



A elaboração de um projeto arquitetônico para uma escola de música, como incentivo à cultura, no município de Videira-SC

*The design of an architectural project for a music school, as an incentive
to culture, in Videira-SC*

*El diseño de un proyecto de arquitectura para una escuela de música,
como incentivo a la cultura, en Videira-SC*

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Resumo

Elementos presentes na música existem desde o período pré-histórico, exercendo um importante papel de enriquecimento cultural. O presente artigo tem como objetivo apresentar os resultados do estudo desenvolvido com intuito de embasar a elaboração de um anteprojeto arquitetônico para uma escola de música municipal a ser implementada no município de Videira-SC. A metodologia utilizada na pesquisa foi do tipo qualitativa exploratória, embasada em fundamentação teórica, análise de estudos de caso e terrenos, além de visitas in loco. Cabe salientar que, no decorrer do estudo, se tornou notória a importância do contato do ser humano com a música, devido às vantagens psíquicas que são desenvolvidas e estimuladas. Atualmente, pode-se observar que as atividades musicais na cidade ocorrem, em sua maioria, no Centro de Eventos Vitória, no entanto como o edifício não oferece infraestrutura adequada se torna necessária a criação de uma nova construção. Nesse sentido, a



implantação da escola de música foi prevista no estudo em uma fração do terreno do parque “Cidade da Criança”, compreendendo espaço físico com área inicial de 3.099,20 m². Para tal, o programa de necessidades, organograma e fluxograma desenvolvido busca atender a demanda estimada, abrangendo setores de ensino, auditório, funcionários, social e de apoio, sendo proposto um local de convívio para a comunidade. Dessa forma, passada essa primeira etapa de levantamento, através das informações coletadas no decorrer da pesquisa, se tornou viável a continuidade do estudo para elaboração da proposta de anteprojeto arquitetônico para uma escola de música, como incentivo a cultura do município.

Palavras-chave: Arquitetura Escolar. Cultura. Escola de Música.

Abstract

Elements present in music have existed since prehistoric times, playing an important role in cultural enrichment. This article aims to present the results of the study developed in order to support the design of an architectural draft for a city music school to be implemented in the city of Videira-SC. The methodology used in the research was of the exploratory qualitative type, based on theoretical foundation, analysis of case studies and land, and on-site visits. It is noteworthy that, during the study, the importance of human contact with music became clear, due to the psychic advantages that are developed and stimulated. Currently, it can be observed that musical activities in the city occur mostly in the Vitória Event Center. As the building does not offer adequate infrastructure, a new construction is necessary. The establishment of the music school was planned in the study on part of the land of the “Child City” park, comprising physical space with an initial area of 3,099.20 square meters. The needs of the program, organizational chart and flowchart developed seeks to meet the estimated demand, covering education, auditorium, employees, social and support sectors: a place of coexistence for the community. After the information collected, it became feasible to continue the study to develop the proposal of architectural design for a music school, as an incentive to the culture of the city.

Keywords: School Architecture. Culture. Music school.

Resumen



Los elementos presentes en la música han existido desde tiempos prehistóricos, desempeñando un papel importante de enriquecimiento cultural. Este artículo tiene como objetivo presentar los resultados del estudio desarrollado con el fin de apoyar la elaboración de un borrador arquitectónico para una escuela municipal de música que se implementará en Videira-SC. La metodología utilizada en la investigación fue del tipo cualitativo exploratorio, basada en fundamentos teóricos, análisis de estudios de caso y terreno, y visitas in situ. Es de destacar que, durante el estudio, la importancia del contacto humano con la música se hizo evidente, debido a las ventajas psíquicas que se desarrollan y estimulan. Actualmente, se puede observar que las actividades musicales en la ciudad ocurren principalmente en el Centro de Eventos Vitória, sin embargo, dado que el edificio no ofrece infraestructura adecuada, es necesaria la creación de una nueva construcción. En este sentido, el establecimiento de la escuela de música estaba previsto en el estudio en una fracción del terreno del parque "Cidade da Criança", que comprende un espacio físico con una superficie inicial de 3.099,20 m². Con este fin, el programa de necesidades, el organigrama y el diagrama de flujo desarrollados buscan satisfacer la demanda estimada, cubriendo los sectores de educación, auditorio, empleados, sociales y de apoyo, y se propone un lugar de convivencia para la comunidad. Por lo tanto, después de esta primera etapa de la encuesta, a través de la información recopilada durante la investigación, se hizo posible continuar el estudio para elaborar la propuesta de diseño arquitectónico para una escuela de música, como un incentivo para la cultura de la ciudad.

Palabras clave: Arquitectura escolar. Cultura. Escuela de Musica.

Introduction

Music is an element present in human daily routine and its teaching has been made since Eastern and classic ancient times, present in Ancient Greece in citizen's background (CASTRO, 2007). Its appreciation or studies can provide an improvement on learning other academic field subjects, creativity, self-expressiveness, transmitted cultural heritage, besides the human spirit exaltation by this contact (CAMPBELL; CAMPBELL; DICKINSON, 2010). Despite its advantages, Brazil has a deficit in good quality and free music classes.

The city of Videira is in the midwest of the Brazilian state of Santa Catarina and has a population of around 52,510 inhabitants (IBGE- Brazilian Institute of Geography and Statistics- 2018). The city has humid climate, well- defined seasons and irregular topography (VIDEIRA, 2019). In education



according to IBGE (2018), 18,4% of young people are school-aged between 15 and 24 years old with twenty-one public elementary school and seven high schools (IBGE, 2017).

The majority of these institutions provide the contact between students and music only on occasions during basic education. These activities happen apart from school time but currently they do not happen in the proper schools. The city council has a Music Center linked to the Department of Tourism and Culture which offers musical instruments classes such as guitar, violin, cello, flute and many others used in the city symphonic band.

Most classes and concerts happen in the Vitoria Performance Center (CEVI). As the building lacks appropriate infrastructure to bear the demand of bands' rehearsals as well as violin and cello, it is necessary to have some classes in other locations. So, camerata, violin and cello classes happen in a building next to CEVI while symphonic band activities occur in another place on Dário Giassone Street, in the Saint Tereza district. Besides that, CEVI does not offer an appropriate parking lot, making necessary the use of public roads that can be insufficient to assist the demand sometimes.

Considering those facts, this work aims to demonstrate the results of a research to support the design of an architectonic draft proposal for a music school in the city of Videira to meet the Music Center's needs. Moreover, the school can offer occupational activities out of school time, especially for those who cannot afford this contact with music, rescuing young people likely to be marginalized.

History and Architecture of music schools

According to Frederico (1999), men have started to produce musical instruments in Prehistory from animal bones. But the great progress of music occurs in Greece with the origin of musical theory. Therefore, the use of music in Greco Latin -culture goes beyond religious cult and are considered an artistic manifestation seen by experts as an instrument that promotes the morality and citizenship of the individual (FREIRE, 2010).

In Roman Empire, opposed to Greeks, elites rejected music education as a school subject, so it lost its social importance. Meanwhile, according to Fonterrada (2008), music had a great development among elites resulting in an increase of heterogeneous elements earning an almost symphonic characteristic over time.

After the fall of the Roman Empire and the rise of the Catholic Church, music evolution became related with religious music. mainly during the Renaissance, Baroque and Classic periods.



During Renaissance, the classic polyphony apogee happened. According to Cardoso (2010) after reaching its perfection, a voice loss came with the introduction of musical instruments. Cardoso (2010) mentions that through this evolution an instrumental alternation which is the main concert inspiration begins.

According to Cardoso (2010), during the Baroque Period the biggest development of musical instruments, from its studies to Luthier's improvement and groups formation, arriving in the classical period marked by perfection with orchestras and Beethoven's piano sonatas.

Besides that, until Protestantism, music education was under the sole responsibility of the Catholic Church. It was aimed at the bourgeoisie due to its financial conditions to pay for education (FONTEERRADA, 2005).

Fonterrada (2005) says that although the 17th and 18th centuries had Italian conservatories; they were aimed at orphan children education while in the 19th century the objective was vocational. Still in that century, music started to be seen as a scientific study object which led to a bachelor's degree in Music (FONTEERRADA, 2005).

In the 20th and 21th centuries, another educational model is highlighted with independent education schools, methods that do not follow any conservationist or university systems that can be guided by graduated musicians or not. In Brazil, this method expanded after a reformation on education in 1968 which took down the right of conservatory to issue a higher education diploma. Therefore, the search for private classes has increased due to former students of conservatories that wanted to get a diploma (VIEIRA, 2004), as universities required that music students had previous knowledge of singing or any musical instrument. Nowadays, most independent education schools in the country are private. Still, some cities offer music classes in the curriculum.

Over this evolution, the idea of music as a scientific study object gave attention to places intended to music education and sound behavior which helped to advance material development that benefit the sound desired in environments. It is worth mentioning that a space for music classes or concerts must be planned with attention related to acoustic and thermal comfort.

One of the factors to achieve an appropriate acoustic comfort is to reach the condition of audibility through reverberation. It is the necessary time for sound intensity to be reduced to 60dB after the end of sound emission by the source (CARVALHO, 2010). Thus, to hit the reverberation time it is necessary porous surfaces in the place.



Rey de los vientos music school in the city of Yotoco in Colombia is an example with reverberation in the classroom. In this study, we can see the adoption of two projects strategies that accept the use on walls of acoustic panels with density of 1,56 lb/ft³, besides the use of sealing masonry with angulation above 90° so they will not be parallels (ARCHDAILY, 2015).

Another important aspect to achieve an appropriate acoustic comfort is the isolation of noise level transmission. According to Steel (2017), the maximum level in a music classroom is 35dB, in small rooms for rehearsals and recitals it is 30dB, and for concert rooms it is 25dB up to 30dB. To guarantee the appropriate levels, it is necessary to use architectonic strategies such as acoustic frames, floor materials that promote sound absorption or implementation of an elastic base on the subfloor counterfloor and an appropriate partition for the project (CARVALHO, 2010).

Carvalho (2010) highlights that for acoustic frames the use of double or triple glass is not enough, but it is also necessary to implement rubbers or another similar material that absorbs vibration filling the blanks between glass and frames profile. About the partitions, Carvalho (2010) mentions that to provide a good isolation a mass increase is inevitable. Then, an absorbent on its interior that avoids the empty inside walls to hold air vibrations is recommended.

An example of this architectural strategy to provide more capacity for acoustic isolation is the music school designed in the city of Videira (in the Brazilian south state of Santa Catarina) by the architect Peter Althaus. The project suggests the use of external walls in reinforced concrete and some frames with fixed glass, providing illumination to the place with ventilation happening mechanically by air conditioning.

To ensure users comfort a space thermally appropriate is mandatory, besides one acoustically appropriate too, especially considering that in some cases acoustic issues interfere in illumination and ventilation. So, it is important to observe aspects like solar radiation, sun's path, speed and direction of wind, temperature, humidity of air and precipitation rates (JONES, 2017). Another aspect is ventilation in the environment, naturally or forcedly. According to Costa (1982), with natural ventilation there is a wind action or temperature difference between the internal and external environment resulting in cross ventilation or chimney effect.

In relation to cross ventilation, Jones (2017) mentions that it happens due to pressure difference in internal and external areas and direction, as well as localization of external seals openings. Chiarello (2006) explains that the chimney effect occurs through an opening in a higher level of environment,



in which hot air that tends to rise will escape and be replaced with cold air from the external environment.

Target audience and music school structure

Its implementation was proposed to the city of Videira Music Center administered by a Swiss Association which had the responsibility of providing musical instruments and equipment maintenance for students.

It is currently under the responsibility of the municipal government with the Department of Tourism and Culture located in Campos Novos Street, Matriz neighborhood. Besides that, according to available data of Agency (2019), the Center serves around 300 students in groups of different ages for classes who come on regular and irregular bases.

Regular users are students, professors and other workers that collaborate with daily school operation which is around 355 people. The population in general and outsourced employees are the irregular users.

The research for the later development of a music school architectural project that offers a free open place to the public in order to integrate the population of Videira. For that, the program divides the project into five main sectors: education, social, auditorium, administrative, support, and parking lot. The education sector is composed of nine classrooms. Four classrooms are designed for flute, guitar, violin and cello teaching, and other five smaller ones for individual practice. Moreover, it has two rehearsal rooms, one for the symphonic band and another to cameratafor and choir. It also has rooms for storage, maintenance and instruments repair.

The social sector creates environments for contact between users. A library that contributes to individual musical background was proposed, a café (venue for exhibitions) and an open *foyer* for the public to build an open field environment, inviting the participation of the population.

A sector for auditorium and its dependencies was developed for community's reception in concerts and other events. It covers areas like stage, dressing rooms, technical rooms and storage as well as capacity for 350 people seated.

An administrative sector was planned because the program is linked to the Department of Tourism and Culture. The activities do not happen in an educational setting. One room for teachers with a lunchroom, bathrooms, changing rooms and an area to save files was proposed.



The support and parking lots are sectors intended for technical activities and logistics, with support being exclusively for employees.

After the program design with appropriate areas and an estimated increase of 20% for walls and circulation, the construction resulted in an initial area of 3,099,20 square meters. A study to analyze possible lands in the city of Videira was carried out. A land near the amusement park “Children City” located in Constantino Crestani Avenue, Cidade Alta neighborhood. This area has 5,017,47 square meters and a vast green area around.

It was verified that the land is in a residential zone 1. Music schools can be constructed. About the soil occupation, the area presents: utilization coefficient 4, occupancy rate of 60%, maximum height of 4 floors, front setback of 4,00 meters and side with openings of 1,50 meters, considering that the building has up to 4 floors.

The intervention place has infrastructure to meet the school’s needs. It has a sanitation system with water supply and garbage collection, access to paved road with length of approximately 18 meters, rolling tracks divided by a principal seedbed making available parking lots on both sides. Moreover, it has three bus stops surrounded by 80 meters of the land.

Environmental and physical determinants were analyzed in the area of the land analysis as Figure 1 shows, in which it is possible to observe an uneven ground around 14 meters, steeper in the west direction and level in east direction. The uneven ground can explore architectural topography characteristics in order to integrate the school with an intervention area. It can be useful in an



auditorium design, designing a place for interaction and to be in touch with nature.

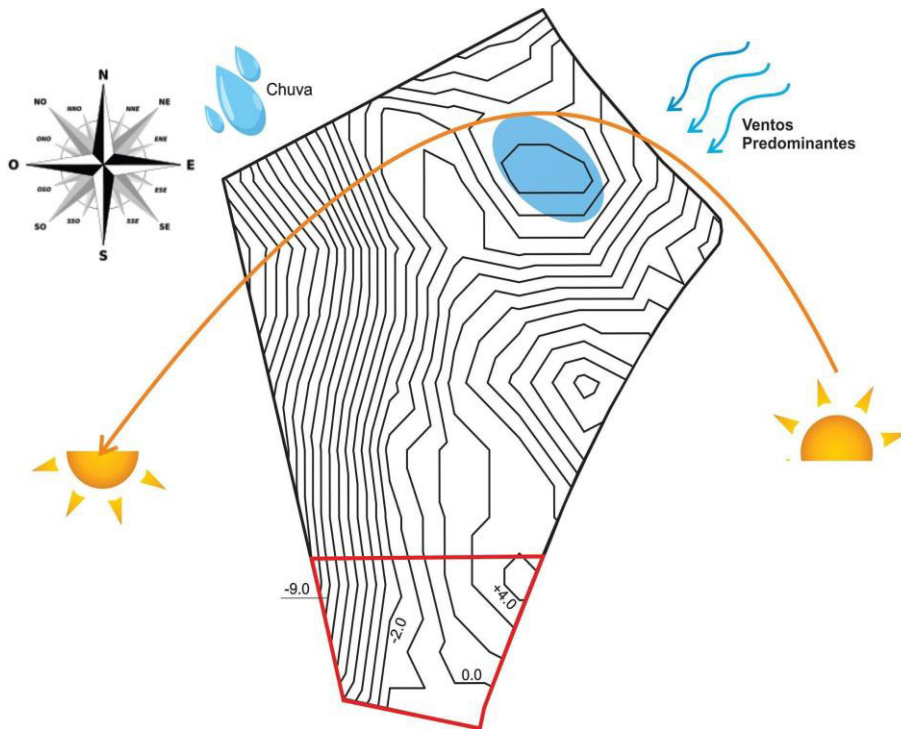


Figure 1- Insolation, prevailing winds and intervention area topography (FABIANA MENEGON, 2019).

Through insolation analyzes, it was possible to certify that the land suffers interference in the north and west directions due to the presence of an arboreal vegetation commonly found in “Children City”. This massive vegetation does not have high density, so solar rays are not completely blocked. The south faces the land of the Esther Crema School and does not have any insulation barrier, but the direction does not receive solar incidence. The east faces Constantino Crestani Avenue without an insulation barrier too. It will be the main of construction.

After the analyses and researches, an on-site a spotsstudy was designed to define the approximate localization of land sectors as Figure 2 shows.

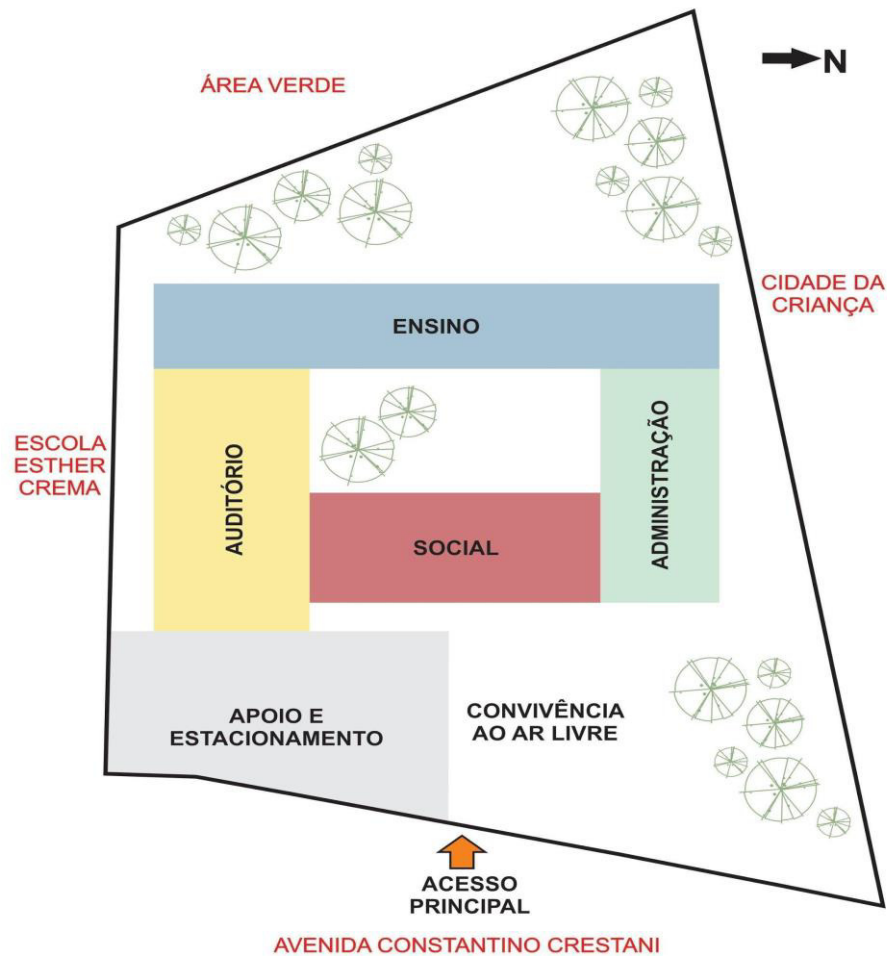


Figure 2- on sitestudy for music school in Videira city (FABIANA MENEGON, 2019).

As previously mentioned, the Music Center in the city of Videira had been under the responsibility of the Swiss Association for many years. Besides the availability of instruments and maintenance equipment, the association collaborated with exchange programs for some students and professors making possible an exchange and expansion of their knowledge. In addition, the school architectonic proposal will be the concept elements of traditional Swiss architecture like constructive materials, topography and surrounding, used a lot in constructions of the Alps. The search for common characteristics with local architecture preserves this connection.

The relation from local building characteristics and Swiss culture makes the population feel welcomed by elements that remind them of Italian and German cultures. Music school students may have knowledge and recognize that musical practice in the city of Videira was developed by support of the Swiss community.



The party follows the same model of architectural concept, then it will use common elements between traditional Swiss constructions and traditional Italians and Germans constructions of the area, so the school will not differ from the surrounding buildings.

Between elements broadly used in traditional Swiss architecture, wood and stone which can be seen in Italian and German buildings that have architectural characteristics of constructions arising from settlers. Another aspect is the use of grass around the construction with ornamental vegetation. Moreover, Swiss Alps have a relief just like in Videira's topography, characterized by a bumpy relief with sinuous lines in the landscape.

Before those questions previously mentioned, it is important to emphasize that the project proposes strategies with more energy efficiency and society integration, to preserve the environment through water reuse, energy generation, among others. Society integration through contact with music for a bigger part of Videira's population, making a culture available. People participation not only in presentation moments but also on a daily basis through social coexistence..

Final Considerations

Through knowledge, it was possible to determine the importance of music in human background, with a cultural value and its psychic benefits. Besides that, it is viable to understand how music education happened in history and differences between its responsible institutions. These conclusions lead to a better understanding of school flow to develop the proposal of architectural design.

More knowledge about the theme By research and analysis was acquired, making possible the development of concept and architectonic party, essential elements for the design of the proposal. Moreover, the land analysis allows to understand the choice of a place that assists school needs, designed environment collaborating with education.

The proposal has the objective of developing a new place of social coexistence that may contribute to the enrichment of the city of Videira's culture, providing a new environment for students with well-being, making studying and learning easier.

Finally, thinking of Music Center difficulties, it is possible to conclude that the implementation of a proper structure for a music school in Videira can expand its projects to comprise a bigger part of the population, especially those in social risk. Furthermore, architecture as an artistic expression can also provide an appropriate place to learn and practice music.



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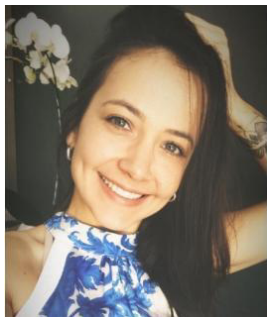
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