

# Design Strategies for Community Arts Education Spaces in Urban Renewal—An Example of Public Art With 'Art Wall Painting + Soundscape Installation'

Ying Ti

Faculty of Art and Design, Macao Polytechnic University, Macau, China

**Abstract.** In urban renewal, public art intervention in the form of 'art wall painting + soundscape installation' can enhance the educational significance and emotional connection of community public space. This study takes Macau Ajenu as an entry point, adopts literature research method, case study method and field research method to analyse the problems and status quo of the current community public space, and proposes to optimise the community public space through the intervention of 'art wall painting + soundscape installation', which emphasises the systematic construction of the trinity of ecology-art-education. It stresses that systematically constructing the ecological-artistic-educational trinity can create a more energetic and sustainable community learning environment.

**Keywords:** Urban regeneration, public art, fine art wall painting, soundscape installation.

## 1. Background and theoretical basis of the study

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(i) Policy background

In recent years, China has issued a series of documents emphasising the importance of cultural heritage and innovation in urban renewal. For example, it has been proposed that existing buildings should be preserved and utilised, and that the scale of the pattern of the old city should be maintained in order to perpetuate the city's distinctive features and promote the integration of urban renewal and cultural heritage.

From an international perspective, the intervention of public art in community regeneration has become a more mature approach. The 'South Bank Arts Quarter' on the banks of the Thames in London has realised the value of this area by transforming the abandoned industrial area into an art education space. And the innovation of art education space can not only effectively activate the vitality of the community but also promote cultural heritage and innovation.

(II) Literature Review

Through combing the relevant literature at home and abroad, the author found that many scholars have broken through the traditional art display form, constructed a community life scene in which artists, community residents and the government work together, and strengthened the sense of community cultural identity by making art a carrier of community cultural expression while considering the needs of all parties in the process of designing community space.<sup>1</sup> I agree with this, and I hope that the combination of 'art + music' can be emphasised in this setting.

Some scholars have proposed the theory of 'micro-renewal' in the design strategy of micro-renewal of public space in old communities in contemporary cities, to carry out the transformation of public space in old communities using small-scale progressive micro-renewal, which not only avoids the waste of resources brought about by large-scale renovation but also avoids the destruction of the original structure of the community.<sup>2</sup> I believe that through the implementation of replacement and implantation strategies, unused public facilities and open spaces in the community can be given new

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<sup>1</sup> Gao Qi. Research on community public art space design in the context of urban renewal [D]. Hainan University, 2024.

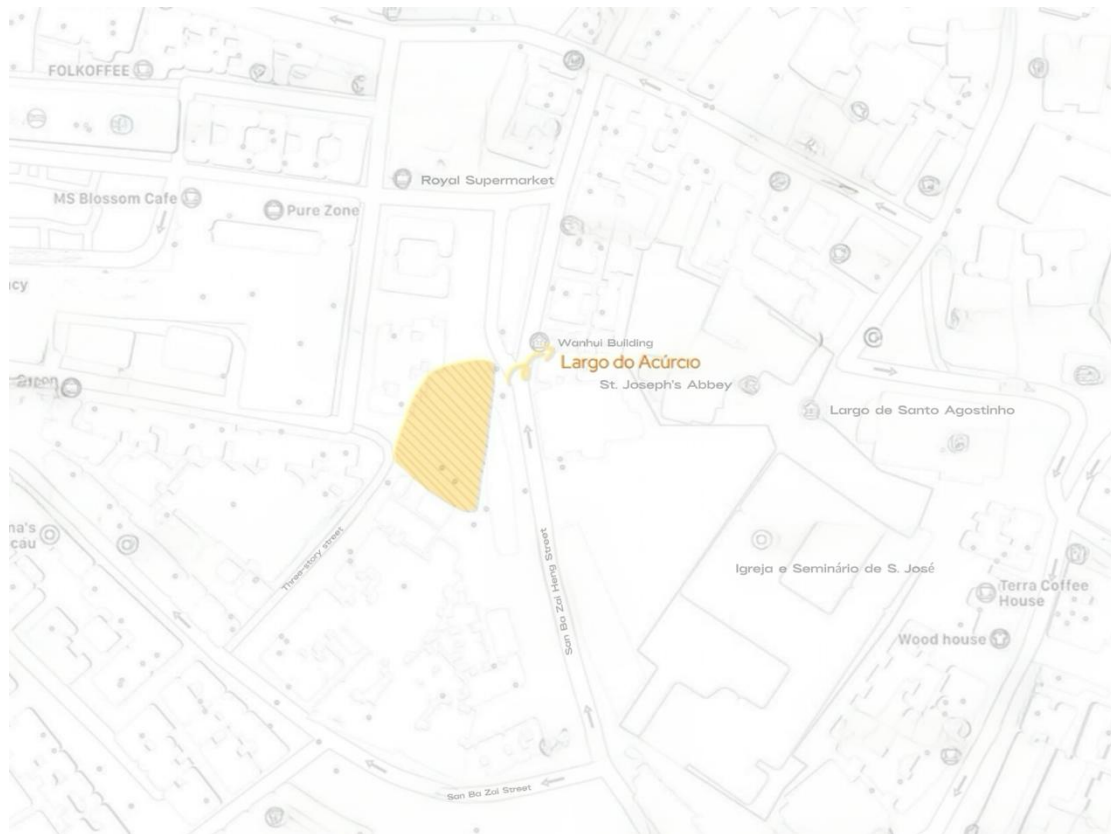
<sup>2</sup> Song Ruochen. Research on the design strategy of micro-renewal of public space in old communities in contemporary cities [D]. Harbin Institute of Technology, 2019.

vigour. Some scholars also take new types of public art as an entry point to introduce the concept of new types of public art, and then, through the implementation of art projects to dig deeper into the community, at the same time shaping the community's cultural brand, reflecting the community value of public art.<sup>3</sup>

This study is expected to explore the cultural heritage of the old community in depth and propose a set of implementable solutions to shape the cultural atmosphere with the characteristics of the community. The aim is to extend the community value of public art beyond visual aesthetics to further promote the development of community culture, enhance the quality of life of residents, and increase community participation.

### (III) Research Questions and Methods

The purpose of this study is to explore how to enhance the social value of community art education space through the public art form of 'art wall painting + soundscape installation' in the context of urban renewal. The study adopts a combination of literature research method, case study method and field research method to conduct a systematic theoretical analysis of the practice cases and propose specific design strategies.



**Figure 1.** Map showing the location of the Macao Aguilera foreland

This study selects community art education space in the process of urban renewal as the research object, and takes the former site of Macao Ajenu as a case study (as shown in Fig. 1), focusing on exploring the specific application of public art combining 'art wall painting and soundscape installation' in the community public space.

## 2. Synergistic Innovation Mechanism of 'Art Wall Painting + Soundscape Installation'

(i) Visual: wall painting

<sup>3</sup> Xun Yi. Urban regeneration strategies under the intervention of new types of public art in France: the example of the 'Old Neighbourhood' project in Paris [J]. *Public Art*, 2020, (06): 24-29.

As one of the origins of art history, wall painting reflects the aesthetic sense of the early civilisation, from the animal totems of the Paleolithic Age to the sacrificial scenes of the farming civilisation, conveying human perception of the environment and the spiritual world in its unique form. Currently, as an important form of community public art, it not only demonstrates the value of urban renewal but also plays a key role in building community emotion and art education.

Wall art shows diversity in different areas such as schools, businesses, and villages, and this diversity stems from different cultural backgrounds and audiences. Educational reforms have promoted the development of school culture, with schools using space resources such as 'red culture walls' and 'history and culture walls' to use walls as educational tools. The combination of art education and wall painting promotes cultural inculcation among students. In the commercial field, the integration of art and commerce is regarded as cross-border innovation. The combination of wall painting art and commercial space breaks through traditional boundaries, becomes a carrier of public art, injects competitiveness into business, and reconstructs urban culture through visual narratives. In the construction of the countryside, wall painting art, as a visual carrier, needs to follow the three major principles of theme condensation, form normality, and value orientation. Through the reconstruction of visual images, it promotes the transformation of the countryside from material modernisation to humanistic modernisation.

Research has shown that in the context of urban renewal, community wall art should not only have a decorative function but also solve spatial conflicts, rebuild community cultural memory, and enhance educational interaction. Urbanisation has led to spatial homogenisation and cultural memory rupture, and wall art reshapes the community's historical memory through visual symbols, while the privatisation of public space in urban regeneration has led to an increase in the demand for wall art intervention. Wall painting art should play the function of reconstructing the framework of community governance, making residents the main body of community space, transforming commercial advertising space into a visual carrier of local knowledge, breaking through the limitations of traditional education space, realising the living of education, and promoting the transformation of community education mode into 'cultural symbiosis'.

(ii) Auditory: soundscape

Soundscape theory was first proposed by Canadian musicologist Murray Schaeffer in the 1960s.<sup>4</sup>The core concept of this theory lies in the process of analysing human cognitive perceptions and interpretations of the acoustic environment<sup>5</sup>. Research has shown that the overall quality of the soundscape is highly correlated with the physical and mental health of the public.<sup>6</sup>A high-quality soundscape not only produces an environmental healing effect but also greatly enhances the suitability of the living environment. The soundscape materials carrying historical memories or regional characteristics can create an emotional connection between the public and the environment through multi-dimensional senses and build a spatial experience with more cultural depth.

Soundscape and mural art in the school, commercial, and rural areas of the application are reflected in the design of the soundscape; the needs of different target groups must be given comprehensive consideration in the style of the soundscape material, music, sound effects, and other elements. Campus environment and facilities planning form a three-dimensional 'environmental education' system. For example, the morning reading area is designed with birdsong and natural white noise to help students concentrate; the corridor displays famous quotes from different periods to increase the

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<sup>4</sup> SCHAFER RM. *The Soundscape: Our Sonic Environment and the Tuning of the World* [M]. Rochester: Destiny Books, 1977.

<sup>5</sup> HONG J Y, JEON J Y. Relationship between Spatiotemporal Variability of Soundscape and Urban Morphology in a Multifunctional Urban Area: a Case Study in Seoul, Korea [J]. *Building and Environment*, 2017: s0360132317304791.

<sup>6</sup> Rui Ning Zhang, Yuan Zhang, Yang Liu. Study on the correlation between soundscape distribution and landscape features in urban community parks-taking Shenyang Lu Xun Park as an example [J]. *Applied Acoustics*, 2022, 41 (2): 207-215.

diversity of learning scenes. The integration of soundscape into the campus has transformed it from 'environmental beautification' to 'cognitive intervention'. Soundscapes are widely used in the commercial sector, with FMCG brands using fast-paced music to stimulate shopping, and personal buyers attracting customers with music that suits their tastes. These strategies aim to prolong the customer's stay through soundscapes, such as the use of urban soundscape material in ancient commercial districts to recreate historical streetscapes and create an atmosphere of temporal and spatial interlacing. When soundscape becomes part of the brand narrative, the commercial space is transformed into a platform for cultural experience. In the construction of the countryside, soundscape assumes the role of cultural revival. Field recordings capture natural soundscapes, such as the sound of water and wind, combined with the sounds of farming horns and festive gongs and drums, to enhance the sense of identity of countryside residents, and to enable visitors to experience the countryside atmosphere in-depth.

The soundscape configurations in different areas, such as schools, commercial, and rural areas, reveal the high demand for soundscape installations in community wall painting in the context of urban regeneration. Soundscape design is gradually transcending the traditional single dimension of hearing and becoming a key clue to reshape the value of space. In this process, the cross-media synergistic design of 'wall painting + music' facilitates the formation of knowledge dissemination paths by its inherent immersive interactive educational function. The incorporation of this composite artistic effect opens up an innovative path for the living environment of future community residents.

#### (iii) Cross-media Collaborative Design

Cross-media co-design is a key development direction in the field of public art now and in the future, and Braun Kathrin (UK) has mentioned in *From Digital Design to Data-Assets* that digital design is applied to the digital vision of the future of architectural places.<sup>7</sup>

The innovative integration of 'art wall painting + soundscape installation' breaks through the limitations of the traditional single communication medium, and forms a three-dimensional community art education space by building a multi-sensory audio-visual interactive environment. The visual narrative function of the art wall painting and the abstract emotional atmosphere of the soundscape installation together constitute a complete path of community cultural expression. This combination not only enriches the form of artistic expression but also realizes functional synergy, i.e., the practical effect of  $1+1>2$ . In addition, this cross-media synergy reflects the unique 'environmental pedagogy' of spatial immersion education, which can stimulate the awakening of deep memories, reduce the psychological resistance to learning, and promote the residents' sense of identity and belonging to the community culture.

### 3. Practical Strategies and Innovative Paths

#### (I) Community Portrait

In recent years, the Macao Special Administrative Region (MSAR) has been actively promoting the construction of public art in the community through the implementation of cultural and tourism integration projects such as 'Culture in the Community'. Preliminary statistical analyses (as shown in Figure 2) show that the coverage rate of wall paintings in Macao's communities has reached 30%-40%, mainly in areas such as Hac Sa Wan New Street, Rua da Cinco de Outubro, and Rua de Guanqian. These wall paintings feature local cultural narratives and neighbourhood revitalisation. The coverage of soundscape art installations is about 20%-30%, represented by the 'Illuminations of the River of Dreams' sound and light installation in the South Bay and Coloane Fishing Village, which demonstrates the combination of technological interaction and cultural memory. The coverage rate of composite art communities is about 10-15 per cent, with the Fifth of October Street and Guanqian Street as typical examples, where multi-sensory interactive experiences are realised through the combination of 'visual + soundscape installations'.

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<sup>7</sup> Historical Social Research Volume 47, Issue 3 (181). 2022. pp 81-110.



Leisure" and a "Beautiful Home" in the MSAR Urban Master Plan (2020-2024), but also a response to the requirement of 'Building a "World Centre of Tourism and Leisure" and a "Beautiful Home" in the MSAR Urban Master Plan (2020-2024). This practice is not only a response to the requirement of 'Building a "World Centre for Tourism and Leisure" and "Beautiful Home" in the Macao SAR Urban Master Plan (2020-2024), but also a double breakthrough in the transformation of spatial functions and the reconstruction of social relations through the intervention of art media.



**Figure 3.** Current status of the Yakinu foreland (author's own photographs)

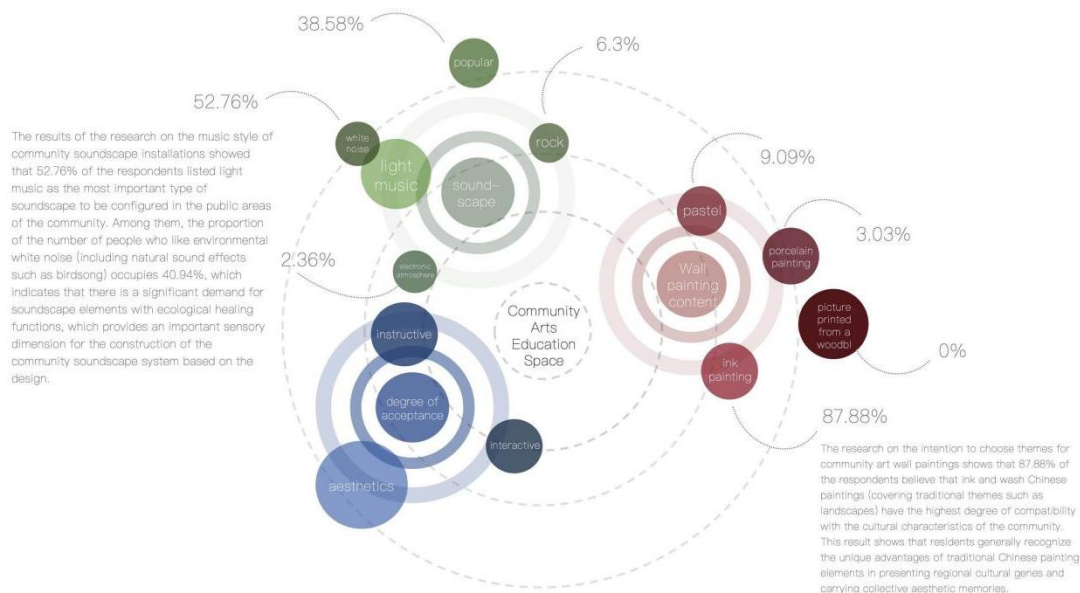
The Anjuen Frontier in Macau is located at the junction of the Alameda de São Paulo and the Rua de São Paulo in the Fung Shun Tong district of Macau (as shown in Fig. 3). The open space of Anjuen Frontier is equipped with adult fitness facilities and seating areas for citizens to exercise and rest. Akenu Frontier has cleverly utilised the scattered marginal land and unused space for integration and reuse, which has greatly increased the area of land use, and has also followed the principle of all-age-friendly design in the configuration of facilities in the open space, such as the provision of leisure seats, the installation of protective fences around the public area, and the planting of vegetation for residents to cool off. The above design details reflect the all-around consideration for the users of public areas in the community, ensuring that every resident can enjoy a pleasant rest time.

However, even though there is already a good foundation of facilities in Macau's Adriano forecourt, a series of issues, such as the emotional link and the embodiment of the community's educational function, are still slightly lacking. Firstly, the hot and humid climate of Macau has led to problems such as mottling, blackening and cracking on the external walls of the buildings, and in some cases even the falling off of wall skins, which not only affects the aesthetics of the buildings, but also greatly reduces the sense of well-being of the residents. This is followed by a weak emotional link to the area. Despite the relatively complete public infrastructure in the former land of Yajianu, there are very few people in the community's public space, which leads to a lack of emotional interaction between the residents and the community space, and the main function of the community's public area is only limited to low-intensity activities such as gossiping and walking. Although there are a

few wall paintings on the walls in the area, the theme is relatively isolated from Macau and from the former land of Adriano, which does not allow residents to create an interactive emotional link, and the site lacks public art facilities for in-depth participation by residents. Last but not least, the educational function of the Ajenu forecourt as a public area within the community is weak, and there is a lack of interactive educational installations within the site to attract young people to interact with each other, resulting in a shallow or even insufficient knowledge of the history and culture of the community among the young people.

(ii) 'Wall painting + soundscape' intervention programme

Through the strategy of designing community art education space in urban renewal, more residents can participate in community public art, ensuring that public art works can be better integrated into the local community, and will also contribute to the improvement and development of Macau Yajianu foreland. To verify the feasibility of the 'Art Wall Painting + Soundscape Installation' intervention, the researchers of this study conducted a one-month community research before the project design and implementation (as shown in Figure 4). Through an online questionnaire survey (127 valid questionnaires), the researchers were able to collect real feedback from residents on the 'Art Wall Painting + Soundscape Installation' intervention programme. According to the survey data, 84.38 per cent of the respondents expressed the hope that the community art space would fulfil the function of a window for cultural display, and 71.88 per cent of the respondents said that the intervention of 'art wall painting + soundscape installation' would have a significant feature in improving the educational environment of the community.



**Figure 4.** Results of the visit to the 'Art Wall Painting + Soundscape Installation' intervention programme (author's own production)

Through the field research and data analysis of the 'Art Wall Painting + Soundscape Installation' project, it was found that this kind of artistic intervention can greatly improve the sense of identity of the community residents and the educational function of the community.

## 5. Optimisation Suggestions and Development Outlook

(i) Policy synergy mechanism

The sustainable development of community education space design cannot be separated from the collaborative participation of artists, residents, and the government. Artists, residents and organisations are like a symphony orchestra that needs to perform their respective roles and at the same time cooperate to play a new chapter of community renewal. The establishment of a policy synergy mechanism is to build a platform for artists, residents, and the government to communicate

effectively in the long term, so that the community arts education space can truly become the heart of community culture.

(ii) Future Trends of Community Education Space

The future community education space will show a more flexible, diversified, and sustainable development trend. With the continuous development and deepening of the concept of urban renewal, people's educational space is not only limited to classrooms and libraries, but also towards a more 'flexible' space. This 'flexible' space places more emphasis on its variability and adaptability, and can change its functional use according to real-time needs. The ecological-artistic-educational trinity system will become the core feature of future community education spaces. Through flexible design and the construction of the trinity system, a more dynamic and sustainable community learning environment will be created. This will not only enhance the use of community space but also promote the development of community cultural identity and aesthetic education.

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