



A Systematic Literature Review of Citizen's Participatory Ladder Models

Mahdis Rahimi¹, Saeed Salehi Marzijarani², Elham Sfandyarifard^{2*}, Mahmoud Teimoury³

1. Ph.D. Candidate in Architecture, Department of Architecture, Faculty of Engineering, Arak Branch, Islamic Azad University, Arak, Iran

2. Department of Architecture, Faculty of Engineering, Arak Branch, Islamic Azad University, Arak, Iran

2. Assistant Professor, department of Architecture, Rasam Institute of Higher Education, Karaj, Iran

3. Department of Architecture, Faculty of Engineering, Arak Branch, Islamic Azad University, Arak, Iran

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ABSTRACT

Nowadays, there are different participatory citizen's types in architectural design process, each of which is different from the other in terms of the type and user participation level. In general, participation types as a potential for better and more appropriate architecture are rarely used. They are either carried out casually and poorly planned, or remain at the stage of theoretical foundations, which only confirms prejudices about its ineffectiveness. Despite the fact that a whole horizontal and participatory tradition has been acknowledged in citizen's participatory ladder models historically, empirical research characterizes participatory ladders in the relevant literature. Despite this, there are not many studies that track participation, making it difficult to get a broad picture of participatory ladder models in practice. To further explain, the participatory ladder models type was studied, and the method of a systematic literature review procedure was employed to gain a thorough grasp of these models. Out of 528 articles, 61 were chosen and examined for this purpose. Following the 61 studies, findings show that participatory ladder models have been used in five general groups. Studies are including ones on urban and regional planning, social participation, city, social learning, as well as participatory ladder models of evaluation and validation. Findings indicate that 12 categories make up 22 studies on urban and regional planning. Participatory city ladder models are the subject of 12 studies, social participation models are covered in 16 research, and social learning is covered in 5 studies. Participatory ladder models, including evaluation and validation models, also comprise 5 other investigations, and the least amount of articles was allocated to the areas of "social learning" and "evaluation and validation," while the most articles were allocated to the area of "urban and regional planning," likely because participatory ladder models were used more frequently in this area. This comprehensive survey of the literature offers a good opportunity to start future studies on participatory design that makes use of participatory ladder models.

Keywords: citizen participation, systematic literature review, participatory ladder models

1. Introduction

The democratic approach in today's design has found a special place for itself in the field of architecture, and it has received more attention. The word, Participation, refers to "participating in something or being a part of it." [1] Participation in cultural and social dimensions has various definitions: a) Participation is creating a sense of

solidarity and belonging and collective effort among the society members for achieving fair social system. b) The intellectual and emotional distinct involvement in the group, for the purpose of achieving specific goal of the group, is the concept of participation, which encourages the individual's sense of responsibility. c) Participation

*Corresponding author: e.sfandyarifard@rasam.ac.ir



means cooperation to do something. d) Participation is the mental and emotional involvement of people in group situations to help each other to achieve group goals and share the responsibility of work. [2]

Cultural status, geographic scale, general political titles and goals, program or project, scope of operation and access to resources are some of the issues related to the context. Identifying participants, introducing users, experts, policymakers and other people involved in the project is a very serious matter. Defining the level of participation means controlling information and to what extent each of the groups should interfere in each part of the participation. Defining the stages in which participation takes place, from the beginning stage to maintenance, is also another issue. The level of access to different techniques, methods and tools is effective in how the process works. Some issues should be considered in a collaborative process; there is no best answer for a design problem and there can be different answers for each problem. In this research, the typology of participation ladder models and the development process and the advantages and disadvantages of the models have been discussed. The process during which people identify and evaluate their wants and needs from the plans and tools of their knowledge and priorities and plays a consequential part in enhancing the health of society is called citizen participation.[3] Since citizens' participation idea has been used repeatedly in different fields, contrary to the fact that it seems like a simple concept at first, in practice it is different and its meaning has become rather vague.[4] Tools have been expanded as a means to identify assorted participatory level, to evaluate projects based on the characteristics of participation and to clear ambiguities about social participation. Arnstein's Participation Ladder, Hart Participatory Ladder's Model which is a modified version of Arnstein's model, a framework by Boyce and the Pretty Particular Participation Ladder,[6] which characterize seven participatory steps, are some tools that

represent the vague concept of participation that can exist to a more or less extent. The first effective step to distinguish between levels and participation's types is the participatory typology.[7] According to the implicit normative assumptions, put the participation typology on the "good" axis to "bad" or "active" to "passive" axis. Participatory research is analyzed by getting feedback on acceptance and the extent of dealing with different beliefs. This feedback in the project requires the second mirror, meaning that all members of the project in the free discussion of the evaluation, as well as the benefits and investments of participation and balance between democracy and authority at various levels should also be reviewed and evaluated.[8] One of the problems preventing people from participating is that they are not included in the design and assessment phases of a design development. This may also explain why people are reluctant to get involved in new design initiatives. This makes it difficult to create designs. The potential for improving the lives of participants is presented by participatory designs. However, they might have a lot of difficulty with participative designs. They support involvement and have a generally good attitude toward participatory design. Despite this, many believe the current interfaces are either too expensive or too complicated. There are many studies now that concentrate on participatory ladder models. Previous studies have offered insightful information on the advantages and disadvantages of using participatory ladder models to engage people. This research sought to determine how participatory ladder modeling approaches had been used in the literature to produce designs for users. A systematic literature review was conducted for this purpose. Although 528 papers were initially located, only 61 directly contributed by providing responses to the study topics. The outcomes demonstrate a favorable impact of citizen participation ladders on projects. Designers have a better chance of producing a product that takes into account constraints and

certain design qualities if they involve people in the design process. The rest of this article is divided into the following sections. The following section provides an overview of participatory ladder models from the perspective of their theoreticians. Then, a quantitative summary of the search results is provided and some of the responses to the current study questions are highlighted. The final section concludes with the key findings regarding the outcomes. An organized review of the literature was the methodology employed in this paper. In a systematic literature review (SLR), all the research that is available and pertinent to a certain subject or topic area is found, assessed, and interpreted. Based on Kitchenham et al. (2010), SLRs can be used either to identify and classify the primary studies in a given topic area or to respond to a specific research question (for example, "which is the best option"). By extracting pertinent material using stringent inclusion and exclusion criteria, both of these goals are pursued. This kind of review is beneficial because it gives scholars a comprehensive understanding of a subject where the body of knowledge is fragmented and it is difficult to even find pertinent papers.

(1) Where can participatory ladder models be used?

(2) What is the recommended future work?

2. Literature Review

The design process has more importance than the results when participation is at its highest levels of empowerment. As part of the participative process, goals and tactics are also collectively decided. For the benefit of all participants, the results are also made public.[9] The practical and specialized viewpoint holds that involvement, by setting the course of planned activities, is a useful tool for developing a healthy lifestyle and improving the caliber of research. Small and medium-sized levels have the goals of promoting democratic values, enhancing social stability, decreasing group conflicts, enhancing creativity and talents, enhancing the spirit of solidarity, eradicating the culture of marginalization,

enhancing the spirit of responsibility, enhancing resource sharing, highlighting the development of the human personality, and finally, solving issues and offering fresh design approaches. [10] Arnstein's model (1969) is the first and most well-known participatory method, an influential model for generations of planners, a benchmark in planning theory and practice, and a strong procedure that looks for empowering people to take responsibility for their lives and surrounding environment [11] Roger E Hart presented a revised copy of Arnstein's participatory ladder [15], the most effective model for children's participation. Hart's model has been adapted and interpreted many times. For example, Shire's model (2001) developed five steps for participatory children's model. Hart argues that "different degrees of commitment of each person and organization to the empowerment process at different levels of participation are expressed by identifying three levels of "openings", "opportunities", and "commitments." [12] Hart's Ladder is not an assessment instrument. Kanji and Greenwood's model (2001) classifies participation in five stairs, indicating progress from superficial to deep, and "limited" to "wide". Jensen described participation's steps, as "various shapes instead of different levels".[17] Teresdar also invented the circle and the manion as a participatory model.[18] Shire (2001) proposed an alternative model of fifteen questions as a tool to increase children's participation.[12] According to Zakus and Lysack (1998), "citizen's participation is an intricate procedure that its success is affected and reduced by many factors; among them, the increase in time pressure, the disappointing quality of some participatory tools such as interviews, and external factors such as financial needs can also be mentioned as the principal challenges in participatory investigation.[19,20, 21, 22, 23, 24] Jules Pereti's typology (1995), highlighting the tensions inherent in participatory concept, helps to clarify the motivation of contributors.[26] Participation of youth and social groups is an important and fundamental principle of Pereti's typology.

Table 1. Participatory ladder models. (Aazami, Pouya, et al. 2016:228–241)

Arnstein (1969)		Hart (1992)		Bhatnager and Williams (1993)	Pretty et al. (1995)		White (1996)	Kanji and greenwood (2001)	Veneklasen et al. (2007)
Forms	Levels	Forms	Levels	Levels	Forms	Levels	Forms	Levels	levels
Citizen power (Active)	Citizen Control Delegated power Partnership		8-youth – initiated, shared decisions with adults 7-youth – initiated, and directed				Transformative representative instrumental Representative transformative instrumental Representative instrumental transformative	Collective action Co – learning Cooperation	Self – mobilization Interactive participation Functional participation
Tokenism (Responsive)	Placation Consultation informing	Participation	Adult – initiated shared decisions with young people consulted and informed assigned but informed	Initiating action Decision – making Consultation	Participation	-self – mobilization -interactive participation -functional participation	Instrumental representative transformative Instrumental nominal representative	Consultation	Participation for material incentives
Non participation	Therapy manipulation	Non participation	Tokenism Deception manipulation	Information sharing	Non participation	participation for material participating by consultation passive participation token participation or manipulation	Instrumental	compliance	Participation by consultation Passive participation
							Nominal instrumental		Token participation

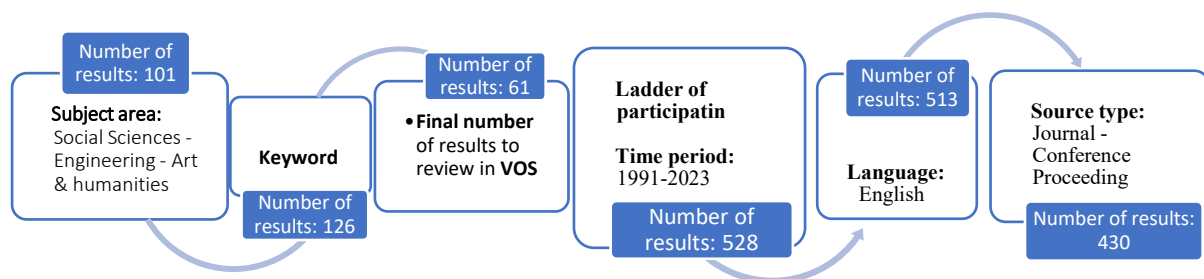


Figure 1. Literature Search Strategies and Their Results (Author's Source)

3. Research Methodology

For the purpose of achieving the main objectives of the current research, the "systematic literature review process" method has been used. In this method, bibliometric and

systematic analysis has been used, whereby the subjective interpretation is eliminated and the research process is logical and scientific. Scopus database was used in this research, by the following steps: First, the keyword

searching was done with different titles, such as "participatory design models", "participatory design", "degrees of participation", "participation ladders", and "ladder of participation" to achieve the best search formula. Finally the best search formula was determined to be the title "Ladder of participation", which included a total of 528 articles. In the next step, the study focused on the filter of the search formula for articles that dated 1991 to 2023. First, by selecting English language, we reached 513 articles. Then in the next step, in the Source type section, we selected the Journal-Conference proceeding option and reached 430 articles. In the next step, in the Filter area, we activated the Social sciences-Engineering-Art & humanities option and reached 101 articles. Finally, the keywords were participation-adult-local participation-participatory approach-ladders-community participation-middle aged-questionnaire-aged-ladder of participation-questionnaires-adolescent-social participation-participatory research-surveys and questionnaires-urban planning-child. We selected cooperation-interview-young adult-communication-consultation-community engagement-child participation-rural areas and reached 126 articles. In the next step, 126 study articles and 62 final articles were selected and analyzed in VOS software. Finally, the final results, which include the review of collaborative ladder models and their advantages and disadvantages, were written in the conclusion section of the article.

4. Results and Findings

The compatibility of different views on participation is such that participation at low levels is considered passive and instrumental, and in higher levels "active and democratic" and is considered to increase the level of power. Opinion of utility is an example in this case, which considers participation as an effective method in developing and promoting the health of society and receiving internal information. [12] And the goal of the perspective of

empowerment, which is a goal in itself, is to change and increase the power of decision-making and participation.[13]

4.1 Using VOSviewer to Visualize Bibliometric Networks

Considering that the VOSviewer software is an application program for drawing scientific networks and studies based on scientometrics, and by using this software, the analysis of synonyms, co-citations, bibliometric and scientometric studies extracted from citation and information databases is done, and that using this software in studies based on Research Literature and Research Background is very useful. This software was used in this study. Vos is a useful tool for assessing the research data, which was mostly gathered through the use of library studies and a systematic review of research methodology.

4.2 Co-occurrence Analysis of Author Keywords in the Ladder of Participation

The study was conducted using 61 articles from 528 articles that were obtained for quantitative analysis from the Scopus database, and 25 related words were discovered using the Vos program based on the highest repetition in the selected articles and with a minimum repetition of 3 words. In Figure 2 and Table 2, a comprehensive quantitative analysis report is shown. The keyword "local participation" has been repeated the most in participatory ladder models articles. And according to the results, the use of ladder models has been more in this field. Table 2 also includes the terms sustainable development and sustainability, which are advantages and outcomes of applying the participation's ladder models. In Table 3, authors of articles with a minimum of 1 document and 7 citations were chosen and taken into consideration utilizing the VOS software analysis. Finally, 58 out of the 138 writers meet the criteria, and their median year of publication was checked and shown in Table 3. Additionally, it was found that the 5 authors that are most related to each other are: Alvaro, Kissmann, Burford, Rosado-May, and Harder.

Table 2. Top keywords in “Ladder of participation”. (Author's source)

Keyword	occurrences	Total link strength	Keyword	occurrences	Total link strength
Local participation	17	49	United states	6	20
Participatory approach	15	45	Europe	4	27
participation	13	34	United kingdom	3	25
Decision making	10	40	Western Europe	3	25
Ladder of Participation	4	6	Eurasia	3	25
Empowerment	6	13	California	3	12
Community participation	6	12	Urban planning	5	14
Ladders	5	10	Rural Areas	3	6
Adult	5	31	Aged	3	24
Female, Male	5	34	Social participation	3	20
Stakeholder	5	14	Sustainable Development	3	10
Sustainability	4	9	Consultation	3	3
Child participation	4	2			

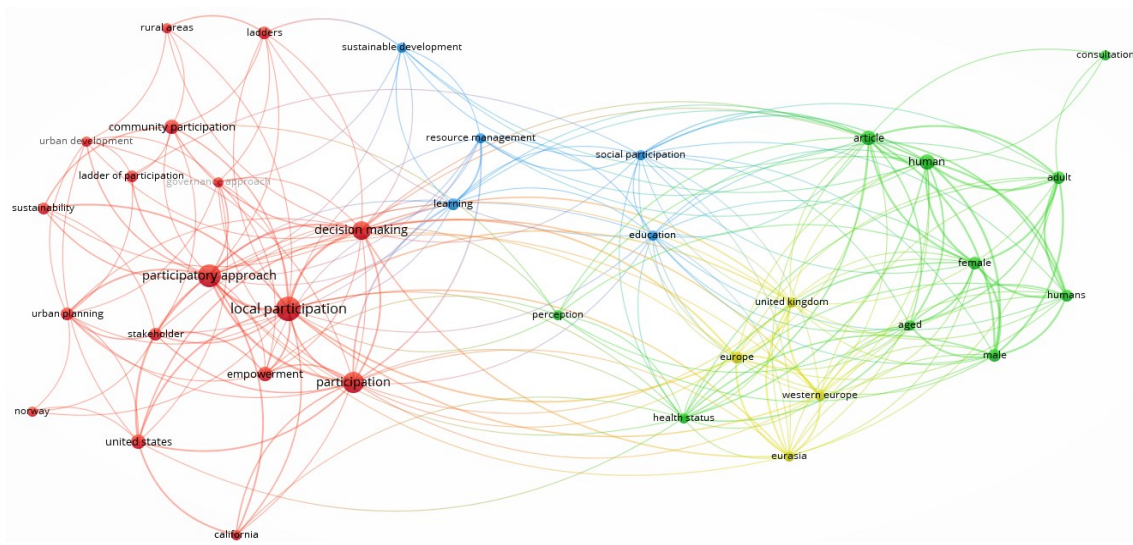


Figure 2. Author keyword co-occurrence of “Ladder of participation”

Table 3. Co-occurrence of authors in “Ladder of participation”. (Author's source)

Author	Average Year published	Documents	Citations	Total link strength	Author	Average Year Published	Documents	Citations	Total link strength	Author	Documents	Average Year published	Citations	Total link strength
Bjorgen A.	2021	1	9	2	Carter P.	2018	1	11	1	Kissmann S.	1	2012	20	4
Fossheim K.	2021	1	9	2	Martin G.	2018	1	11	1	Rosado-may F.J.	1	2012	20	4
Macharis C.	2021	1	9	2	Mak B.K.L.	2017	1	37	2	Bahou L.	1	2012	15	0
Bruns B.	2021	1	7	0	De jong M.	2017	1	36	1	Dauber S.	1	2010	37	2
Alcorn L.G.	2019	1	11	3	Kriz K.	2017	1	39	1	Hogue A.	1	2010	37	2
Brower brown K.	2019	1	11	3	Li H.	2017	1	36	1	Rasiah R.	1	2010	55	0
Karner A.	2019	1	11	3	Skivenes M.	2017	1	39	1	Morgenstern J.	1	2010	37	2
Marcantonio R.	2019	1	11	3	Mbeche R.	2017	1	14	0	Jacobs G.	1	2010	50	0
Duit A.	2019	1	11	2	Cheung L.T.O.	2017	1	37	2	Collins K.	1	2009	272	1
Mohedano roldan A.	2019	1	11	2	Hui D.L.H.	2017	1	37	2	Ison R.	1	2009	272	1

Schultz L.	2019	1	11	2	Carpentier N.	2016	1	81	0	Macpherson S.	1	2008	7	0
Ewnetu B.	2019	1	49	1	Castell P.	2016	1	17	0	Bartley M.	1	2007	30	2
Kelly G.	2019	1	9	1	Mhagama P.	2016	1	7	0	Head J.	1	2007	30	2
Laskey A.B.	2019	1	15	1	Gupta J.	2015	1	159	1	Stansfeld S.	1	2007	30	2
Nicholls W.	2019	1	15	1	Hurlbert M.	2015	1	159	1	Maier K.	1	2001	63	0
Roberts A.	2019	1	9	1	Nolte K.	2014	1	30	1	Guaraldo Choguill M.B	1	1996	182	0
Wondirad A.	2019	1	49	1	Voget-Kleschin L.	2014	1	30	1	Abrams D.B	1	1991	862	1
Arnstein S.R.	2019	1	96	0	Alvarado dzul S.H.	2012	1	20	4	Biener L.	1	1991	862	1
Gaber J.	2019	1	19	0	Burford G.	2012	1	20	4					
Lee C.A.	2019	1	11	0	Harder M.K.	2012	1	20	4					

4.3 Research into Participatory Ladder Models

Urban and regional planning, social participation, city planning, social learning, evaluation, and validation participatory ladder models are included in 61 studies. Table 4 lists 22 papers that deal with regional and urban planning. Studies were conducted in the largest category of community planning, on achieving community control and promoting equitable development (Lasky & Nichols, 2020), citizen participation in urban planning and development decisions (Gaber, 2020), and community control (Karner, Brower Brown, & Marcan) as well as improving the quality of local plans through participation and participatory decision-making (2019). The role

of participation in development through social radio (Mhagama, 2016), participation in tourism development (Mak, Cheung, & Hui, 2017), (Wondirad & Ewnetu, 2019), and the ladder of citizen participation in developed countries (Guaraldo Choguill) are some examples of the second-largest category (1996). Other groups taken into account are: planning studies, health promotion in underserved neighborhoods, construction and property management, BMC psychology, community development, local community, deliberative system, e-planning research, local economic development, and programing the subject of study.

Table 4. Summary of urban and regional planning participatory ladder models (N=22)

Category	Studies
planning studies	Maier K.(2010)
community participation	Guaraldo Choguill M.B.(1996). Wondirad A., Ewnetu B.(2019). Mak B.K.L., Cheung L.T.O., Hui D.L.H.(2017). Mhagama P. (2016). Chen Z., Wan P.Y.K. (2023)
Planning Association	Lee C.A. (2019). Roberts A., Kelly G. (2019). Sloane D.C., Hawkins B.M., Illum J., Spindler A., Lewis L.B. (2019). Davis J., Pijawka K.D., Wentz E., Hale M., King D.A. (2021). Karner A., Brower Brown K., Marcantonio R., Alcorn L.G. (2019). Gaber J. (2020). Laskey A.B., Nicholls W. (2020)
health promotion in disadvantaged neighbourhoods	Sandholdt C.T., Srivarathan A., Kristiansen M., Malling G.M.H., Olesen K.V.M., Jeppesen M., Lund R. (2022)

Construction and Real Estate Management	Liang Y., Zhang Y., Wang Y., Li M. (2022)
BMC Psychology	Kazemi M., Honarvar B., Heydari S.T., Joulaei H., Haghghi M.R.R., Lankarani K.B. (2021)
Community development	Krüger V. (2018)
local community	Bednarek-Szczepańska M. (2020)
Deliberative system	Maaoui M., Ray R. (2022)
E-Planning Research	Vorobeva O.V., Manzhula E.A. (2021)
local economic development	Jocom S.G., Memah M.Y., Pngemanan L.R. (2021)
Planning studied	Castell P.(2016)

Table 5 summarizes 16 studies that use participatory ladder models of social participation. In the largest category, child-centered participation was developed (Krij, Skivens, Bakr, El Sayad & Thomas, 2021). Other groups in this table include: citizen power, participatory research action, citizen

science (ethno-biology), patient and public participation (critical social policy), youth participation (politics), user social participation (health), health for development, leisure sciences, health care planning (consumer studies), social sciences and medicine, and conservation and society.

Table 5. Summary of social participation participatory ladder models (N=16)

Category	Studies
citizens' power	Arnstein S.R.(2007). Ciaffi D. (2019)
participatory action research	Jacobs G.(2010)
Citizen science (Ethnobiology)	Jesus M.D., Zapelini C., Schiavetti A. (2021)
child-centred participation	Križ K., Skivenes M.(2017) Bakr A.F., El Sayad Z.T., Thomas S.M.S. (2018). Koch A.B. (2021)
patient and public engagement (Critical Social Policy)	Carter P., Martin G. (2018)
Young people participation (policy and politics)	Macpherson S. (2008)
users' social participation (health)	Zalmanson L., Oestreicher-Singer G. (2015)
Sanitation and Hygiene for Development	Shaw R.J. (1992). 16.
Leisure sciences	Russpatrick S., Tiwari A., Markle L., Musonda E., Mutunda A., Osbert N., Pinfold J., Winters A., Winters B., Larsen D.A. (2017)
health care planning (Consumer Studies)	Gallant K., Hutchinson S. (2016)
Social Science and Medicine	Longley M. (2001)
Conservation and Society	Bartley M., Head J., Stansfeld S. (2007)
	Mbeche R.(2017)

The following categories were assigned to 12 studies on participatory city ladder models (Table 6): innovation and industrialization, environment, environmental science, environmental law and management, cities

(urban load planning), local environment, water law, groundwater governance, eco-city development, land acquisition consulting (global development), land and environmental policy and planning.

Table 6. Summary of city participatory ladder models (N=12)

Category	Studies
Innovation and Industrialization	Rasiah R.(2010)
Echological	Omodanisi E.O., Eludoyin A.O., Salami A.T. (2015)
Environmental Science	Asirin, Asbi A.M., Pakpahan V.H. (2018)
Environmental Law and Management	Stephen Tromans Q.C. (2014)
Cities (urban freight planning)	Bjørgeren A., Fossheim K., Macharis C. (2021)
Local Environment	Mayrhofer R. (2018)
water law	Adshead J. (2006)
groundwater governance	Bruns B. (2021)
eco-city development	Li H., de Jong M. (2017)

land acquisitions consultation (World Development)	Nolte K., Voget-Kleschin L. (2014)
Land	Simon D. (2021)
Environmental Policy and Planning	Mohedano Roldán A., Duit A., Schultz L. (2019)

Five studies use participatory ladder models for evaluation and validation (Table 7). In this table, three categories regarding diagnosis and evaluation as well as validation are considered

as the largest category, and the evaluation framework (planning association) is also considered as the smallest category.

Table 7. Summary of **evaluation and validation** participatory ladder models (N=5)

Category	Studies
diagnostic and evaluation	Hurlbert M., Gupta J.(2015), Carpentier N.(2016)
evaluative framework (planning association)	Contreras S. (2019)
Validation	Biener L., Abrams D.B.(1991) Hogue A., Dauber S., Morgenstern J. (2010)

Five other studies in social learning participatory ladder models (Table 8 shows the use of participatory ladder models in game-based learning design (Bates, Brown, Cranton, & Lewis 2011), computer science and education (Xiao, Liang & Tang, 2018), (Collins & Ison,

2009), social science education (Bahou, 2012) and indigenous participation in education between cultures (Burford, Kissmann, Rosado-May, Alvarado Dzul, & Harder, 2012). All studies were published in journals.

Table 8. Summary of **social learning** participatory ladder models (N=5)

Category	Studies
Social Sciences: Education	Collins K., Ison R.(2009). Bahou L. (2012)
Ecology and Society	Burford G., Kissmann S., Rosado-May F.J., Alvarado Dzul S.H., Harder M.K. (2012)
Computer Science and Education	Xiao S., Liang W., Tang Y. (2018)
Games-based Learning	Bates M., Brown D., Cranton W., Lewis J. (2011)

5. Discussion

Effectiveness and cost reduction are approved as participatory goals. White (1996) provides a perspective on the interests at stake of different forms of partnership. Participatory tools are mostly used to examine the citizens' participation, which can be a useful gadget to

recognize inconsistent ideas at each particular stage of the process. Such typologies can be implicitly expressed as principled, indicating an improvement towards more "authentic" forms of participation. However, the forms of contextual participation become more enigmatic.

Table 9. Strengths and weaknesses of participatory ladder models. (Data extraction by the author)

Main Findings	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Developing skills to control life.[27] • altering adverse living circumstances.[27] • Evaluation professional behavior, as a result of which people learn from their experiences.[28] • Revision the essence of professionalism to maintain socio-economic power from injustices, which professionals are a part of them.[29] • Epistemic alteration from rationality to thinking in act.[30] • Promoting the interests and meeting the needs of participants.[31] • A dynamic proceeding, which allows participants to calibrate their operations, capabilities, and science.[32] • identifying system for “public interests of society”. • progress of democracy. • creating collective ownership, a sense of membership and shared liability in the group.[15, 35] • Removing barriers of racism, resistance of those in power and ignorance of low-income communities.[11] • The impact of culture and power on practical planners and the general public(Briggs 1998) and the development of cultural competence or work ability.[36] • Equalizing power inequalities in certain decision-making processes. • Simplicity, the ability to graphically reveal a strength.[37] • The participatory method, as a practical system at the macro, middle and micro levels with the operation of increasing social consistency , amplification the spirit of correlation,decreasing group clashes, eliminating the marginalization's culture, growing abilities and emerging creativity, expanding democratic worths, sharing In resources, reinforcement the spirit of responsibility, emphasizing the development of human personality, overcoming difficulties and opening new ways are associated.[19, 20] 	<ul style="list-style-type: none"> • Conflicts caused by different viewpoints. • Vague statements about how to implement participatory exercises. • The threat of pressure and the nature of time in participatory research • As the power's divisions used show, citizen's power is not regularly distributed.[11] • Increasing levels of uncertainty.[32, 33, 34] • The existence of conflict and complexity in collective decision-making.[32,33,34] • Moral concerns.[38] • Uncertainty, instability, uniqueness and value conflict.[30] • Inequality of participation levels • Inconsistencies in procedures used to improve participatory outcomes and how the participatory process is implemented result in varying quality of outcomes and limited repeatable success. • Lack of logical progression of levels of the cooperative ladder from one rung to another. Also, real participation programs of people may need 150 steps instead of eight steps to cover a wide range of participation levels of real citizens.[11] • Disappointing quality of user engagement tools such as interviews. • The needs of factors such as time and money. • Participation as a ladder ignores two points: First, higher on a ladder (ie, more cooperative) is not necessarily better. Second, equality is important in terms of both gender and power.[39] • Being neutral about class, age, gender ethnicity, and native identity.[40, 29] • Arnstein's model, which focuses on power, is insufficient to understand participation at a conceptual or practical level.[37] • Hierarchical nature of participation ladder models. • Citizen's rein is seen as the purpose of participation—an presumption that does not always equal with participants' own reasons for participating. [37] "real planning means withdrawing the control element". [41] • Scholars emphasize the restrictions approved by Arnestein, which requires any problems or decisions for various levels and types of partnerships that are not reflected on a ladder scale. • Low insight into how the participatory process progresses among all the citizens involved in the project. [37] • Citizen framing is one of the broad problems in Arnstein's participatory ladder. participation as an open power strive between government authorities ['them'] and social activists ['us'], with a primary concentration on group struggles. [42, 37]

6. Conclusion

In short, it can be said that the systematic literature review method has been used in this article for a deep understanding of participatory ladder models and their advantages and disadvantages. Sixty three articles out of 528

articles from the Scopus database were selected and analyzed. According to the findings, among the advantages of participatory ladder models, according to the reviewed articles, can be the advancement of democracy, promotion of social and economic power, epistemological

change from rationality to reflection in action, developing skills to control and change adverse life conditions, being neutral about social classes, age, gender, race, ethnicity and native identity, increasing social stability, strengthening the spirit of solidarity, reducing group conflicts, eliminating the culture of marginalization, the flourishing of talents and the emergence of creativity, the expansion of democratic values, sharing resources, strengthening the spirit of responsibility, emphasizing the development of human personality, removing the difficulties and opening new ways. Their disadvantages can be mostly the lack of equal delegation of power, their hierarchical nature, high cost, the nature and pressure of time, complexity and conflict around collective decision-making, inequality of participation levels and levels of uncertainty. Finally, by examining the advantages and disadvantages, it is concluded that all participatory models still have gaps that should be considered when using the model. Filling the gaps and voids of participatory ladder models by understanding participation and user conditions as a small part of a larger system and

Reference

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- choosing the model based on the context, considering differences and things such as political, ideological, philosophical, cultural and religious identity differences, and addressing issues of variety and ensuring that no one is unfairly omitted will help drive micro-level changes and system-level reforms. The findings show that participatory ladder models have been used in five general groups. The least amount of articles were allocated to the areas of "social learning" and "evaluation and validation," while the most articles were allocated to the area of "urban and regional planning", likely because participatory ladder models were used more frequently in this area. Future study:
- How participatory ladder models can be employed for different groups of people (such as children, the elderly, teachers...)?
 - To what extent people can be involved in the design process?
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