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Participatory methodologies for evaluating and improving Learning City policies

Metodologie partecipative per la valutazione e il miglioramento delle politiche delle Città dell'Apprendimento

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Abstract

The concept of the Learning City is key to sustainable urban development and the promotion of lifelong learning. However, evaluating the true impact of Learning Cities poses a methodological challenge, especially with respect to citizen engagement. This study takes an experimental approach, using a combination of quantitative and qualitative methods, to analyse the effectiveness of participatory evaluation methodologies that engage university students as citizen-learners. It compares an experimental group involved in participatory co-evaluation activities of the urban learning experience with a control group exposed to traditional modes of use and evaluation. The results reveal notable disparities in civic awareness, engagement in lifelong learning, and perception of urban inclusivity, indicating that participatory methodologies are effective instruments for evaluating and enhancing Learning City policies.

Keywords: learning city; participatory evaluation; students; mixed methods; lifelong learning.

Sintesi

Il concetto di Città dell'Apprendimento è fondamentale per lo sviluppo urbano sostenibile e la promozione dell'apprendimento permanente. Tuttavia, valutare il reale impatto delle Città dell'apprendimento rappresenta una sfida metodologica, soprattutto per quanto riguarda il coinvolgimento dei cittadini. Questo studio adotta un approccio sperimentale, utilizzando una combinazione di metodi quantitativi e qualitativi, per analizzare l'efficacia delle metodologie di valutazione partecipativa che coinvolgono gli studenti universitari come cittadini-studenti. Esso mette a confronto un gruppo sperimentale coinvolto in attività di co-valutazione partecipativa dell'esperienza di apprendimento urbano con un gruppo di controllo esposto a modalità tradizionali di utilizzo e valutazione. I risultati rivelano notevoli disparità nella consapevolezza civica, nell'impegno nell'apprendimento permanente e nella percezione dell'inclusività urbana, indicando che le metodologie partecipative sono strumenti efficaci per valutare e migliorare le politiche delle città dell'apprendimento.

Parole chiave: città dell'apprendimento; valutazione partecipativa; studenti; metodi misti; apprendimento permanente.

1. Introduction

Over the last two decades, the concept of the Learning City has gradually become established as a strategic framework for integrating education, training, and sustainable urban development. This is in response to the economic, social, and technological transformations that characterise contemporary societies (Longworth, 2013; Unesco, 2015). From this perspective, learning is viewed as an ongoing, widespread and contextualised process that transcends the confines of formal education, extending into the non-formal and informal spaces of the city. This involves educational institutions, cultural organisations, the third sector, workplaces and citizens (Biesta, 2011; Field, 2006). Learning Cities are thus complex learning ecosystems in which knowledge, skills and abilities are developed through the dynamic interaction of individuals, communities and the urban environment (Kearns, 2015). This vision is closely associated with the concept of lifelong learning, which is not only seen as a means of improving employability, but also as a means of promoting social cohesion, democratic participation, and individual and collective well-being (Delors et al., 1996; Schuller & Watson, 2009).

Despite the growing membership of the Unesco-promoted Global Network of Learning Cities (GNLC), numerous studies have highlighted the ongoing challenge of assessing the true impact of Learning City policies (Kearns et al., 2020; Valdés-Cotera & Wang, 2018). Existing evaluation models tend to favour structural and quantitative indicators, which are often top-down and struggle to capture the experiential dimension, citizens' points of view, and the actual degree to which urban learning opportunities are inclusive (Duke, 2014; OECD, 2019). Critical literature emphasises that this limitation risks reducing the Learning City to a set of declarative policies rather than a transformative process experienced by citizens (Biesta, 2010; Wildemeersch, 2019). Consequently, there is a growing interest in alternative evaluation approaches capable of integrating measurement, reflexivity and participation, and of restoring complexity to urban educational phenomena (Bradbury et al., 2019; Patton, 2008).

Participatory evaluation emerges as a particularly promising theoretical and methodological perspective within this debate. Based on the idea that stakeholders, particularly citizens, should be considered active subjects and co-producers of evaluative knowledge rather than mere objects of evaluation (Cousins & Whitmore, 1998; Estrella & Gaventa, 2000), it has been associated with positive effects in terms of empowerment, transformative learning, accountability and improvement of public policies (Fetterman, 2001; Reason & Bradbury, 2008). This approach has been shown to have positive effects in terms of empowerment, transformative learning, accountability, and the improvement of public policies (Fetterman, 2001; Reason & Bradbury, 2008). In the context of Learning Cities, participatory evaluation methodologies have dual value: they allow for the collection of data that is more sensitive to citizens' real experiences, and they contribute to generating learning and strengthening a sense of belonging and active citizenship (Brookfield, 2005; Gaventa & Cornwall, 2008). In this context, clarifying the ultimate purpose of research on Learning City evaluation becomes crucial. Studies in this field generally pursue two main objectives: on the one hand, to support individual cities in monitoring and improving their lifelong learning policies; on the other, to develop analytical frameworks and tools that allow comparisons across cities and support international networks such as Unesco's Global Network of Learning Cities (GNLC). This study primarily aligns with the first perspective. Rather than proposing a benchmarking

tool for inter-city comparison, it aims to explore how participatory evaluation methodologies can support cities in understanding how learning opportunities are experienced by citizens and in improving the inclusiveness and effectiveness of urban learning policies. However, despite the growing theoretical recognition of such approaches, there is limited empirical evidence based on experimental designs, particularly with regard to specific groups of citizens. In this context, university students represent a strategic yet underestimated target group. They occupy a hybrid position between formal and informal learning, between citizenship in training and active participation in urban life, acting as potential mediators between educational institutions and the local area (Checkoway, 2013; Mountford-Zimdars et al., 2017). Involving students in the participatory evaluation processes of Learning Cities means not only gathering their views, but also promoting critical, reflective and civic skills, in line with a democratic conception of education (Biesta, 2011; Nussbaum, 2010). In light of these considerations, this study aims to empirically analyse the effectiveness of participatory methodologies in evaluating the Learning City experience, focusing on university students as citizen-learners. Through a controlled experimental design and a mixed-methods approach, the research aims to contribute to the scientific debate by offering empirical evidence that is useful both theoretically and in terms of urban education policies.

2. Theoretical framework

2.1. The Learning City and assessment

Unesco has formalised the concept of Learning Cities as an integrated strategy to promote lifelong learning at the urban level (Osborne, Kearns & Yang, 2013; Unesco, 2015; Valdés-Cotera et al., 2015). The contemporary policy framework for Learning Cities is largely shaped by the Unesco Global Network of Learning Cities (GNLC), established in 2013 to support cities committed to promoting lifelong learning as a driver of sustainable development. The GNLC provides conceptual guidelines, policy frameworks and benchmarking indicators that guide local administrations in designing and assessing learning-oriented urban policies (Unesco, 2015). However, the idea of the Learning City predates the GNLC and builds on earlier debates on learning regions, learning communities and lifelong learning policies developed in the 1990s and 2000s (Field, 2006; Longworth, 2013). From this perspective, cities are viewed as extended educational environments in which policies, infrastructure, social relations and cultural resources come together to create accessible and meaningful learning opportunities for all citizens (Kearns, 2015; Longworth, 2013). Literature on the subject highlights how Learning Cities form part of a systemic vision of education in which formal, non-formal and informal learning interact dynamically (Field, 2006; Schuller & Watson, 2009). This approach draws on ecological and sociocultural theories of learning, emphasising the importance of context, community, and social practices in knowledge construction (Bronfenbrenner, 1979; Wenger, 1998). Despite the clarity of regulatory principles and values, the evaluation of Learning Cities is one of the most debated critical issues. While Unesco proposes a set of key areas and benchmarks, numerous studies have highlighted that these tools are often generic and difficult to compare, as well as being insensitive to local specificities (Kearns et al., 2020; Valdés-Cotera & Wang, 2018). Evaluation models in particular tend to favour quantitative and structural indicators (e.g. number of programmes, participants and investments) while neglecting qualitative, experiential and perceived dimensions of urban learning (Duke,

2014; Kearns, 2015). This approach risks perpetuating a top-down logic in which evaluation becomes an institutional reporting tool rather than a process of collective learning and continuous improvement (Biesta, 2011). In order to support cities in monitoring their progress, Unesco has also developed the Key Features of Learning Cities, a comprehensive framework used within the Global Network of Learning Cities (GNLC). The Key Features identify a set of core dimensions through which cities can assess their development as learning-oriented environments. These include the promotion of inclusive learning systems, effective learning in families and communities, learning for and in the workplace, the use of modern learning technologies, quality and excellence in learning, and a vibrant culture of lifelong learning (Unesco, 2015). Rather than prescribing a single evaluation methodology, the framework encourages cities to adopt context-sensitive monitoring strategies that combine quantitative indicators with qualitative evidence. As a result, many Learning Cities have developed locally adapted evaluation practices, reporting their progress to the Unesco Institute for Lifelong Learning (UIL) in ways that reflect their specific social, institutional and cultural contexts. Consequently, there is a growing need to develop evaluation approaches that can integrate objective and subjective data, as well as institutional indicators and citizens' experiences. This would help to overcome the dichotomy between measurement and meaning (OECD, 2019). Within this framework, the present study does not aim to replicate the Unesco monitoring system but rather to complement it by exploring participatory evaluation practices that capture the experiential dimension of urban learning policies. In particular, the research focuses on how citizen perspectives – specifically those of university students – can enrich existing monitoring systems by providing qualitative insights into how learning opportunities are perceived, accessed and experienced in the urban environment.

2.2. Participatory evaluation methodologies

In response to the shortcomings of traditional evaluation models, participatory evaluation has emerged as an alternative theoretical and methodological approach based on the active involvement of stakeholders in evaluation processes (Cousins & Whitmore, 1998). According to this perspective, those involved are not merely data providers, but rather competent individuals who contribute to defining evaluation criteria, collecting and interpreting evidence, and using results (Patton, 2008). Participatory evaluation has its roots in action research, critical pedagogy and emancipatory approaches to development. These approaches conceive of knowledge as socially constructed and oriented towards change (Fetterman, 2001; Freire, 1970; Reason & Bradbury, 2008). In educational and urban contexts, these methodologies have been linked to increased ownership of processes, enhanced transparency in decision-making, and improved quality of public policies (Bradbury et al., 2019; Gaventa & Cornwall, 2008). Numerous studies have highlighted the formative effect that participation in evaluation processes can have on participants themselves, promoting reflective learning and the development of critical thinking and civic awareness skills (Brookfield, 2005; Mezirow, 2000). In this sense, participatory evaluation is a genuine educational tool as well as a measurement tool, consistent with the logic of lifelong learning. In the context of Learning Cities, participatory methodologies are particularly important as they enable the evaluation process to align with the model's founding values of inclusiveness, participation, equity, and widespread learning (Unesco, 2015). However, the literature indicates that such approaches are still poorly systematised and rarely supported by rigorous experimental designs capable of demonstrating their comparative effectiveness (Kearns et al., 2020).

2.3. Students as citizen-learners

Within the urban stakeholder landscape, university students are a key group for the implementation and evaluation of Learning Cities. They are at a pivotal point in their lives, characterised by intense learning, identity formation and social engagement (Arnett, 2004). Students also experience the city as a space for study, work, socialising and civic experimentation, thereby establishing themselves as citizen-learners (Biesta, 2011). Literature on higher education emphasises that actively involving students in citizenship, participation and evaluation practices contributes to developing transversal skills, critical thinking and social responsibility (Checkoway, 2013; Mountford-Zimdars et al., 2017). From this perspective, students are not only beneficiaries of urban learning policies, but also co-producers of knowledge and change. Involving students in Learning Cities' participatory evaluation processes strengthens the link between formal, non-formal and informal learning, promoting greater integration between universities and the local area (Brennan et al., 2014). Furthermore, this involvement is consistent with a democratic conception of education, in which participation in decision-making and evaluation processes forms an integral part of the educational experience (Biesta, 2015; Nussbaum, 2010). In light of these considerations, university students are a particularly suitable group on whom to empirically test and analyse the effectiveness of participatory evaluation methodologies in the Learning City. This would make a significant contribution, both scientifically and in terms of urban education policies.

3. Research aims and hypoteses

3.1. Research questions

In order to guide the empirical investigation, the study addresses the following research questions:

RQ1. How do participatory evaluation methodologies influence university students' perception of the Learning City experience?

RQ2. To what extent does participation in evaluation processes affect students' civic engagement, orientation toward lifelong learning, and perception of inclusiveness in urban learning opportunities?

RQ3. How do students interpret their role as citizen-learners when actively involved in participatory evaluation processes?

3.2. Aims

1. Assess the impact of participatory methodologies on students' perception of the Learning City experience;
2. Analyse the differences between an experimental group and a control group in terms of engagement, civic awareness and perception of inclusiveness;
3. Qualitatively explore the experiences of students involved in participatory evaluation processes.

3.3. Hypoteses

h1. Students in the experimental group will show significantly higher levels of

engagement in lifelong learning than the control group;

h.2. The experimental group will report a greater perception of inclusiveness and accessibility of urban learning opportunities;

h.3. Qualitative narratives from the experimental group will highlight greater critical awareness of the role of the city as a learning ecosystem.

4. Methods

4.1. Research drawing

The study adopts a quasi-randomised experimental design with homogeneous experimental and control groups. It integrates quantitative and qualitative methods using a convergent mixed-methods approach (Creswell & Plano Clark, 2018). This design was chosen to enable a comparative assessment of the effectiveness of participatory methodologies while maintaining high ecological validity in the City of Learning's real context. Participants were assigned to the two groups using a matching procedure based on key variables (age, degree course, year of enrolment, and previous experience of urban learning activities) to ensure group homogeneity and reduce the risk of selection bias, in line with methodological guidelines for quasi-experimental educational research (Shadish, Cook & Campbell, 2002).

The design includes:

- a pre-test phase, aimed at assessing the initial conditions of the participants;
- an intervention phase, differentiated for the experimental group and the control group;
- a post-test phase, aimed at measuring any changes attributable to the intervention.

Integrating quantitative and qualitative data enables outcome measurement to be combined with an in-depth analysis of participants' experiences, thereby strengthening the interpretative robustness of the results (Tashakkori & Teddlie, 2010). This approach is particularly well suited to the study of Learning Cities, as these are considered to be complex, contextualised systems (Kearns et al., 2020).

4.2. Sample

The research sample consists of 120 university students enrolled in bachelor's and master's degree programmes at the University of Naples Parthenope, located in a city engaged in lifelong learning initiatives aligned with the principles of Unesco's Learning Cities framework. The participants were divided into two numerically equivalent groups:

- experimental group (n = 60): involved in a structured programme of participatory activities to evaluate the Learning City, including participatory mapping, co-construction of evaluation indicators and public presentation of the results;
- control group (n = 60): involved in urban learning activities and citizen initiatives similar in content and duration, but without an explicit participatory component in the evaluation, following more traditional and predominantly informative methods.

The sample size is consistent with comparative experimental studies in education and allows for the application of inferential statistical analyses with adequate statistical power (Cohen, 1988).

Inclusion Criteria

Students who met the following criteria were included in the study:

- aged between 19 and 30, in line with the typical university student population;
- regular enrolment in a university degree course at the time of data collection;
- permanent residence or continuous attendance in the city under study, in order to ensure direct knowledge of the urban context and available learning opportunities;
- willingness to participate in all phases of the research and to provide informed consent.

Exclusion Criteria

Students who met one or more of the following criteria were excluded from the study:

- previous participation in structured participatory assessment or action research projects in urban areas, in order to avoid contamination effects;
- discontinuous or incomplete attendance of the activities included in the experimental protocol;
- failure to complete the quantitative or qualitative assessment tools.

4.3. Quantitative tools

Standardised tools validated in international scientific literature were used to collect quantitative data, selected for their theoretical consistency with the Learning City paradigm and the objectives of the study. All tools were administered in the form of structured questionnaires, using 5-point Likert response scales.

Lifelong Learning Scale (Kirby et al., 2010)

The orientation towards lifelong learning was measured using the Lifelong Learning Scale developed by Kirby et al. (2010). The scale is widely used in education and universities and allows for the assessment of individual disposition towards lifelong learning.

The tool consists of 14 items (short version) and measures four main dimensions:

- goal setting;
- self-direction and initiative;
- application of knowledge and skills;
- self-evaluation of learning processes.

The scale has demonstrated good psychometric properties in different cultural contexts, with internal reliability values (Cronbach's α) generally ranging between .78 and .86 (Kirby et al., 2010). In the present study, the scale showed excellent internal reliability (α = .83).

Civic Engagement Scale (Doolittle & Faul, 2013)

The level of civic engagement among students was measured using the Civic Engagement Scale (CES), a validated tool proposed by Doolittle and Faul (2013) and widely used in studies of university students and young adults. The scale consists of 14 items and is divided into two sub-dimensions:

- civic attitudes, relating to values, sense of responsibility, and interest in public life;
- civic behaviours, referring to concrete practices of civic and social participation.

The CES exhibits good construct validity and high internal reliability, with Cronbach's α

values exceeding .80 (Doolittle & Faul, 2013). In the present study, the overall internal reliability of the scale was α = .85.

Perceived Inclusivity of Learning Opportunities Scale (adapted from OECD, 2019)

The perception of inclusiveness of urban learning opportunities was measured using an adapted scale, constructed from conceptual frameworks and indicators proposed by the OECD (2019) and Unesco (2015) on the theme of equity and access to lifelong learning. The scale includes items aimed at measuring:

- the perception of accessibility of learning opportunities;
- the perceived degree of equity and inclusion with respect to different social groups;
- the territorial distribution of learning opportunities in the city;
- the perception of institutional support for lifelong learning.

The items underwent a content validation procedure through review by experts in the field and a preliminary analysis of internal reliability. The scale showed a Cronbach's α value of .82, indicating good internal consistency. The use of adapted scales is consistent with educational and policy-oriented research practices, especially in emerging contexts such as Learning Cities (Kearns et al., 2020; OECD, 2019).

4.4. Qualitative tools

In order to gain a deeper understanding of the students' experiences and supplement the quantitative data, qualitative tools were used, in line with the mixed-methods approach adopted in the study. It should be noted that the participants were not asked to explicitly evaluate the effectiveness of the mixed-methods research design itself. Rather, the aim of the qualitative components of the study was to explore students' experiences of participatory evaluation activities and their perceptions of the Learning City. Consequently, the mixed-methods approach should be understood as an analytical strategy adopted by the researchers rather than as an object of evaluation for participants.

Focus group

Semi-structured focus groups were conducted with participants in the experimental group at the end of the intervention. The focus groups aimed to explore in depth:

- the perception of the city as a learning ecosystem;
- the experience of participating in evaluation processes;
- the meaning attributed to the participatory activities carried out;
- the critical issues and potential of Learning City policies.

The focus group outline was developed based on the literature on participatory evaluation and reflective learning (Bradbury et al., 2019; Patton, 2008). All meetings were audio-recorded and subsequently transcribed in full.

Individual reflective journals

In addition, students in the experimental group were asked to keep individual reflective journals during the participatory activities. The journals were intended to encourage reflection and collect personal narratives related to:

- individual and collective learning;
- changes in the perception of the role of the city;
- development of civic and critical awareness.

The use of reflective journals is widely recognised as a valuable tool for investigating transformative and participatory learning processes (Brookfield, 2005; Mezirow, 2000).

4.5. Activities

The experimental group was involved in a structured programme of participatory evaluation activities, designed according to the principles of participatory action research and participatory evaluation, which conceive evaluation as a collaborative, reflective and change-oriented process (Cousins & Whitmore, 1998; Reason & Bradbury, 2008). The activities were designed with a dual purpose: on the one hand, to collect evaluative data on the Learning City experience from the students' point of view; on the other, to promote learning, civic awareness and empowerment among participants.

Participatory mapping of urban learning opportunities

The first activity involved participatory mapping of learning opportunities in urban spaces. Organised into small groups, students were guided in identifying and analysing formal, non-formal and informal learning places, initiatives and resources (e.g. libraries, museums, cultural centres, associations, public spaces, city events). From a methodological point of view, participatory mapping is widely recognised as an effective tool for making local knowledge visible and actively involving citizens in knowledge and planning processes (Chambers, 2008; Cornwall & Jewkes, 1995). In the field of urban education, it promotes a situated understanding of learning and helps to strengthen the sense of belonging to the territory (Kearns, 2015). Operationally, students were asked to:

- identify relevant learning opportunities in the city context;
- describe their characteristics, accessibility and target audience;
- reflect critically on barriers and inequalities of access.

This activity was designed to stimulate a critical reading of the city as a learning ecosystem, consistent with the Unesco Learning Cities paradigm (2015).

Workshop on co-evaluation and participatory definition of indicators

The second activity involved co-evaluation workshops, during which students actively participated in defining quality indicators for the Learning City experience. Through collaborative working techniques (guided brainstorming, facilitated discussion, progressive consensus), participants were invited to reflect on which dimensions they considered most relevant for assessing the effectiveness and inclusiveness of urban learning opportunities. The literature on participatory evaluation emphasises that the co-construction of indicators is a crucial step in ensuring the relevance and usability of evaluation results (Cousins & Chouinard, 2012; Patton, 2008). In particular, involving citizens in defining evaluation criteria allows for the integration of experiential and contextual perspectives that are often absent in standardised models (Estrella & Gaventa, 2000). In this study, the workshops aimed to:

- make explicit the implicit criteria used by students to judge learning opportunities;
- compare these criteria with the Unesco and OECD institutional frameworks;
- promote reflective learning and critical awareness.

This phase was a key moment in the experimental design, as it transformed students from passive recipients of educational policies into active co-evaluators of the urban learning system.

Public reporting of results and dialogue with stakeholders

The third activity involved a public presentation of the results of the participatory process to a group of local stakeholders, including representatives from the university, cultural institutions, associations and local government. The students presented the results of the mapping and co-evaluation workshops, using accessible and dialogue-oriented communication methods. Public feedback is considered in the literature on action research and participatory evaluation as an essential step in ensuring transparency, accountability and transformative impact (Fetterman, 2001; Gaventa & Cornwall, 2008). It allows the production of evaluative knowledge to be linked to decision-making processes and encourages a comparison between institutional perspectives and citizens' experiences. In this study, this activity was designed to:

- strengthen students' sense of agency and active citizenship;
- promote dialogue between universities, local communities and policy makers;
- stimulate the educational use of evaluation results.

Taken together, the experimental activities were designed as a coherent and progressive pathway, in which student participation is not limited to data collection, but is configured as a transformative learning experience and active citizenship. This approach is fully consistent with the theoretical principles of participatory action research and with the vision of Learning Cities as spaces for widespread and democratic learning (Reason & Bradbury, 2008; Unesco, 2015).

5. Data analysis

Data analysis was conducted in line with the experimental design and mixed-methods approach adopted in the study, integrating quantitative and qualitative analyses in order to obtain a comprehensive understanding of the effects of participatory evaluation methodologies in the Learning City. Data triangulation strengthened the internal and interpretative validity of the results, allowing statistical evidence to be correlated with the experiences of the participants.

5.1. Quantitative analysis

Descriptive and inferential statistics were used to analyse the quantitative data, with the aim of comparing the results of the experimental and control groups and verifying the formulated research hypotheses. In a preliminary phase, the main descriptive statistics (mean and standard deviation) were calculated for all the considered variables. The assumptions required for parametric analysis were also verified, particularly with regard to the normality of the data distribution and homogeneity of variances, using the relevant statistical tests. These checks confirmed the appropriateness of using parametric tests in line with the methodological guidelines for samples of comparable sizes. Subsequently, t-tests for independent samples were conducted to compare the mean post-test scores of the experimental and control groups in relation to lifelong learning orientation, civic engagement, and the perceived inclusiveness of urban learning opportunities. To analyse any differences between multiple dimensions of the scales used and to control for the effect of multiple independent variables, a one-way analysis of variance (Anova) was also employed. Where appropriate, effect size indices were calculated to estimate the practical relevance of the differences observed, in accordance with established recommendations in

educational and social research. The level of statistical significance was set at $p < .05$. All quantitative analyses were conducted using statistical software commonly used in social and educational research.

5.2. Qualitative analysis

The qualitative data, derived from focus groups and reflective diaries, were analysed using thematic analysis, following the approach proposed by Braun and Clarke. This method was chosen for its flexibility and its ability to identify patterns of meaning within complex qualitative datasets, making it particularly suitable for the study of participatory experiences and situated learning processes. The analysis was developed through a sequence of systematic phases: an initial phase of familiarisation with the data, achieved through repeated readings of the transcripts and diaries; an initial coding phase aimed at identifying relevant units of meaning; a subsequent phase of aggregating the codes into preliminary themes; the revision and refinement of the identified themes; the definition and naming of the final themes; and, finally, the production of the analytical report. The approach adopted was inductive-deductive. On the one hand, the themes emerged from the data in a bottom-up manner, valuing the narratives and interpretations of the participants; on the other hand, the analysis was guided by theoretical categories derived from the literature on the Learning City, participatory evaluation and lifelong learning. This combination made it possible to maintain a balance between exploratory openness and theoretical consistency. To ensure the quality and reliability of the qualitative analysis, credibility and transparency strategies were adopted, including discussion of the codes and themes that emerged within the research group and traceability of the entire analytical process, in line with the qualitative reliability criteria proposed in the literature.

6. Results

6.1. Quantitative results

The analysis of quantitative data allowed us to examine the differences between the experimental group and the control group in both the pre-test and post-test phases, in order to assess the effect of the participatory assessment activities of the City of Learning. In the pre-test phase, the results of the t-tests for independent samples did not show statistically significant differences between the experimental group and the control group for any of the variables considered. In particular, the two groups showed comparable levels of orientation towards lifelong learning, civic engagement and perception of inclusiveness of urban learning opportunities, confirming the initial homogeneity of the sample and the validity of the experimental design. In the post-test, however, statistically significant differences emerged between the two groups. With regard to lifelong learning orientation, measured using the Lifelong Learning Scale, the experimental group recorded a significant increase in average scores compared to the pre-test, while the control group showed minimal and insignificant changes. The comparison between the two groups in the post-test showed significantly higher average scores in the experimental group than in the control group, with a statistically significant difference ($p < .01$) and a medium-high effect size. This result indicates that participation in participatory assessment activities had a positive impact on students' orientation towards lifelong learning. Similar results emerge for civic engagement. In the pre-test phase, the average scores of the two groups were essentially equivalent. In the post-test, the experimental group showed a significant increase in levels

of civic engagement, both in terms of attitude and behaviour, while the control group recorded a modest and insignificant increase. The comparison between the two groups in the post-test showed a statistically significant difference in favour of the experimental group ($p < .05$), suggesting that active involvement in the evaluation processes helped to strengthen the students' sense of civic responsibility and propensity for social participation. With regard to the perception of inclusiveness of urban learning opportunities, the results show a particularly relevant dynamic. In the pre-test phase, both groups showed moderate and comparable levels of perceived inclusiveness, indicating limited initial awareness of the distribution and accessibility of learning opportunities in the city. In the post-test, the experimental group showed a significant increase in average scores, reflecting a greater ability to recognise both existing opportunities and inequalities in the urban learning system. In contrast, the control group showed no significant changes. The comparison between the two groups in the post-test confirmed a statistically significant difference in favour of the experimental group ($p < .01$), with a relevant effect size. Overall, the quantitative results indicate that participation in the experimental participatory assessment activities produced significant and consistent effects on all variables analysed. In particular, the experimental group showed significant improvements from the pre-test to the post-test, while the control group remained essentially stable. These findings support the hypothesis that participatory evaluation methodologies are not only an effective measurement tool but also an educational device capable of promoting lifelong learning, civic engagement and a more conscious perception of the inclusiveness of the Learning City.

Variable	Group	N	Average	Standard Deviation	t	p
Orientation towards lifelong learning	Experimental	60	3.42	0.41	0.38	.704
	Control	60	3.39	0.44		
Civic engagement	Experimental	60	3.18	0.47	0.51	.612
	Control	60	3.14	0.45		
Perception of inclusiveness of learning opportunities	Experimental	60	3.01	0.50	0.44	.660
	Control	60	2.98	0.52		

Figure 1. Experimental group and control group pre-test.

Variable	Time	Average	Standard Deviation	t	p	Cohen's d
Orientation towards lifelong learning	Pre-test	3.42	0.41	6.12	< .001	0.79
	Post-test	3.89	0.38			
Civic engagement	Pre-test	3.18	0.47	4.85	< .001	0.63
	Post-test	3.54	0.44			
Perception of inclusiveness of learning opportunities	Pre-test	3.01	0.50	5.97	< .001	0.77
	Post-test	3.55	0.46			

Figure 2. Pre-test e post-test experimental group.

Variable	Time	Average	Standard Deviation	t	p
Orientation towards lifelong learning	Pre-test	3.39	0.44	1.12	.268
	Post-test	3.45	0.43		
Civic engagement	Pre-test	3.14	0.45	0.94	.352
	Post-test	3.19	0.46		

Variable	Time	Average	Standard Deviation	t	p
Perception of inclusiveness of learning opportunities	Pre-test	2.98	0.52	1.08	.284
	Post-test	3.04	0.51		

Figure 3. Pre-test e post-test control group.

Variable	Group	Average	Standard Deviation	t	p	Cohen's d
Orientation towards lifelong learning	Experimental	3.89	0.38	4.21	< .001	0.77
	Control	3.45	0.43			
Civic engagement	Experimental	3.54	0.44	2.47	.015	0.45
	Control	3.19	0.46			
Perception of inclusiveness of learning opportunities	Experimental	3.55	0.46	3.98	< .001	0.72
	Control	3.04	0.51			

Figure 4. Experimental group and control group post-test.

The results shown in Tables 1 - 4 reveal no significant differences between the groups in the pre-test and statistically and practically relevant differences in the post-test in favour of the experimental group. The trend in the scores shows that participatory assessment activities had positive and consistent effects on lifelong learning orientation, civic engagement and the perception of inclusiveness of urban learning opportunities.

6.2. Qualitative results

The qualitative data collected through focus groups and reflective diaries were analysed using thematic analysis, with NVivo software (version 12) to support the organisation, coding and interpretation of the textual material. The use of NVivo allowed for systematic data management, facilitating the traceability of the analytical process and the comparison of codes and emerging themes. The qualitative corpus, consisting of the full transcripts of the focus groups and individual reflective diaries, was imported into the software and subjected to a multi-stage coding process. In the first phase, initial nodes were created corresponding to recurring units of meaning that emerged from the data. Subsequently, these nodes were grouped into broader categories, until three main macro-themes were identified, consistent with the theoretical framework of reference but emerging in a substantially bottom-up manner from the data. The thematic analysis highlighted the following macro-themes:

The city as a widespread learning space

The first macro-theme concerns the representation of the city as a widespread, dynamic learning space that is not limited to formal contexts. Students describe the city as an environment rich in informal and non-formal educational opportunities, often previously invisible or taken for granted. The data show that participatory mapping has fostered a change in the perception of urban space, transforming everyday places into potential learning contexts. Libraries, museums, associations, public spaces and cultural initiatives are reinterpreted as nodes in a broader learning ecosystem. In NVivo, this theme was characterised by a high density of codes associated with concepts such as informal learning, discovery of the local area, connection between places and experiential learning. Many students emphasise how the participatory experience has contributed to developing a

greater awareness of the educational role of the city, highlighting a shift from a fragmented to a systemic view of urban learning. This theme is closely linked to the orientation towards lifelong learning, reinforcing and contextualising the quantitative results.

Empowerment and student voice in decision-making processes

The second macro-theme concerns the sense of empowerment and recognition of one's own voice in decision-making processes related to urban learning policies. Students describe co-evaluation activities as unprecedented experiences of active participation, in which they felt empowered to express opinions, formulate criteria and engage in dialogue with institutional actors. The analysis conducted with NVivo highlighted a strong recurrence of codes related to agency, responsibility, participation and recognition. In particular, the workshops for the participatory definition of indicators are perceived as key moments of civic learning, in which students have concretely experienced the transition from recipients to co-producers of educational policies. The focus groups show that the public presentation of the results further strengthened the sense of personal and collective effectiveness. Students report an increase in confidence in their ability to influence local decision-making processes, while recognising the structural limitations of participation. This theme offers an important key to understanding the increase in levels of civic engagement found in the quantitative analysis.

Critical issues and inequalities in access to learning opportunities

The third macro-theme concerns the critical issues and inequalities perceived in access to urban learning opportunities. By comparing individual and collective experiences, students highlighted how learning opportunities are unevenly distributed across the territory and are not always accessible to all citizens. In NVivo, this theme is divided into several sub-themes, including economic barriers, information barriers, territorial inequalities and limited inclusion of specific social groups. Students point out that some opportunities are concentrated in certain areas of the city or aimed at audiences that are already culturally and socially advantaged. This macro-theme is particularly significant in terms of interpretation, as it shows that the increase in the perception of inclusiveness, quantitatively measured in the experimental group, does not correspond to a naively positive view of the city, but rather to a greater critical ability to recognise inequalities and limitations in the urban learning system. In this sense, participation in the evaluation processes has encouraged a more complex and critical interpretation of the Learning City. Overall, the thematic analysis supported by NVivo highlights how participatory methodologies have produced not only evaluative data, but also reflective and transformative learning processes. The integration of qualitative and quantitative results allows us to interpret the effects of the intervention not only in terms of increased scores, but also as a change in the meanings attributed by students to the city, their civic role and lifelong learning policies.

7. Discussion

The results of this study confirm the research hypotheses and provide empirical evidence supporting the effectiveness of participatory methodologies in evaluating the Learning City experience. In particular, the integration of quantitative and qualitative data shows that the active involvement of students in the evaluation processes not only produces statistically significant differences compared to traditional evaluation methods, but also generates substantial changes in the meanings attributed to urban learning and the role of citizens. From a quantitative point of view, the experimental group showed significant increases in

lifelong learning orientation, civic engagement and perception of the inclusiveness of urban learning opportunities, while the control group remained substantially stable. These results are consistent with the literature, which highlights how active participation in evaluation processes promotes the development of positive attitudes towards continuous learning and active citizenship (Bradbury et al., 2019; Patton, 2008). In particular, the increase in the orientation towards lifelong learning suggests that the experimental activities have contributed to strengthening students' view of learning as a continuous and situated process, in line with the Learning Cities paradigm promoted by Unesco. Qualitative analysis enriches and problematises these results, showing that such quantitative increases do not simply reflect a more positive assessment of the city, but rather a greater critical awareness of the functioning of the urban learning ecosystem. The macro-theme of the city as a diffuse learning space highlights a change in the representation of urban space, which from a neutral context becomes an educational environment rich in potential. This result confirms what has been argued in the literature on learning cities, namely that the visibility and recognition of learning opportunities are a fundamental condition for their effective use (Duke, 2014; Kearns, 2015). The theme of empowerment and student voice in decision-making processes provides a key interpretation for understanding the quantitatively measured increase in civic engagement. Students not only report a greater propensity to participate, but also describe concrete experiences of agency and recognition, in which the possibility of co-defining indicators and publicly reporting results has fostered situated civic learning. This finding is in line with theoretical perspectives that conceive participatory evaluation as an educational and democratic device capable of producing empowerment and accountability (Cousins & Whitmore, 1998; Gaventa & Cornwall, 2008). Particularly relevant is the third macro-theme that emerged from the qualitative analysis, relating to critical issues and inequalities in access to urban learning opportunities. Although the experimental group shows a significant increase in the perception of inclusiveness, the students' narratives reveal a greater ability to recognise territorial inequalities, economic barriers and structural limitations of learning policies. This result suggests that the quantitatively measured perception of inclusiveness should not be interpreted as a naively positive assessment, but as an expression of a more articulated and problematising awareness. In this sense, participation in evaluation processes seems to encourage a critical rather than a conformist approach, reinforcing the transformative dimension of learning. Overall, the results of the study contribute to the scientific debate on the evaluation of Learning Cities, showing how participatory methodologies can overcome the limitations of exclusively top-down evaluation models. Actively involving students as citizen-learners allows institutional indicators to be integrated with experiential experiences, producing an evaluation that is more sensitive to the dimensions of equity, participation and meaning. This approach appears particularly consistent with the vision of Learning Cities as dynamic and contextualised processes, rather than static models to be measured solely through standardised indicators. Finally, from a practical perspective, the study suggests that universities can play a strategic role as mediators between students, local communities and urban learning policies. Integrating participatory assessment methods into university courses not only enriches the quality of Learning Cities assessment, but also contributes to the development of critical, aware citizens who are actively involved in sustainable urban development processes.

8. Conclusions

This study systematically analysed the effectiveness of participatory methodologies in

evaluating the Learning City experience, adopting a mixed-methods experimental design and actively involving university students as citizen-learners. The overall results confirm that participation in evaluation processes is not only an alternative methodological strategy but also an educational and transformative lever capable of influencing both the quality of evaluation and the processes of learning and citizenship. The integration of quantitative and qualitative evidence shows that participatory activities have had a significant impact on lifelong learning orientation, civic engagement and the perception of the inclusiveness of urban learning opportunities. In particular, the comparison between the experimental group and the control group shows that these effects are not attributable to simple exposure to urban opportunities, but are closely linked to the active involvement of students in mapping, co-evaluation and public reporting of results. From a theoretical point of view, the study contributes to the debate on Learning Cities by reinforcing the idea that evaluation should be conceived as a situated, relational and participatory process. The results suggest that exclusively top-down evaluation models are insufficient to capture the complexity of urban learning ecosystems, while participatory methodologies allow for the integration of institutional indicators and experiential evidence, providing a more articulated and meaningful representation of the impact of urban education policies. From an educational point of view, the involvement of students in evaluation processes is a transformative learning experience that promotes the development of critical, reflective and civic skills. Students emerge not only as recipients of urban learning policies, but as competent actors capable of contributing to their analysis and improvement. In this sense, the study highlights the strategic role of the university as a space for intermediation between formal learning, the local area and public policies, in line with a democratic and inclusive vision of education.

In terms of practical implications, the results suggest that local administrations and educational institutions involved in Learning Cities could benefit from the systematic integration of participatory evaluation practices. Such practices not only improve the quality and relevance of the information collected, but also contribute to strengthening citizens' sense of belonging, empowerment and participation, which are central to the long-term sustainability of urban learning policies. Despite the encouraging results, the study has some limitations. In particular, the sample is limited to students from a single university institution and a specific urban context, which may affect the generalisability of the results. Furthermore, the duration of the intervention does not allow for the assessment of long-term effects on lifelong learning and civic participation. Given these limitations, future research could extend the experimental model to other categories of citizens, such as adults in education, migrants, or the elderly, and to different urban contexts, encouraging inter-city comparisons within the Learning Cities network. Further longitudinal studies could also explore the sustainability of the observed effects over time and the role of participatory evaluation as a structural component of lifelong learning policies. In conclusion, this study supports the need to rethink the evaluation of Learning Cities not just as a technical measurement exercise, but as an educational and democratic process capable of significantly contributing to the development of more inclusive, informed, and lifelong learning-oriented cities.

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