

The Role Of Extracurricular Spaces In Promoting A Safe Environment And Reducing Violence In Schools -School Library As A Modal-

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Abstract:

The present study endeavors to elucidate the role of extracurricular spaces in schools, with a particular focus on the quality of the school library spaces as an architectural solution to reduce violence in educational settings. Adopting a descriptive and analytical approach, the study takes a qualitative focus on the quality of the architectural space and its impact on student behavior. The paper demonstrates how architectural design and the quality of the school library environment can promote positive behavior and reduce violence among students. In order to achieve this objective, a comprehensive examination of concepts and theories related to environmental psychology and behavioral architecture has been conducted. Moreover, it studies on violence in schools and their relationship with educational spaces. It is from this foundation that a theoretical framework was created, the aim of which was to establish a link between the quality of physical space and human behavior in general. The findings indicated that extracurricular spaces, such as the school library, when designed according to architectural standards that consider students' needs and address their psychological and social aspirations, have the potential to offer a secure and invigorating environment that mitigates stress and fosters positive interaction skills. Consequently, this contributes to the establishment of a secure school environment devoid of violence. The study concludes with recommendations and architectural design standards that contribute to activating the role of the school library as an extracurricular space that contributes to reducing violence in the school environment, and achieving protection for students.

Keywords: *Extracurricular space, violence in schools, library, architectural design, quality of space.*

INTRODUCTION

For emerging generations, school is a primary vector of socialization and development, and happens to be the privileged theater of this dynamic. It is not limited to academic learning but rather an environment that promotes personality's development, the development of social skills and the acquisition of positive values. However, a significant number of educational institutions worldwide are facing major challenges, among which is the phenomenon of violence within the educational community. This violence, influenced by multiple factors, is inserted into the educational environment and affects academic success. The endemic violence that plagues the community cannot be considered as a simple individual issue; it takes on a collective dimension that cannot be neglected. This reality requires the implementation of global and multidimensional strategies to curb this scourge. The school environment, in its multiple components, is not limited to a space of traditional educational activities; it constitutes an active and interactive agent that influences and is influenced by the behavior of its users.

Extracurricular spaces are defined as areas beyond traditional classrooms providing alternative environments for social learning, recreation, and student interaction. As (Woolner, 2010) points out, such spaces include libraries, playgrounds, hallways, and break rooms. These areas play an important role in "promoting social interaction while offering a supportive climate that reduces stress and encourages positive behavior." Evidently, designing these spaces taking into account the users' needs can create a more inclusive and safe school environment. Their crucial function in developing student conduct and interactions may be overlooked despite the great time students spend in these spaces, which has a huge

influence on their psychological and social well-being. Properly designing extracurricular space and providing a safe and stimulating environment can effectively promote positive behaviors, reduce stress, and provide outlets for constructive self-expression, which in turn reduces the likelihood of violent behavior.

In the context of extracurricular spaces, the school library is a unique model with enormous potential for addressing the phenomenon of violence in the school environment. The library is not merely a book depository; it is a functional architectural structure that provides educational services to facilitate study, research, and teaching, as well as preparing and processing materials for use to effectively fulfil its function within the school community (Fahim Mustafa, 2006, p. 95). The latter can serve as a haven and a safe place for students to escape the stresses of the classroom and to partake in peaceful and productive activities. Thus, well designing these areas can foster reading, research, and critical thinking, while also encouraging values such as tolerance, mutual respect, and peaceful conflict resolution. However, school libraries face numerous challenges, including insufficient resources, outdated designs that do not meet the needs of today's students, and a lack of awareness of their crucial role in the overall educational process. For this reason, it has become necessary to reconsider the design of school libraries and activate their role as dynamic learning spaces in order to effectively address the phenomenon of violence in schools.

Research problematic: In recent years, schools have faced a serious phenomenon, which is school violence. It has raised significant concern among parents, teachers, and decision-makers. Thus, it is no longer a phenomenon limited to individual conflicts; rather, it has evolved to include multifaceted and dangerous forms such as bullying, verbal and psychological violence, and even physical assault.

This rise is due to numerous interrelated factors, including social and economic changes, the impact of the media and social media platforms, inadequate social control systems, and the lack of safe and engaging spaces in schools to channel students' energies and guide them toward constructive goals. The continued spread of this phenomenon is a serious threat to the educational system, turning schools from safe learning environments into places of tension and conflict. The resulting negative impact on students' psychological health, social adaptation and academic performance is significant.

Despite efforts to fight school violence, traditional solutions frequently focus on disciplinary or therapeutic measures after the fact has occurred, as opposed to addressing the deeper causes or developing preventative conditions. However necessary they may be, approaches that rely on punishment or individual psychological counseling may be a limited in way to address a multidimensional phenomenon greatly influenced by the surrounding environment. In this instance, the school's architectural environment is a crucial factor often overlooked. The architectural structure of school buildings and spaces, including classrooms, hallways, playgrounds, or even libraries, directly or indirectly influences student behavior and relationships. Overcrowded, unmonitored, or unsupervised spaces can increase the risk of friction and conflict, while carefully designed spaces that offer comfort, safety, and flexibility can promote positive behavior and reduce stress and restlessness.

In light of the shortcomings of traditional solutions and the increasing awareness of the significance of urban environments, it is crucial to explore innovative architectural approaches that maximize the potential of extracurricular spaces. The school library is one such space, standing out as a center of knowledge and culture and a haven for calm and contemplation. Nevertheless, could the unique design, aesthetic and functional approach of a school library make it an effective tool for reducing violence in schools? This question brings us to the main problematic of this study, which is the following: How can a qualitative design of the architectural space in a school library contribute to reducing violence in schools by supporting positive behaviors and providing a safe and stimulating environment for students? The present paper aims to address this issue through the analysis of the relationship between the school library's architectural design and its ability to measure its role as a preventative and therapeutic space in facing school violence.

Research hypothesis: The architectural design of a school library that integrates the psychological and social needs of students through flexible and diverse spaces with high environmental quality—such as natural lighting, calming colors, and appropriate furniture—significantly enhances students' mood and behavior. This thoughtful design approach reduces stress and negative interactions, thereby fostering a calm and safe learning environment.

The research purposes: The objective of this study is to:

- Highlighting the effective role of extra-curricular spaces as preventive and therapeutic tools to reduce violence in the school environment, focusing on the school library as an application model through which this goal can be achieved.

- Explore how flexible and diverse spaces affect positive social interaction.

- Provide architectural and design recommendations to enhance the role of the library in a safe school environment.

The research methodology: This study will employ a descriptive-analytical approach supported by a qualitative architectural method focused on analyzing the quality of school spaces. Emphasis will be placed on non-quantitative aspects, such as the feelings of security, comfort, belonging, and motivation, which are difficult to quantify but have a significant impact on behavior. The analysis includes examples of school libraries whose unique designs have positively influenced student behavior, in addition to a comprehensive review of previous research addressing the topic from multiple perspectives. Furthermore, a case study will be conducted on a marginalized and underutilized school library space to propose architectural interventions aimed at preventing spatial imbalance.

Data collection tools: - Published studies and research in the fields of architecture, environmental psychology - case study - observation - questionnaire directed to students.

1- Defining concepts:

1-1- Classroom and Extracurricular Spaces: Classroom activities are defined as activities that are conducted inside the classroom and have the goal to enrich the educational process, develop a number of skills in students, and promote a sense of affection and collaboration among them. These are activities that have been planned and developed to serve the educational curriculum, which are carried out under the oversight and supervision of the subject instructor. The place of their practice is inside the classroom.

As for extracurricular activities, these are planned educational activities that develop a number of skills and attitudes among students, helping them to adapt to society, participate in solving problems and issues, and are carried out outside the classroom under the supervision of the school administration and teachers in their respective fields of expertise. The place where these activities are carried out is outside the classroom, whether inside or outside the school (Sayed Abdul Warith, 2022, pp. 7 and 20).

The current research focuses on extracurricular spaces, which are defined as spaces in which educational and pedagogical activities are practiced outside the scope of classrooms and traditional curricula. From an architectural perspective, these spaces include school libraries, courtyards, gardens, green spaces, playgrounds, laboratories, workshops and student clubs. They contribute to breaking the routine of traditional learning and provide an enjoyable learning environment. In addition, they help to develop critical thinking skills, time management skills and personal and social skills, as well as building positive attitudes towards learning and school. They also help to reinforce values and ethics among students and influence their behavior.

1-2- The School violence phenomenon Violence in the school environment is defined as "a set of aggressive or harmful behaviors that occur within the educational environment, including physical assaults, threats, bullying, and psychological abuse, which negatively affect the safety of students, teachers, and the educational process as a whole. Miller (2023) noted that violence in schools is an extension of societal violence, and requires preventive strategies that enhance students' psychological resilience and support a safe learning environment. Violence is a serious social phenomenon that negatively affects the educational environment and the overall development of students. The causes of school violence may be multiple, including family factors such as poverty, domestic violence, and neglect, as well as psychological factors like bullying, social pressures, lack of values, and lack of social skills. School factors also play a role, including lack of interest in the student, overcrowding, absence of clear policies to deal with violence, and absence of extracurricular spaces and activities, especially the school library. Thus, there is an urgent need to develop comprehensive strategies to reduce this phenomenon. These strategies should focus on prevention and promote a culture of tolerance, and should activate problem spaces and pay attention to the quality of the school environment.

1-3- The impact of design and the physical environment on human behavior from an architectural and psychological perspective:

More than two thousand years ago, Vitruvius established basic specifications and requirements for architectural space design. He believed that any building must achieve three main goals: **utility, beauty, and stability**. Whereas, **Utility** is: building is constructed to provide a specific benefit and need.

Therefore, it must be designed to perform its function in the environment in which it was constructed and in an economical manner, this means functional utility for need and purpose. Usage utility is expressed in contemporary design philosophies as embodying the functional purpose of the design. **Stability** is interpreted as the designer's work securing vital or social needs. Therefore, it must be produced in such a way that it will remain intact for an appropriate period, meaning it must be durable enough to withstand natural influences. Furthermore, large-scale designs that reflect the characteristics of civilizations must routinely consider stability. Stability reflects the technological aspects and techniques used in designing and maintaining buildings. **Beauty** is related to the aesthetic aspect, noting that durability and suitability contribute to achieving joy (Khalaf, 2005, pp. 62-63).

Researchers have long relied on scientific and experimental studies to explore the relationship between architectural design and human behavior. A group of thinkers has emerged who have stressed the importance of the environment in shaping human behavior. These include Jean-Jacques Rousseau, who emphasized the importance of the environment, and architects such as Le Corbusier, who attempted to incorporate psychological principles into their designs (Badran, 2019, cited in Abu Al-Khair, 2024).

Thomas conducted research in the 1920s in the United States, where he focused on observing and recording the phenomena of clear geometric space, or rather on the psychological meaning of events (CHAVEZ, 1984). Kurt Lewin developed this work under the name of "field theory," where he believed that the individual who wants to understand the forces that govern behavior must take into account the entire psychological state. He also coined the term "psychological life space" to refer to a set of facts that govern the behavior of the individual at a particular moment. Murray contributed to the development of Lewin's work, which led to the theory of 'need-pressure', explaining behavior in terms of psychological needs and environmental pressures to which individuals are exposed, as needs have an important role in determining their behavior (Genn, 1984; Soleimani, 2011, p. 173).

As the relationship between architectural space and human behavior is complex and intertwined, architectural design, with all its details of lighting, colors, space distribution, and air quality, has the ability to shape emotions, perceptions, and feelings, thereby guiding individual behavior in either positive or negative ways. Thus, carefully designed spaces can promote feelings of comfort and security, while inappropriate spaces can lead to tension and anxiety, as shown by Al-Rashoud (2004, p. 54) in the following figure:

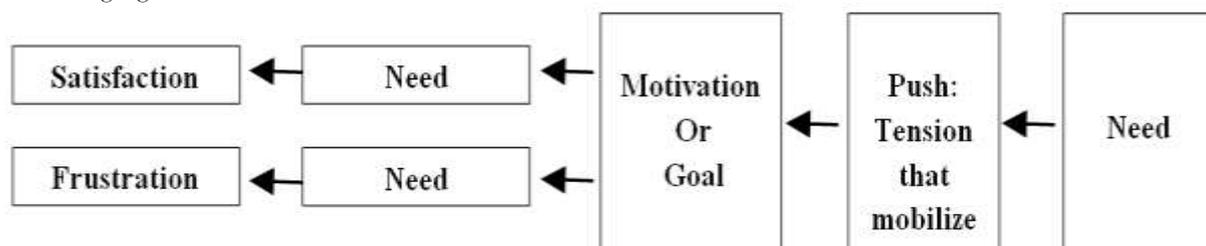


Figure No. (01) The behavioral system of the user of built interior spaces

Source: Al-Rashoud, 2004, p. 54

Thus, the architectural space in educational institutions constitutes an effective element in achieving educational goals. Its role is not limited to hosting school activities, but extends beyond that to contribute to meeting the basic human needs of learners. However, the relationship between architectural form and educational function is not direct or automatic. Rather, it is a dialectical one in which material, psychological, and social dimensions interact. The human being—the learner in particular—is the central link between design and function.

When the physical environment of the school does not take into account the educational and recreational inclinations of students, this leads to dissatisfaction on psychological and cognitive levels. This generates feelings of frustration and alienation within the school environment, and this frustration gradually manifests as negative behaviors. These behaviors may manifest as rebellion and deviation in reaction to an environment that does not meet students' aspirations or satisfy their psychological and physical needs. Therefore, the design of educational spaces must primarily consider human dimensions by creating flexible and stimulating environments that foster interaction, enhance learner motivation, and facilitate the development of a positive relationship between students and the educational institution. An optimal architectural design for school facilities transcends mere graphical representation; it serves as a framework

guiding behavior and, more fundamentally, addresses essential needs that yield satisfaction. Moreover, it embodies a psychological and pedagogical vision that aligns with architectural principles, reflecting the societal philosophy concerning education and childhood.

1-4- The school library as a model for a safe school environment to reduce violence Qualitative approach

The school library is defined as " a specialized educational environment within the school, providing students and teachers with access to a variety of educational resources, including books, magazines and digital media, to support the curriculum and enhance research skills, critical thinking and independent reading " (Ashikuzzaman, 2023), it is an extra-curricular space of great importance in promoting positive behavior. The library is more than just a place to store books; it is also a school space and an educational and cultural center, providing a safe and stimulating environment for learning and exploration. From an architectural and qualitative perspective, the design of a library can have a significant impact on student behavior, contributing to a safer and more inclusive school environment. Good design, incorporating natural lighting, ventilation, comfortable furniture and effective organization, can foster a sense of comfort and belonging, positively affecting student behavior and reducing the likelihood of violence.

1-5- Qualitative analysis of the quality of the architectural space of the school library: The quality of architectural spaces relates to the effect of the built environment on human behavior. It can be analyzed in terms of several dimensions as follows:

- **Natural lighting and ventilation:** Natural lighting is sunlight that enters interior spaces from windows or architectural openings. It is regarded as one of the most significant elements in educational building design. It plays an important role in improving user comfort, concentration, and productivity, and reducing visual fatigue, which has a positive effect on student performance and behavior (Barrett et al., 2013). In addition, natural light has positive effects on students' psychological state, regulating their biological rhythms and increasing their well-being (Edwards and Torcellini, 2002). Therefore, ensuring that educational spaces allow sufficient natural light is one of the most important factors in determining their quality. Ventilation is the process by which air is renewed within an enclosed space, whether naturally (the passage of air through openings and windows) or mechanically (the use of air conditioners). As Maxwell (2016) assert, ventilation plays a vital role in improving indoor air quality, minimizing the accumulation of pollutants and odors, regulating temperature and humidity, and enhancing the health and psychological comfort of users. In educational environments, good ventilation contributes to reducing the spread of respiratory diseases and improving the concentration and academic performance of students (Sekhar & Gopalakrishnan, 2016). Therefore, the provision of an effective ventilation system is a requirement for the architectural design of healthy and safe school spaces.

Well-lit and naturally ventilated spaces reduce feelings of tightness and tension, increase energy levels and concentration, in contrast, dark or poorly ventilated spaces can increase feelings of annoyance and aggressiveness. Arising from it, the school library, which provides abundant natural lighting through large windows or overhead vents, and proper ventilation, creates a comfortable and encouraging environment for reading and quiet learning, which reduces the likelihood of negative behaviors.

- **Colors and Materials** Colors in educational spaces refer to the color spectrum used on walls, furniture, or decorative elements, and play a prominent role in eliciting emotional and cognitive responses in students. According to a study by Babar et al. (2021), cool colors such as green and blue provide a sense of hope, curiosity, and satisfaction and are recommended for learning environments, while dark colors (such as black and gray) are considered depressing and evoke anxiety and fear. The architectural materials used in the design and construction of school buildings additionally have a significant impact on the environmental and health comfort of students. Natural materials like wood and stone provide a warm and natural atmosphere that leads to a sense of relaxation and psychological comfort (Leather and all, 1998). Furthermore, sound isolation is a vital factor in libraries to ensure a quiet environment for reading and learning. To provide a safe and secure learning environment, it is necessary to select high-quality materials that meet safety standards (Barrett et al., 2013).

- **Flexibility and diversity of spaces:** The concept of flexible spaces refers to the ability to modify educational spaces to meet the changing needs of learners and users. According to Woolner (2010), the design of educational spaces should allow for a variety of uses so that spaces can easily be transformed from one educational activity to another or from a quiet place for reading to an interactive space for group discussions. This promotes the effective use of the educational environment. He emphasizes that this

diversity in the use of spaces encourages active learning and provides students with various opportunities for social interaction and self-expression.

The flexibility of spaces is not limited to rearranging furniture only, but also includes architectural planning that allows dividing or combining spaces, providing areas dedicated to individual and group activities, and ensuring ease of movement and access. This diversity creates a dynamic environment that stimulates creativity and encourages students to participate, as well as reduces the feeling of routine and inertia that may lead to boredom and negative behaviors within the school.

Furniture and equipment: Woolner (2010) states that furniture and equipment play an important role in the design of educational settings since they directly affect user comfort, interaction, and academic success.

A flexible and reconfigurable furniture allows students to easily transition from an individual activity to a group one, improving social relations and stimulating creativity.

According to Maxwell (2016), the quality of furniture and equipment influences how satisfied students are with their learning environment. This has a positive impact on their behavior and engagement at school. Therefore, the design of furniture and equipment must be consistent with the needs of users and modern learning requirements.

Acoustics and noise control: The quality of acoustics and noise control are vital factors that influence the effectiveness of educational spaces, particularly in school libraries and areas used for extracurricular activities. Excessive noise can distract students, increase stress levels and reduce the quality of learning and social interaction (Shield & Dockrell, 2003). Therefore, architectural designs should incorporate noise control strategies, such as the use of soundproof materials, furniture arrangement to minimize sound reflections, and the design of spaces that prevent auditory interference between different activities (Woolner, 2010). Studies indicate that effective sound management contributes to the creation of a calm and comfortable environment that promotes concentration and positive behavior, thereby reducing conflict and violence within the school (Klatte et al., 2013). Maxwell (2016) also emphasizes the need to integrate acoustics standards into educational space quality standards to ensure a healthy and safe educational environment.

Security and Safety: Security and safety are one of the main pillars in the design of educational spaces, as they contribute to providing a school environment that protects students and employees from physical and psychological risks. Security includes providing protection from violence, bullying, and accidents, while safety concerns the application of design standards that ensure the safety of the building and the surrounding environment (Dyson & Renkly, 2007). In addition, studies confirm that a safe environment contributes to improving the educational climate and increasing students' sense of belonging, which reduces violence rates (Maxwell, 2016).

By integrating these design elements, the school library can transform from a mere repository of books into a lively, safe, and stimulating space that effectively contributes to the promotion of positive behaviors, the development of social skills, and thus reducing the phenomenon of violence in the school environment. This space is not only measured by its aesthetics, but also by its ability to encourage non-violent behavior among individuals.

2- PREVIOUS LITERATURE

2-1- The study of Willis, Hughes & Bland (2019) The study confirms that school libraries, as interactive and flexible spaces, contribute to students' social and emotional well-being, which can indirectly reduce violence in the school environment a peaceful school culture, by providing areas for relaxation, socializing, and creative activities. Libraries can foster a sense of belonging and support connections and relationships among students. Furthermore, engaging students in diverse educational activities allows them to express themselves positively, thereby mitigating conflicts.

Researchers employed a qualitative methodology utilizing interviews and drawings to capture students' perceptions of the ideal library. Findings revealed that while students recognized the current school library as a space that supports learning, socialization, and technology use, they envisioned ideal libraries that emphasized calmness, comfort, openness to the outside environment, and flexible, inclusive, and creative spaces fostering a sense of belonging and well-being. Additionally, the study highlighted a notable absence of student input in the design of these spaces, despite students being the primary users. The most important recommendations of the study are as follows: it is necessary to involve students in the design

of school libraries to ensure alignment with their psychological and educational needs, thereby adopting human-centered concepts that foster an educational environment conducive to well-being and active learning. Moreover, the school library should be recognized as a central space that supports students' mental health and promotes a sense of belonging and inclusion. Despite the fact that the study does not focus on school violence as a primary topic, its findings suggest that improving the conception of the school library and involving students in its perception can help to reduce school violence by fostering a positive learning environment, interaction, and student behavior alignment.

2-2- Woolner's study (2010): The study emphasized that the physical learning environment is not just a neutral framework in which education takes place, but also an active element in shaping students' social and emotional experiences. It is argued that the design of school spaces may play a preventive role in the reduction of violence if it takes into account the psychological and social needs of the students.

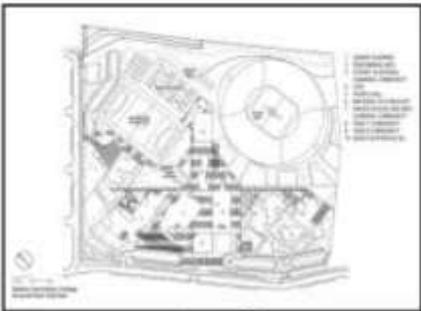
Spaces with openness, transparency, ease of movement, and visual clarity help to reduce feelings of isolation or tension, as well as the risk of aggressive behavior in closed or unsupervised places. The presence of extracurricular spaces dedicated to free interaction (such as playgrounds, reading areas and quiet corners) strengthens the spirit of cooperation and belonging, thus reducing tensions and violence between students. These results overlap with other research, such as:

2-3- Study of Debarbieux (2006) : It emphasizes that school violence often arises in marginalized spaces within the institution where supervision is absent, or where the needs of students with regard to comfort, expression and communication are not taken into account. Therefore, reconsidering the design of school spaces in accordance with educational and humanitarian principles is an important factor in preventing violence in the school environment, rather than being a secondary consideration.

Researcher's notes on previous literature:

According to previous studies, many countries, particularly developed countries, place a high value on school libraries. These countries have so investigated the influence of libraries on children's behavior and academic performance. From an architectural standpoint, it is necessary to pay special attention to this vital area that aims to energize students' extracurricular activities while adhering to quality standards. These standards, including the shape, size, location, lighting, and furniture, are designed to stimulate the desire of children to use this crucial area and have a positive influence on their behavior.

3- An analytical study of a number of school library projects:

The project	The architectural analysis
<p>Baldvis Secondary College, Australia's first project:</p>  <p>Image 02</p>  <p>Image 01</p>  <p>Image 04</p>  <p>Image 03</p>	<p>The school's architectural design is a contemporary reimagining of the typical Australian industrial shed, the "learning warehouse." The warehouse intersects and faces north and south, with the library located at the entrance, with administration, classrooms and science laboratories. The cafeteria is located at the heart of the warehouse, as well as a place for students to spend time or sit on the wide steps facing the sports hall to watch a game.</p> <p>The utilization of bright and consistent colors served to enhance the aesthetic appeal and visual attractiveness of the project.</p> <p>The utilization of substantial glass windows is recommended in order to enhance natural lighting and ventilation, including in stairwells.</p>

	<p>The architect elected to utilize iron and glass as a means of expressing modernity, technology, lightness and dynamism.</p> <p>It is evident that clarity, flexibility, communication and transparency are all architectural principles that are utilized in the design process with a view to enhancing the quality of space and ensuring the comfort and safety of students.</p>
<p>School library space:</p>  <p>Image 05</p>  <p>Image 06</p> <p>The second project: « Reeds Spring Middle School » in United States:</p>	<p>The use of large windows to maximize natural light demonstrates transparency, continuity, and outside integration.</p> <ul style="list-style-type: none">- The translucent facade has direct touch with the vegetation, creating a tranquil and comfortable atmosphere conducive to reading.- The use of vibrant colors promotes reading, inspiring and motivating students.- The books' shelves are directly connected to the lecture hall, allowing for greater reading freedom.- The spacious space, without walls or barriers, is part of the principle of "free design"- The use of sound-absorbing carpets on the floor isolates readers from noise, and harmonious colors ensures optimal visual comfort during reading.- The use of comfortable, colorful and original seats, different from those in classrooms. <p>- The densely wooded site and steep topography were preserved to allow the school to blend seamlessly into the landscape.</p> <p>The use of open and flexible spaces for learning and collaboration connects students with each other and with the world.</p> <ul style="list-style-type: none">- A sequential staircase steps into the three-story lobby in the center of the building and attracts students for informal learning, social activities and Lunchtime. The design accommodates the integration of modern technology, collaborative learning environments, the safety of the facility from the



Image 08



Image 07

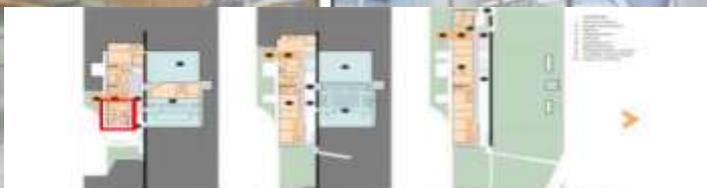


Image 11



Image 12

hurricane at once, the integration of technology, soft seats, folding and operable walls promotes the idea that learning happens everywhere (photo No. 09, 10)

- The school library is on the second floor. It is next to the main meeting area and the outside space, which is in a quiet neighborhood. Students can use the meeting space's amphitheater to read, talk to each other, and exchange ideas.

- The school library is a spacious, open area without any partitions, which makes it easy to move around, sit anywhere, and encourages students to use this space.

- The openness of the school library provides it with plenty of natural light and ventilation.

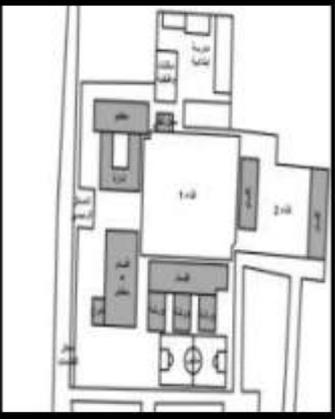
- The use of bright, basic colors attracts students and encourages them to participate in activities, giving them a sense of comfort and belonging, which has a positive impact on their behavior and reduces the likelihood of resorting to violence.

- Allowing students to choose the books they want and making them accessible by placing them directly on the shelves.

The author's subsequent observations, derived from the analysis: Researchers and specialists in the school field have generally concluded that extracurricular spaces must be available in schools, especially in the school library. Most of these studies emphasized the importance of encouraging students to use these spaces and highlighted their positive impact on students and their behavior. Through the architectural analysis of the two previous projects and the study of the principles employed in the qualitative design of school libraries, it is evident that developed countries have placed great importance on this vital field, considering it the beating heart of the school. Several design standards emerged, reflecting high quality and excellence of the space, including the use of natural lighting, bright colors, and spacious areas that allow freedom of movement and circulation. Furthermore, the provision of good, comfortable furniture, the concept that reading can occur anywhere for students, and the incorporation of natural elements that provide psychological balance, relaxation, and security are all criteria that positively influence student behavior. These features contribute to providing protection and reducing the likelihood of violence within the school environment.

4- Case study

The case study presentation Tarik Ibn Ziyad Middle School - Batna - Algeria

The project	The architectural analysis																				
 <p>Image 14</p>  <p>Image 13 (distribution of fields)</p>	<p>Tarik Ibn Ziyad Middle School is located next to the southern entrance of the Park Afouraj neighborhood, in an old popular residential neighborhood. It occupies an area of approximately 17,400 m², close to National Road No. 31. It is one of the oldest educational institutions in the area. Nearby are Salah AL-Din AL-Ayoubi Secondary School and Mohammad AL-Eid AL-Khalifa Secondary School. It is one of the intermediate schools with a library.</p>																				
 <p>Image 16</p>  <p>Image 15</p>	<p>-To achieve Tarek Ibn Ziyad Middle School, you must access the secondary road, where there are two entrances, one to the north and the other to the south.</p> <p>-Tarik Ibn Ziyad Middle School offers easy access with three entrances: one for students, one for staff housing, and one for services.</p>																				
<table border="1" data-bbox="296 1464 759 1951"> <tbody> <tr><td>Classrooms</td><td>33</td></tr> <tr><td>Labs</td><td>03</td></tr> <tr><td>Workshops</td><td>03</td></tr> <tr><td>Lecture hall</td><td>01</td></tr> <tr><td>Administration</td><td>01</td></tr> <tr><td>School Library</td><td>01</td></tr> <tr><td>school restaurant</td><td>01</td></tr> <tr><td>Schoolyard</td><td>02</td></tr> <tr><td>School stadium</td><td>01</td></tr> <tr><td>Technical location</td><td>02</td></tr> </tbody> </table>	Classrooms	33	Labs	03	Workshops	03	Lecture hall	01	Administration	01	School Library	01	school restaurant	01	Schoolyard	02	School stadium	01	Technical location	02	<p>The Middle school reports a student population of 1075 students. It is considered a base school 07 (because the number of its students exceeds 1000), of which 490 are males and 586 are females, framed by 57 teachers, an administrative staff of 20 employees in addition to 07 observers.</p>
Classrooms	33																				
Labs	03																				
Workshops	03																				
Lecture hall	01																				
Administration	01																				
School Library	01																				
school restaurant	01																				
Schoolyard	02																				
School stadium	01																				
Technical location	02																				
<p>Table No. 01 (Architectural Space Statistics)</p>	<p>The neighborhood in question is home to the oldest and most important Middle school in the area, namely Tarek Ibn Ziad middle school. This middle school is an important educational facility that comprises several functional areas, including a school library. It is upon this library that the focus of this paper will be made.</p> <p>The architectural analysis</p> <p>- The school library is located inside the administration building.</p> <p>The library's location is inappropriate and difficult to access. Additionally, it is hidden from view, which, combined with its placement within the administration area, creates a psychological barrier that discourages students from using it.</p> <p>It is preferable for the library location to be visible from all sides, making it easily accessible and free from psychological barriers</p> <p>-To reach the school library, students must pass through a narrow corridor</p>																				



containing several offices, a guidance counsellor's office, a teachers' room and a club. This creates a psychological barrier, as most students avoid entering the area due to fear of being punished.

- The library has only one entrance, which is insufficient for users in case of an emergency.

Based on our observation of photo 20, taken at approximately 10 a.m., we observed that the school library was closed and not in use, despite the presence of a large number of students seated in the courtyard at that time.

The library area is 72 square meters, of which 62 square meters are allocated to the reading room and 10 square meters to the book storage room. This space is insufficient for the number of students, as it is roughly equivalent to the size of a single classroom (62 square meters). Therefore, the area is too narrow for its intended function. Furthermore, the limited space restricts students' freedom of movement, making users feel confined, which increases anxiety and tension and may lead to negative behavior.

The architectural analysis

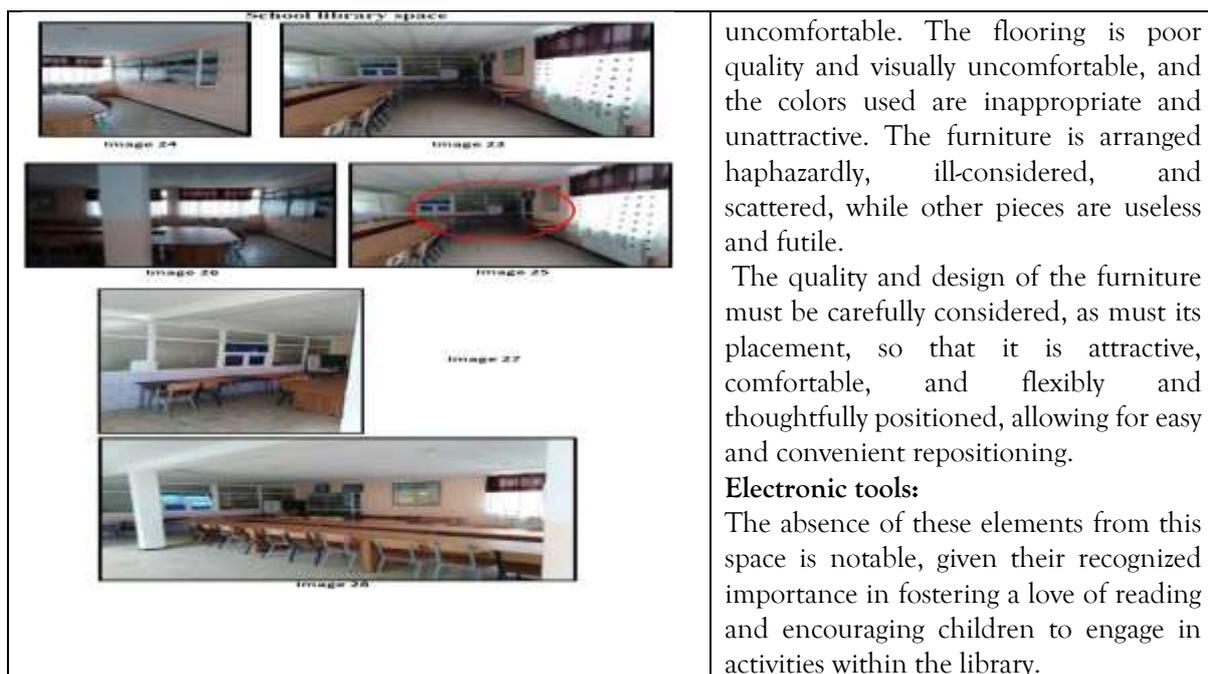
-The shelves do not accommodate a sufficient number of books, which made it necessary for the curators to add other shelves that are closed and hung on the walls, as they do not meet the children's reading needs.

- It is necessary to give the child freedom inside this space and make the shelves accessible so that he may choose what he wants.

Despite the presence of four windows, the library experiences insufficient natural lighting and ventilation, resulting in the presence of several dark corners within the reading room.

The school library should be designed to maximize natural light, thereby ensuring optimal visual and psychological comfort for its users. This objective can be achieved by incorporating substantial apertures that facilitate the entry of sufficient light and ensure effective ventilation.

The existing furniture, including tables and chairs, is unsuitable and



5- SURVEY RESULTS:

The study targeted a sample of 1075 male and female students at Ibn Ziyad Middle School. The questionnaire was distributed to 10% of the total number, representing the study sample. This institution was chosen due to its high rates of school violence and its marginalized and underutilized school library, making it an appropriate environment for studying the role of extracurricular spaces in reducing violence within the school—the school library serving as a model. The results showed that the majority of sample members expressed poor quality in school spaces, with particular reference to: The lack of green spaces within the institution, the absence of adequate extracurricular activities and the presence of unattended, marginalized areas that encourage negative behavior were also highlighted. Additionally, the school library's location within the administration building was criticized for being inaccessible and unattractive. They recommended redesigning it in a way that would make it more attractive to students, as well as preparing the school courtyard to make it more suitable for educational and cultural activities.

6- RESULTS AND DISCUSSION:

By analyzing the literature, architectural and psychological principles, the study dealt with the pivotal role that extra-curricular spaces, specifically the school library, can play in reducing the phenomenon of violence in the school environment. The discussion showed that the qualitative architectural design of the library, which takes into account psychological and social aspects, is not just an aesthetic addition, but also an effective tool in influencing human behavior and promoting a positive environment.

6-1- Discussing the results in light of the hypotheses and previous studies: The findings of the qualitative analysis have supported the study's hypothesis, as the qualitative architectural design of the school library contributes to the promotion of positive behaviors, as evidenced by the influence of natural lighting, calm colors, comfortable furniture, and acoustic isolation on student mood and concentration. Spaces that provide comfort and tranquility encourage disciplined behavior and reduce stress, which limits aggressive behavior and fosters a calmer, more harmonious learning environment.

6.2 Conclusion on the role of the school library as an extracurricular space in reducing violence: Based on the discussion and analysis, it can be concluded that the school library, when it has an appropriate and unique design, transforms into a lively extracurricular space with great potential to reduce the phenomenon of violence in the school environment. The school library space is not just a place to store books but an integrated educational environment that contributes to:

Promote positive behaviors: By providing a comfortable, safe, and stimulating environment, it encourages calm, concentration, mutual respect, and self-discipline.

Provide outlets for self-expression: Through cultural and creative activities, the library offers spaces for students to express themselves constructively, reducing the need to resort to violence.

Development of social skills: The library encourages positive interaction, collaboration, problem solving, and the development of empathy, which are essential skills for conflict reduction.

Creating a safe environment: The library can be a haven for students, where they feel safe and comfortable away from the stress of school or home environments.

In summary, a well-designed school library is an investment in students' abilities and an effective tool for fostering a generation that is conscious and tolerant, and capable of positive interaction within society. This directly contributes to reducing violence within the school environment.

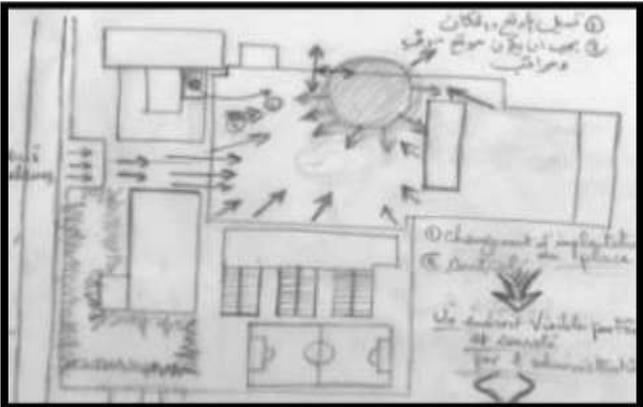
Conclusion:

Based on the findings and conclusions of this study, a set of propositions may be presented as conceptual principles aimed at strengthening the role of extracurricular spaces, particularly the school library, in reducing school violence. These proposals are aimed at architects, educators, and educational decision-makers.

7-1- Architectural suggestions for designing school libraries:

- **For a flexible and diverse design:** School libraries should be designed to provide flexible and diverse spaces that meet the diverse needs of students. This includes quiet reading areas, group work areas, relaxation spaces, and areas for creative activities. These spaces should be easily adjustable and reconfigurable.
- **Natural Lighting and Good Ventilation:** Priority should be given to maximizing natural lighting and good ventilation in library design. The use of large windows, skylights, and a design that allows for natural airflow contributes to a healthy and comfortable environment.
- **Stimulating Colors and Materials:** The use of a calm and relaxing color palette throughout most of the library, with the possibility of using colors that are more vibrant in activity areas. Prefer natural materials such as wood, which create a sense of warmth and comfort.
- **Comfortable and Safe Furniture:** Provide comfortable, safe, durable furniture that is appropriate for students of different ages. Furniture should be versatile and mobile to facilitate flexible spaces.
- **Soundproofing:** Library design should ensure effective noise control using soundproofing materials and space planning to minimize sound transmission between different areas.
- **Visual Security and Safety:** The library should be designed to ensure that all spaces are as visible as possible, avoiding hidden corners that might encourage negative behavior, while providing appropriate supervision and efficient staff distribution.

7-2- Architectural intervention: The researchers implemented an architectural intervention at the school library of Tarek Ibn Ziyad Middle School with the objective of rectifying the disparity in the quality of space and reactivating it to re-establish its pivotal function. This intervention was undertaken to exert a favorable influence on student behavior by catering to their cultural and educational aspirations. The following sequential philosophical steps were observed:

Architectural Design Philosophical Ideas	Architectural Design (Preliminary and Final)
<p>-The first treatment and architectural intervention of the researcher is to change the school library location from the administration (site switching).</p> <p>-The new site should be visible from all angles and monitored by the administration. The relocation of the library to this corner is advantageous in that it provides an unobstructed and comprehensive view of the building from all surrounding perspectives. The new location is a joint site between the middle and primary sections, facilitating convenient access for students.</p> <p>In order to select the most appropriate architectural form, it is necessary to consider</p>	 <p>Figure 01 Source: By author, 2025</p>

the safety of the students, as is the case in our space dedicated to students.

For the second level, it contains electronic media and is open to the first level, to ensure continuity of view between users.

-After gathering the design ideas and drawing Those out in pen, the researcher used several computer-based architectural drawing programs: ARCHICAD for two- and three-dimensional drawing, then inputting the final dimensions into 3DSMAX for final rendering. The resulting Architectural endoscopies were presented.

The school library is an independent, first-plan volume within the institution that represents an open book. It opens its pages daily for the benefit of students, with the aim of enabling them to acquire knowledge and creating an appealing environment for them. At the same time, the project aims to meet students in an open space, either in the internal spaces specially designed based on the principles mentioned in the research above or in the open space.

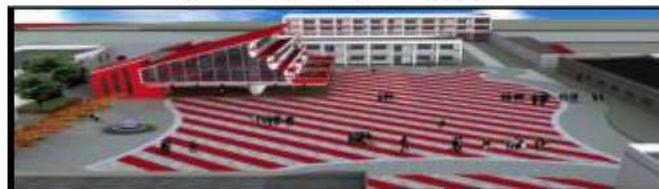
The indoor area is completely open and controlled, with flexibility, good natural lighting, ventilation, and visual contact; the furniture is comfortable and varied to provide users with comfort and well-being.



Design 02 Source: By author, 2025



Architectural endoscopy 01



Architectural endoscopy 02 Source: By author, 2025



Architectural endoscopy 03 Source: By author, 2025

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