementos em seu espaço físico que se enquadram nas normas de acessibilidade apresentados em NBRs, alguns espaços, porém apresentam falhas. Desse modo, as adequações sugeridas no artigo virão ao encontro com a missão da Instituição, que é a busca de uma formação excelente, através da inovação, da inclusão e do desenvolvimento comunitário.
Palavras-Chaves: Educação.Inclusão.Acessibilidade.Universidade.