

# Public Value Creation in Arts-Integrated Community Learning

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## ARTICLE INFO

## ABSTRACT

This study investigates how arts-integrated community learning creates public value beyond individual skill acquisition. The study is designed to collect data from approximately 40 community learning projects involving 2,000 participants, 160 instructors or organizers, and 20 community institutions over one year. Data sources include participant surveys, community-event records, program documents, interview transcripts, social participation logs, and follow-up feedback forms. The quantitative section measures five dimensions of public value: community interaction, intergenerational communication, local identity, civic participation, and cultural confidence. Expected data include around 2,000 pre- and post-program survey responses, 400 community activity records, 1,200 participant feedback entries, and 80 semi-structured interviews. The study applies paired-sample t-tests, factor analysis, social network analysis, hierarchical regression, mediation analysis, and qualitative comparative analysis to examine whether participation in arts-integrated learning improves community connection, cultural belonging, and public participation intention. Key indicators include community belonging score, interaction frequency, cross-age communication frequency, civic participation intention, cultural confidence score, and social network density. The innovation of this study lies in moving public creative learning evaluation beyond individual satisfaction or skill outcomes and building a measurable public-value framework that connects education, community cohesion, and cultural participation.

**Keywords:** Public Value, Community Learning, Arts Integration, Civic Participation; Social Network Analysis, Cultural Belonging, Community Cohesion, Social Outcomes.

## INTRODUCTION

Arts-integrated community learning combines artistic practice with community education, cultural participation, and local public engagement. Its common forms include music, dance, theatre, visual arts, public art, crafts, and cultural heritage activities delivered through community centers, schools, museums, cultural organizations, and other local institutions. Unlike conventional arts education that is often evaluated primarily through individual learning outcomes, community-based arts programs operate within a broader public context. Their effectiveness depends not only on what participants learn, but also on the quality and accessibility of the educational experience and on whether participation contributes to more inclusive and equitable forms of cultural engagement [1]. This broader perspective is particularly important for publicly supported arts education because such programs are expected to generate benefits that extend beyond artistic competence. They may create opportunities for social contact, cultural expression, collective learning, and engagement with local issues, thereby connecting educational participation with wider forms of community development. A growing body of research supports this broader understanding of arts participation. Group-based arts activities have been associated with stronger social support, community connection, collective identity, and a greater sense of belonging [2,3]. During the COVID-19 pandemic, arts and cultural activities also provided opportunities for participants to maintain social ties and share common experiences under conditions of restricted face-to-face interaction [4,5]. Research involving young people similarly found that arts participation was associated with perceived social support, although the relationship with loneliness

became less consistent after individual and family characteristics were taken into account [6]. These findings suggest that the social effects of arts participation are meaningful but are unlikely to arise automatically from attendance alone. The characteristics of participants, the structure of activities, the quality of interaction, and the wider social environment may all shape whether cultural participation produces sustained community benefits.

Community-based arts practices may also be especially important for groups whose participation in conventional cultural institutions is constrained by economic, social, or cultural barriers. Arts projects involving migrant and low-income populations have been shown to provide spaces for cultural expression, interpersonal contact, and shared participation [7,8]. Such activities can allow participants to communicate experiences that may be difficult to express through conventional educational formats, while also creating opportunities for interaction between groups that might otherwise have limited contact. Public murals and locally organized art projects can similarly encourage residents to discuss neighborhood concerns, participate in shared activities, and develop stronger relationships with local public spaces [9,10]. In this sense, community arts are not simply activities located within a community; they can become mechanisms through which residents interpret, negotiate, and reshape their relationships with the places in which they live. The public value of arts-integrated learning can also be observed in heritage and intercultural settings. Interactive heritage programs may improve communication between cultural institutions and local residents when exhibitions or heritage resources are combined with collaborative tasks, guided discussion, and participatory learning [11,12]. Music-based activities can support intercultural understanding when participants from different social and cultural backgrounds create, rehearse, and perform together [13,14]. At a broader spatial level, cultural and creative initiatives have been associated with urban regeneration, local identity formation, and the reuse of cultural resources [15,16]. These findings indicate that the influence of arts participation may operate across several interconnected levels. Individual experiences can affect interpersonal relationships; repeated interaction can influence group cohesion; and collective cultural activities can contribute to community identity and participation in local public life. Evidence from China reflects similar patterns. Participation in square dance has been associated with group cohesion, social support, positive affect, and life satisfaction among middle-aged and older adults [17,18]. Research on public art and rural cultural initiatives has also suggested that artistic activities can strengthen place identity, encourage resident participation, and improve communication between local institutions and communities [19,20]. These studies demonstrate that community arts can produce social and cultural outcomes that extend beyond individual artistic learning. However, much of the existing evaluation literature continues to emphasize attendance, satisfaction, self-reported well-being, or improvement in artistic skills. These indicators are important, but they provide only a partial account of what publicly supported community arts programs are expected to achieve. They do not adequately show whether programs strengthen relationships among residents, improve communication across generations, reinforce attachment to local culture, encourage involvement in community affairs, or increase confidence in local cultural expression. This limitation points to a broader conceptual problem in the evaluation of arts-integrated community learning. Public value is inherently multidimensional, but it is often reduced to a small number of individual-level outcomes. Increased satisfaction, for example, does not necessarily imply stronger community interaction, while improved artistic confidence does not automatically result in greater civic participation. Likewise, a program may produce modest changes in individual well-being but substantial improvements in communication between age groups or in residents' attachment to local cultural traditions. Evaluations that rely on a single outcome therefore risk overlooking important differences in how programs create value. A more complete framework needs to distinguish between related but analytically separate dimensions of community impact and examine how these dimensions develop together. Several methodological limitations further restrict current knowledge. Many studies focus on one project, one artistic form, or one narrowly defined participant group, which limits the extent to which findings can be generalized across different community contexts. Small interview samples and single-site case studies remain common in research on public and community arts. Even studies using larger datasets frequently examine a single activity, such as square dance, and often concentrate on older adults or women [21,22]. These studies provide valuable evidence about specific forms of participation, but they are less able to determine whether similar mechanisms operate across music, dance, visual arts, theatre, heritage, and other community-based programs. Comparisons across projects are therefore necessary to identify which outcomes are broadly associated with arts-integrated learning and which depend on particular program designs or participant groups.

The widespread use of cross-sectional surveys creates another limitation. Cross-sectional data can

identify associations between arts participation, social support, belonging, and other outcomes, but they provide limited evidence about whether these outcomes actually change during a program. Without baseline measurements, post-program observations, or repeated follow-up records, it is difficult to separate program-related change from differences that existed before participation. This issue is especially important in community arts settings because participants who voluntarily enter such programs may already have higher cultural interest, stronger social networks, or greater community involvement than nonparticipants [23,24]. Pre- and post-program measures can provide a clearer estimate of change within participants, while repeated observations can help determine whether improvements are temporary or sustained. Existing studies are also strongly dependent on self-reported perceptions. Measures of belonging, social support, cultural identity, and satisfaction capture important subjective experiences, but they cannot fully show whether actual patterns of social interaction change. Participants may report feeling more connected without substantially increasing the number or frequency of their social contacts. Conversely, new relationships may form during a program before participants themselves interpret these changes as stronger belonging. Combining survey responses with activity records, participation logs, and social network measures can therefore provide a more complete assessment. Network data are particularly useful because they can reveal whether community arts programs increase interaction frequency, expand the number of social connections, or create denser links among participants. Program-level and institutional differences are another underexamined source of variation. Participants are nested within specific projects, and projects are in turn delivered by institutions with different levels of funding, staff experience, teaching methods, cultural resources, community partnerships, and organizational capacity. A highly participatory program with strong local partnerships may generate very different outcomes from a program that offers similar artistic content but limited opportunities for interaction. Standard individual-level regression models may obscure these differences by treating all participants as independent observations. An appropriate evaluation framework should therefore distinguish participant characteristics from project-level and institutional conditions and examine how these levels jointly influence public outcomes. Current research also provides limited explanation of the mechanisms through which arts-integrated learning creates community value. Participation may influence civic engagement directly, but it may also operate indirectly by increasing interpersonal contact, social trust, or a sense of belonging. Similarly, cultural confidence may be strengthened when participants have opportunities to express local traditions, receive recognition from others, and develop stronger connections with local institutions. Identifying these pathways is important because programs with similar attendance levels may produce different outcomes depending on how participation is organized. Evaluation should therefore examine not only whether public value increases, but also how social interaction and community connection help generate these changes. At the same time, the effects of community arts may depend on combinations of program conditions rather than on a single independent factor. Strong outcomes may emerge when experienced instructors, participatory teaching, frequent interaction, institutional support, and locally relevant cultural content occur together. Another program may achieve similar results through a different combination of conditions. Conventional regression approaches are useful for estimating the average effects of individual variables, but they are less suited to identifying multiple configurations that can lead to the same outcome. Examining both net effects and combinations of conditions can therefore provide a more realistic understanding of why some community arts programs produce stronger public value than others.

The present study develops a multidimensional and multi-method framework for evaluating the public value of arts-integrated community learning. Public value is conceptualized through five dimensions: community interaction, intergenerational communication, local identity, civic participation, and cultural confidence. The study includes approximately 40 arts-integrated community learning projects involving around 2,000 participants, 160 instructors or organizers, and 20 community institutions. Data are collected through pre- and post-program surveys, activity records, program documents, feedback forms, participation logs, and semi-structured interviews. Paired-sample t-tests are used to examine changes in participant outcomes before and after program involvement, while factor analysis evaluates the underlying structure of the proposed public-value dimensions. Social network analysis assesses changes in interaction frequency, network size, and network density, providing behavioral evidence that complements participants' self-reported experiences. Hierarchical regression is used to distinguish participant-level effects from differences associated with projects and institutions. Mediation analysis examines whether changes in social interaction and social connection help explain improvements in belonging and civic participation, while qualitative comparative analysis identifies combinations of program conditions associated with high levels of public value. By integrating

longitudinal comparison, multilevel analysis, network measures, mediation testing, and configurational analysis, the study moves beyond evaluations centered on attendance, satisfaction, or individual artistic development. Its purpose is not only to determine whether arts-integrated community learning produces positive outcomes, but also to identify which dimensions of public value change, through what mechanisms these changes occur, and under what program conditions stronger outcomes are more likely to emerge. The study therefore contributes a more systematic framework for understanding community arts as both an educational activity and a form of local public participation. Theoretically, it extends arts education evaluation from individual learning outcomes toward multidimensional community-level value and clarifies the relationships among interaction, belonging, identity, and civic engagement. Methodologically, it combines subjective evaluations with behavioral and organizational data and accounts for the nested structure of participants, programs, and institutions. Practically, the findings can help cultural institutions and community organizations identify which program designs are most effective in strengthening social ties, supporting intergenerational exchange, reinforcing local cultural identity, and encouraging public participation. This framework may ultimately provide a stronger basis for evaluating whether publicly supported arts learning creates meaningful and sustainable value for both participants and the communities in which these programs operate.

## **MATERIALS AND METHODS**

### **Study Sample and Research Settings**

The study covered 40 community learning projects delivered by 20 institutions over 12 months. These institutions included community education centers, public cultural centers, museums, neighborhood groups, and non-profit arts organizations. About 2,000 participants were recruited from project registration lists. The study also involved 160 instructors, organizers, and institutional staff. Participants were eligible when they were at least 15 years old, attended at least 70% of all sessions, and completed both the baseline and final surveys. Participants who could not complete the survey independently because of serious cognitive or communication problems were excluded. The selected projects included visual arts, music, dance, theatre, traditional crafts, public art, and cultural heritage activities. Stratified sampling was used to balance project type, institution type, age group, and community setting. The expected sample included about 1,200 women and 800 men aged 15–75 years. Data were collected from urban, suburban, and small-town communities to reduce the influence of one local setting.

### **Study Design and Control Groups**

A quasi-experimental pre-test and post-test design was used. Thirty projects formed the arts-integrated learning group, with about 1,500 participants. Ten similar community courses formed the control group, with about 500 participants. The control courses covered health education, digital skills, general knowledge, and community services. They did not include planned art creation or performance. The two groups were matched by institution type, course length, group size, participant age, and baseline community-belonging score. All participants completed the same survey before the first session and within two weeks after the final session. A three-month follow-up survey was given to about 800 participants to examine whether the effects remained. The main analysis compared changes in public-value indicators between the two groups. Further comparisons were made by art form, age group, project duration, and level of participation. This design helped separate the effects of arts-based learning from the general effects of joining a community course.

### **Measurement and Quality Control**

Public value was measured in five areas: community interaction, intergenerational communication, local identity, civic participation, and cultural confidence. Each area included four to six items rated on a five-point Likert scale. Community interaction was measured by contact frequency, new social ties, and participation in group tasks. Intergenerational communication was measured by the frequency and quality of contact between different age groups. Local identity covered community attachment, knowledge of local culture, and willingness to represent the community. Civic participation included volunteer work, attendance at public events, and willingness to join future community activities. Cultural confidence measured confidence in understanding, expressing, and sharing local culture. Social network data were collected at three time points through participant lists and interaction records. Attendance records, event records, program documents, and feedback forms were used to check the

survey data. Eighty semi-structured interviews were conducted with participants, instructors, and organizers. The survey was first tested with 80 participants from two projects outside the final sample. Weak items were revised or removed. All researchers followed the same data collection rules, and 10% of the survey records were checked against the original forms. Two researchers coded the interview data separately. Differences were resolved through discussion. Cronbach's alpha values of 0.70 or above were accepted, and Cohen's kappa was used to test coding agreement.

### Data Processing and Model Formulation

Survey data were checked for missing values, unusual response patterns, and outliers. Cases with more than 20% missing items were removed. Smaller amounts of missing data were handled by multiple imputation. Negative items were reverse-coded, and all indicators were standardized before the public-value score was calculated. The public-value index for participant  $i$  was defined as:

$$PVI_i = \sum_{k=1}^5 w_k Z_{ik}$$

where  $Z_{ik}$  is the standardized score of public-value dimension  $k$ , and  $w_k$  is the factor weight obtained from confirmatory factor analysis. The weights satisfy  $\sum_{k=1}^5 w_k = 1$ . Because participants were grouped within projects and institutions, a three-level regression model was used:

$$Y_{ijk} = \beta_0 + \beta_1 T_{ijk} + \beta_2 Time_{ijk} + \beta_3 (T_{ijk} \times Time_{ijk}) + \beta_4 X_{ijk} + u_k + v_{jk} + \varepsilon_{ijk}$$

where  $Y_{ijk}$  is the outcome of participant  $i$  in project  $j$  and institution  $k$ .  $T$  indicates the arts-integrated group, while  $Time$  indicates the post-program stage. The interaction term estimates the net effect of the program. The control variables include age, gender, education, previous arts experience, attendance rate, and project duration. The terms  $u_k$  and  $v_{jk}$  represent differences between institutions and projects.

### Statistical and Qualitative Analysis

Paired-sample t-tests were used to compare baseline and final scores within each group. The group-by-time interaction was used to test the main program effect. Exploratory factor analysis was conducted with half of the sample, while confirmatory factor analysis was carried out with the other half. Model fit was assessed using the comparative fit index, Tucker – Lewis index, root mean square error of approximation, and standardized root mean square residual. Social network analysis measured network density, mean degree, centralization, and the number of cross-age ties before and after the program. Mediation analysis tested whether changes in interaction frequency and network density explained changes in community belonging, cultural confidence, and civic participation. Indirect effects were estimated with 5,000 bootstrap samples. Qualitative comparative analysis was used to identify combinations of project conditions linked to high public-value scores. These conditions included course length, group size, level of co-creation, institutional support, and community-event participation. Interview data were analyzed by thematic coding and compared with the quantitative results. All statistical tests were two-sided, and  $p < 0.05$  was treated as statistically significant. Sensitivity tests were also conducted after removing participants with low attendance and projects with high follow-up loss.

## RESULTS AND DISCUSSION

### Changes in Public-Value Outcomes

A total of 1,846 participants completed both surveys. The final sample included 1,381 participants in the arts-integrated group and 465 in the control group. The two groups showed no significant differences in age, gender, education, previous arts experience, or baseline public-value scores (all  $p > 0.05$ ). The five-factor model showed acceptable fit, with CFI = 0.952, TLI = 0.944, RMSEA = 0.048, and SRMR = 0.043. Cronbach's alpha values ranged from 0.80 to 0.88. The mean public-value score increased from 3.17 to 3.81 in the arts-integrated group, while the control group increased from 3.19 to 3.30. The group-by-time effect was significant ( $\beta = 0.41$ , 95% CI: 0.35 – 0.47,  $p < 0.001$ ). Community

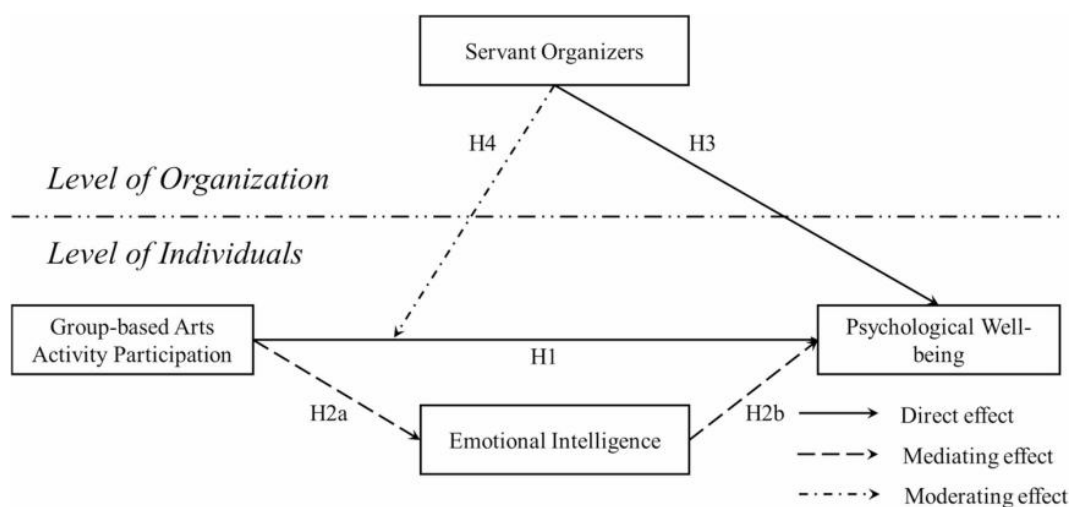
interaction showed the largest gain, followed by cultural confidence, intergenerational communication, local identity, and civic participation intention. Civic participation showed the smallest increase. This result may reflect the need for formal opportunities, such as volunteer work, public events, and community meetings [25,26]. Xiong et al. (2026) also found that arts engagement was linked to stronger social contact among adults. Kazanskaia et al. (2025) reported similar gains after group performing-arts activities. The present study adds evidence from several art forms and community institutions.

### Changes in Social and Intergenerational Networks

The interaction records showed clear changes in participant networks. Network density in the arts-integrated group increased from 0.16 before the program to 0.28 after the program. In the control group, it increased only from 0.17 to 0.19. The average number of direct ties rose from 6.1 to 10.0, while cross-age ties increased by 57.3%. The proportion of participants with no contact outside their own age group fell from 14.8% to 7.2%. Network centralization decreased from 0.36 to 0.25, which means that communication became less dependent on a small number of active participants. Projects involving group performance, murals, exhibitions, or shared craft work produced larger network gains than projects based mainly on individual tasks [27,28]. Attendance alone was therefore not enough to strengthen community ties. Participants needed shared tasks that required discussion, role division, and joint decisions. Hong et al. (2026) found that participatory arts can build close ties within groups and wider ties across groups. Petronienė and Huhmarniemi et al (2025) also reported that mural projects supported community contact through shared planning and creation. The present results support these findings and provide direct network evidence.

### Mediation Effects and Institutional Support

Mediation analysis showed that arts-integrated learning affected public value through more than one path. Increased interaction frequency explained 31.4% of the effect of program participation on the final public-value score. Cultural confidence explained a further 17.6%. Together, the two factors accounted for 49.0% of the total effect. Interaction frequency had a stronger effect on community belonging and intergenerational communication. Cultural confidence had a stronger effect on local identity and civic participation intention. Institutional support also affected the size of the program effect. Projects with stable venues, trained instructors, local partners, and public presentation opportunities had an adjusted effect size of 0.58. Projects with weak institutional support had an effect size of 0.29. The interaction between program participation and institutional support was significant ( $\beta = 0.18, p = 0.004$ ), as shown in Fig. 1. Huang and Wu (2026) found that personal and organizational factors affected the outcomes of group arts activities. Stephan et al. (2026) also reported that community settings improved social cohesion only when they supported meaningful contact among residents. The present results show that arts activities create greater public value when stable institutional support is available [29,30].



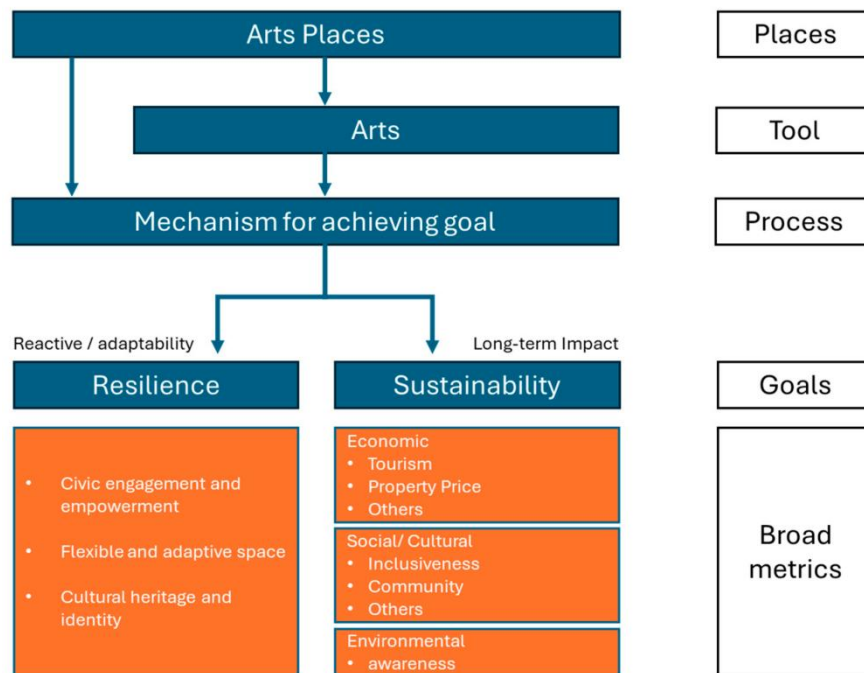
**Figure 1.** Public-value outcomes under arts-integrated learning and institutional support.

### Program Conditions and Follow-Up Outcomes

The qualitative comparative analysis identified three paths linked to high public-value scores. The first combined strong co-creation, high attendance, and a public exhibition or performance. Its consistency was 0.89, and its raw coverage was 0.48. The second combined local cultural content, cross-age group work, and strong institutional support. Its consistency was 0.87, and its raw coverage was 0.41. The third combined small-group teaching, skilled instructors, and links with local organizations. Its consistency was 0.84, and its raw coverage was 0.29. These results show that no single program feature was enough. High public value depended on a mix of participant choice, cultural content, social contact, and institutional support, as shown in Fig. 2. At the three-month follow-up, 74.2% of the total gain in public value remained. Cultural confidence retained 81.5% of its post-program gain, while civic participation retained 61.5%. Interview data showed that many participants continued to discuss local culture and maintain social ties after the program. However, fewer participants joined formal community activities when no new events were provided. Clarke et al. (2026) also found that community arts spaces can support identity, social cohesion, empowerment, and civic engagement. The present study further shows that these gains may weaken without continued activities and institutional support.

### The role of arts places in fostering urban sustainability and resilience

- Initially the research was on “places” and “impact”; after literature review, it can be further expanded into “tool”, “process”, and “broad metrics”:



**Figure 2.** Program features related to public value in community learning.

## CONCLUSION

This study found that arts-integrated community learning creates value beyond the development of individual art skills. Participants showed clear gains in community interaction, communication across age groups, local identity, cultural confidence, and willingness to take part in community activities. Social network results also showed more direct ties, more cross-age contact, and less dependence on a small number of active members. Stronger results were linked to shared creation, regular attendance, public exhibitions or performances, local cultural content, and stable institutional support. The main contribution of this study is a public-value framework that combines survey results, social network data, project records, and interview evidence. This framework connects arts education with community ties and public participation. It may help cultural centers, museums, local governments, and community groups assess and improve similar programs. The findings also show that follow-up events and local partnerships are needed to maintain civic participation after the program ends. This study has several limits. It used a quasi-experimental design, included some self-reported data, and followed participants for only three months. Future studies should use larger regional samples, longer follow-up periods, and stronger control designs to test the stability of these results.



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#### ETHICAL DECLARATION

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