PARTICIPATORY RESEARCH-MYTH OR REALITY?
A DEBATE AMONG DEVELOPMENT AGENTS[#]

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ABSTRACT

The present article discusses the emergence and evolution of participatory research as a methodology in social science research and development. It highlights the shift from traditional survey research methods to more participatory approaches, aiming to involve communities in decision-making and problem-solving processes. It emphasizes the importance of bridging the credibility gap between social science research and its end use, especially in developing countries. The article also discusses the theoretical and methodological underpinnings of participatory research, including the involvement of the researched in the research process, the importance of understanding social reality from the perspective of the individual, and the role of participatory research in promoting social change and development. Overall, the article calls for a re-examination of traditional social science research methods and the adoption of more participatory approaches to address the complex social problems of today's world.

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Keywords: *Participatory Research, Social Science, Development, Community Involvement, Methodology.*

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Introduction

Participatory Research/Participatory Management is being used more as a Fashion while there is a scope for its use as a credential approach of Social Science Research framework for Social and Development action in different fields which include Water Management, Disability Rehabilitation, Disaster Management, Health Services, Agriculture and Technology Innovation etc. In this regard, the Role of the Participatory Focus-a research strategy-by all the Development Agents has to be in deriving Social.

With these remarks, an effort is made herewith to locate the emergence of Participatory research in the history of Social Sciences Research. It may be said that it was the need for a Development Vehicle as a social and community process towards the change and modernization of People. This need has been felt only in the second half of the twentieth century, although the research strategy of Participant Observation – more or less similar to the use of Participatory Method was in use as an Anthropological Method[1] for very long time. Health researchers besides the Novelists and Story writers were the earliest users of the Participatory Focus[1].

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[#] *Modified version of the Endowment Lecture, Center for Water Resources, Anna University, Chennai, 14th March 2012*
[1]   I join with others who consider Participatory Research/Participatory Management as a Fashion in using this in research and social action for development. I have been bracketed me with Participatory Management philosophy Research and Management as I continued it as my fellow academic traveller concept throughout my academic career; from April 1962 initiated by Dr N C Surya, the then professor of Psychiatry in Pondicherry Medical College, Pondicherry. The use of Participatory community survey on

The serious minded social scientists and more particularly of the sociologists-rather called as Conservative Sociologists-were aware of fact that the excessive reliance on formal Social Science Research methods is less credible to get the desired results. Thus, it is advocated that all the research towards the designs of development have to be ushered in not from the dominant point of the development agents or of the dominant act of researchers. Instead, it was considered that there is requirement of involving the People to whom the development was intended to, their mind set to extricate the people's/stakeholders' requirements from their own perception. This was considered as an involvement of the people for Whom the development was intended as an agenda of How of development can be practiced. In this regard, a research tool of Participatory Development rose as a reaction to such realization of such Development practice by a new band of Development Agents and this was popularized mainly in last decades of twentieth Century by Gordon Conway and Robert Chambers (1992), and more recently by David Korten (1996)[2]. This is the concise history of Participatory Method.

At its best, the participatory process was considered that it can be liberating, empowering and educative, a collegial relationship that brings communities into the policy debate, validating their knowledge. Further, IISD *(International Institute of Sustainable Development)* has said, "*That they can be conveniently classified into four main types, each with a distinctive style and ethos.*"

- Participant Observer

Community conceptions of mental illness by joining N C Surya, then in 1977 as an Asian Co-ordinator of Participatory research of International Council for Adult Education, Toronto, Canada at the instance of Malcolm Audhisheshaih, then in 1983-84 to work on Yugoslavian Participatory/Co-optation in Industrial and Labour relations through UGC, then in 1985, through Prof Sakthi Vadivelu at CWR, Anna University on Participatory research in Water Issues, at the instance of Prof B. B. Sundaresan, the then Vice Chancellor, University of Madras, then in 1991, on Irrigation Management Transfer as a Participatory Process, Pedagogy of Ecological responsibility/Water Literacy for Stockholm International Water Institute, then from 1996 onwards as a consultant for various organisations on New Technology and Participatory process for Development besides on Water, Technology and Commoditisation and Poor – An Indian Case Study for South Asia Conference on Technology for Poverty Reduction, New Delhi in 2003 are the milestones of my involvement in Participatory Research.

[1] Participant observation is a structured research strategy widely used in disciplines such as cultural anthropology, sociology, communication studies, and social psychology. Its purpose is to gain a close familiarity with a group of individuals or community and their practices through intensive involvement in their natural environment over an extended period. This method originated in the fieldwork of social anthropologists, particularly students of Franz Boas in the United States, and in the urban research of the Chicago School of sociology. In anthropology, participant observation is used to produce ethnography. One key principle is that the observer must find a role within the group being studied, even if only as an "outside observer," and participate in some manner. Overt participant observation is limited to contexts where the community understands and permits it. Critics argue that this approach may be limited to studying public fronts constructed by actors, leading to the need for covert strategies, especially in studies involving government entities or criminal organizations. *(Douglas, J.D. (1976). Investigative Social Research. Beverly Hills, CA: Sage Publications).*

[2] Way back in 1962, Prof Dr N. C. Surya, the then head of the department of Psychiatry, in the then Pondicherry Medical College and currently called as Jawaharlal Nehru Institute of Post graduate Medical Education and Research (JIPMER), Pondicherry used my services as a sociologist *(first ever job I occupied after my post graduate degree in Sociology)* to do a community survey a method - a unique method of-data collection different from conventional Clinical survey for a study on Mental Morbidity in Pondicherry by using of Community Definition of Mental Illness in an urban fishermen habitat, Pondicherry. In this context, I was exposed to the research work by G. M. Carstairs carried out in the year 1958 on Mental illness and the bearing of it in cultural base. G. M. Carstairs, a cultural psychiatrist, son of a British missionary who lived in Rajasthan until his 9th year and then moved to UK where he grew up, had training in Psychiatry and also in Anthropology only to come back to India for his field research work on Culture and Mental disorder. His three books namely, "*the Culture and Mental Disorder*", "*The Twice Born*" and the "*Great Universe of Kota*" is more important to be considered from the point of their emphasis on the methodology of research-a Participatory one. As an instance, the 1958 study by Carstairs on the Rajasthani village and his quest to understand the Sex, Adolescence and Delusion within the Caste - Hierarchy had an impression in the insufficiency of the clinical survey which does not penetrate beyond the exteriority *(any social phenomenon has exteriority of a social element which envelopes the interiority i.e., the constitutive elements of the social phenomenon- called Phenomenology)* of the symptom of the Delusion in understanding the etiologic of the illness. The way in which the caste hierarchy in choosing a mate for his marriage as influenced by the caste endogamy and exogamy has prevented the Rajasthani youth to fulfil his sex desire through a marriage of a girl from the low ranking caste by the youth's higher ranking caste. In this context, how the fulfilment of the sex desire is conditioned by the Social Structure in Hindu Social Order and the way in which the Rajasthani youth got under the sexual fantasy under the deprivation of the youth's empitheisation with the girl of his choice from the prohibited caste for his marital sex has ended in the Sexual fantasy and resulting in delusion. The need to get into the Social Structural form and shape in the Hindu Social Order as reflected in the Exogamy and Endogamy in choosing a girl for one's marriage deprived his fulfilment of his sex desire is a cultural methodology that requires Research Focus Different From the Conventional Linear Method and that difference is the Participatory Focus to Peel of the Real Cause of the Rajasthani Youth and his Sex Fantacy leading to Delusion.

Another example is the Novelists/Story-writers. Our more familiar literary figure by name Vaira Muthu in our midst and his two classics of novels titled Kallikattu Idikasam and Karuvachi Kaviyam raise the concern of the Participatory Understanding in portraying the characters in the novels. An incident that has happened over the translation rights given by Vairamuthu for these novels to the Oxford University had to be withdrawn by him for a simple reason that the translator could not reflect the serious pulse of the Social Structural Conditions which had characterises as obtained through the Participatory Process. In fact, all the novelists and story-writers are the exponents of the Participatory Method in discovering the Social Structure.

- Rapid Rural Appraisal (RRA)
- Participatory Rural Appraisal (PRA)
- Participatory Action Research (PAR)

Participatory Research for Social Action in India

As for the situation in India, Participatory research is having a distinct methodological concern in social science research. The key issue in the participatory research is "*Whether the results of inquiry and data make sense to the ordinary man in the community for whom the development is intended to or enables the researcher to understand the respondent whom the social scientist calls an ACTOR in the social system".* In resolving the problem, the project on participatory research considers that one has to integrate the "*researcher*" with the respondent i.e. the "*researched*" in the research process itself where the methods of social investigation is supposed to be different from the traditional survey research. Basically the frames of references in the concept of development are bifurcated as that of "*action-agent*" and "*receiving – agent*" which are, although, different but relevant to one another.

As an Asian Coordinator for participatory research for International Council of Adult Education in the year 1977 held in Toronto, Canada, it was found by me that

- The Tanzanian experiment on low cost grain storage Silos,
- Senegal's attempt on rural community education,
- Thailand's exercise to determine the actual problems and perceived needs for the planning of effective community based adult – education and
- Indonesia's efforts in the investigation of local resources for community Education,

as the examples of participatory research which might have identified and decided what the beneficiaries wanted i.e. "*bottom up flow*" rather than the "*top – down imposition*".

While there are an increasing justification in high-lighting the inadequacies of survey – research and other traditional methods of research in areas of social science and also in the innovation of participatory research as a complementary methodology especially for development, there has to be a serious effort in legitimizing/validating the participatory research as a viable methodological tool. This is an inevitable task for the promoters of participatory research when there is a claim that this research approach to the fields of development communication and education may have to answer some of the unique nature of Social Science characteristics which influence survey-research[1]. To take example, in India, the gigantic effort the development programme involves a need for transfer of technology "*in order to adopt appropriate innovative materials, knowledge and ideas, development of skills and favourable attitudes of people leading to the full utilisation of both the available human and natural resources, an alternate educational process seems to be the central characteristic approach to development of rural community as a whole".* In yet another illustration, the research focus on water issues and more particularly of the agriculture sector has been subjected to Participatory research and there by leading to Participatory Management as is the case of Irrigation Management Transfer or in establishing Water Users Association in Water Literacy and in the introduction of Tube well-technology[2]. The basis of this

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[1] Understanding the nature and characteristics of the subject matter of these disciplines may dispel these controversies and thus the differences in the approach may be legitimised as there are differences between nature and society, it will require radically different methods of enquiry.
Differences between Natural and Social World.

Natural world can be observed and explained from outside.	Social world can be comprehended only from inside as the observer belongs to the social world.
The relations between phenomena of the natural world are mechanical	The relations between phenomena of the social world are the relations of value and purpose.

The values and purpose being the mediating factors, and then being the categories from which the observer cannot be separated and as they happened to be the nature and characteristics of the subject – matter of social sciences, the methods in social sciences have to lag behind the causal mechanism of the methods of the natural sciences.

[2] The establishment of Institutional form of Water Users Association- a non-bureaucratic form of management is in the idea of engineering a social process to reinvent a self-managing and participatory farmer in the peasantry of the agricultural sector is of discovering social and modernity process. *(see the Modified version adapted from the published monograph by Shavaji University, Maharastra, 2008, Water Governance (Irrigation Management Transfer)*: Farmers' Participation an Indian Case Study: A Conceptual Framework.
In another illustration, the pollution control of ground and surface water requires environmental planning where educational instrumentalism remains part of managerial and technological instrumentalism. In this context, pedagogy of ecological responsibility has conceptual issues in terms of knowledge construction at the community level. Thus, the traditional learning process and local knowledge, systems theory of literacy for ecological consciousness, self-direction of clients and agents at the community level,

process is in some of the expressed views of the farmers as individuals in the community and in their articulation of the ideas about their own issues. To derive an action plan for dealing with such situation, a diagnostic study through participatory research is considered as a complementary methodology of social research.

In its operational dimension, the significance of participatory research lies at three distinct levels.

- At the first level, it is methodological i.e. to validate hypothesis that participation of local community in the process of research leads to better understanding of the social reality.

- At the second level, it is educational i.e. to demonstrate how the very process of research with local participation benefits the local community to the extent it makes it articulate its needs and reflect an organized effort.

- At the third level, it is development i.e. to establish how the knowledge gained by the local community through their participation leads to better results in solving the problems and improving their well-being.

Methodological Component: It is Consisting of the following Points

- It is an issue about the weak ability of the researcher to understand social phenomena i.e. not only the prediction of the behaviour of individuals but also trying to cope up with the problems of development and communication in the absence of adequacy of proper understanding.

- Integration of the top-down process and bottom-up process is an issue of combination of points of view of "researcher" and "researched". It's not for purpose of simple combination but for an establishment of pragmatism of social reality of social phenomena from the point of the individual in the social system.

- Establishment of social reality is an exercise of combination of ideas and 'Rationality' which implicitly articulates the social order and social research to   contribute to the field of sociology of knowledge by a sort of communication between "Every day Common Sense" and "Scientific rationality"

- Re-focussed explanation of social phenomena by the combination of common sense knowledge with scientific rationality is procedure extending itself to the level of '*rock-bottom*' understanding where there is an extension from level of probability i.e. prediction to level of certainty i.e. diagnosis.

Issues Related to but Distinct from Participatory Research: The most important issue related to but distinct from participatory research is the plausibility of "methodological individualism" .Methodological individualism holds individual as one who acts more or less appropriately in the light of his disposition and as the ultimate constituent of the social world. Explanations of social phenomena or as "rock-bottom explanation" are a possibility according to methodological individualism, only when they are counted in terms of fact about individuals. While the issues of such methodological individualism are related to the philosophy of participatory research which reckons the 'actor' i.e. the researched as a factor within the research process, it is also distinct from participatory research because participatory research goes beyond mere explanation of action of individuals and extends itself to the community decision – making and formulation of the problems both by the researcher and the researched.

Most Important Uses or Purposes of Participatory Research: The uses or purposes of participatory research are consisting of following points:

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mass-media communication in environment education and the strategies for water literacy are outlined as conceptual frame works of pedagogy of ecological responsibility in the context of environmental planning and water management. Two case-studies have been taken up for discussion.*(see Modified version Adapted from the book titled "Poverty, Population and Sustainable Development - Essays in Honour of Professor Victor S. D'Souza")* Edited by S. R. Mehta Published by Rawat Publications Jaipur and New Delhi 1997 A Pedagogy Of Ecological Responsibility: Conceptualissues In Environmental Planning and Water Management.

Another example is the Tube Well Technology as a water technology. The concept of farmers' participation in optimizing water use for irrigation has become popular among administrators and planners, highlighting a shift in traditional economic relationships. However, it is essential to understand the roles of dominant partners who control resources and the power dynamics within the economic structure. These forces influence the technology that manipulates natural resources for sustainable development. This control process becomes more critical as technology plays an increasingly significant role in the agricultural sector. My presentation at the World Congress of Sociology in 2002 and the South Asia Conference on Technology for Poverty Reduction in 2003 explored these themes. Additionally, my study on Water Users' Associations as an Irrigation Management Transfer in Tamil Nadu highlighted farmers' portrayal as social selves. Similarly, my research on Technology Development for Weeding allowed me to examine participatory skills within the framework of capturing the social self during attempts to innovate technology for development.

- Uses from the point of education: Participatory research is not only an end in social science research for efficient use but also a means for better participation of men and ideas from the social system for which the development as a process is aiming. Thus, it has potential learning purpose from view of the respondent in participatory research who happened to be not only the 'researched' but also a beneficiary and also from view of the researcher who happened to be not only a researcher but also a programme planner and an action agent.

- Uses from the point of methodology: Thus, the key issue of participatory research is whether the results of inquiry and data make sense to the ordinary man in the community or enables the researcher to understand him whom the social scientist calls an 'actor' in the social system. Participatory research has to be (and not as is) an effective alternate tool for the specific purpose of bridging the credibility gap between social research and its end-use. Though social science is said to have demonstrable feasibility in solving social problems and in evolving a social policy, there is also a fundamental crisis in the research process as a whole in general and in the efficacy of the concepts of research in particular.

Accordingly, the dichotomy between feasibility and credibility of research is very much fundamental issue in the social sciences. The much talked about technique of research sophistication which is aimed at promoting the feasibility of social science do not actually reflect the understanding of reality of facts and thus the credibility of social science is said to be in crisis. It is often said that the traditional forms of social science research are not considered fully effective. There is a limited possibility for such a research to predict only without any effective diagnosis about the social disposition of the people. These predictions of social researchers are influenced by the subjective action of the researchers and thus a credibility gap is evident between social science research and its end use especially in developing countries. While addressing this gap, participatory research in its attempt to activate the community in decision making with the methods of social investigation enables social science research to extend from the stage of prediction to the stage of diagnosis. This is a crucial crisis/Myth in Participatory Research.

While this so, the issue or processes contained in participatory research is one area of science in which new lines of investigation are being generated. The important issue or process contained in participatory research is its relevance to the contribution of knowledge and ideas within the grounded theory. The theory "depicts to understand social life at the level of thinking and striving of the actor and to comprehend the way in which perceptions and meaning of events emerge in some unique time-order in the life of the actor" and considers the complexities of the factors from view-point of the individual. Thus the grounded theory seems to avoid the methodological orientations namely

- Stipulating causation from view-point of the imposition of social conditions on the actor by ignoring the construction of the actor on the one hand

- Heavy reliance merely on the strength of variables' relationship on the other hand.

Consequently, there is a conscious attempt by grounded theorists to refine participant – observer techniques and also to derive meaning constellations and sequences by shifting from macroscopic methodology to the microscopic methodology. Such refocus of the methodological assumption of grounded theory may further be refined by the participatory research approach. With these, the participatory Management/Research concept in social action has also to be seen.

It is well elucidated by educational researches, particularly by those people like Paulo Freire. His insistence on participatory education has forced a re-examination of the relationship between education and their clients. Calling for a revolution in historical strategy, Paulo Friere, 1970 has underlined the need to understand the exploitative social structures. According to Paulo Friere, elaboration of these exploitative structures means the recognition of the inevitability of human beings in having relationship with others and the world, not only to create culture but also to transform the history. But the conditions in the history assert the feelings of inferiority destroy self-confidence and produce myths to justify oppressive social structure.

In this circumstance, a fatalistic outlook that the ordinary man need no choice and is vulnerable of being crushed by the strong as a legitimacy and passivity of these people in accepting the imposed change without understanding the implication of these changes are but few of , Paulo Friere's argument. In his Pedagogy of the oppressed, Paulo Friere has outlined a methodology of social action. The methodology is the way the people view themselves and their relationships within the social structures. It underlines the sociological dimensions of oppressive structures and transforms the perspectives of the

participants. The decoding of fatalism, encoding of critical consciousness and defining their own solution are the ultimate outcome of Paulo Friere's participatory component of social action particularly through education.

In yet another way reacting to this action of educational endeavour, particularly the education of adults, Budd Hall of Canada and Fransico Vio Grossi of Chili formulated the need for participatory research for social action in the context of social science development and also as a response to the myth of the objectivity of social science research. Budd Hall listed partially some of the shortcomings of the survey research as follows:

- It oversimplified social reality and was therefore inaccurate

- It is often alienating, dominating and oppressive in character

- It did not provide easy links to possible subsequent action

In finding an alternative approach to social survey, development of participatory approach was in its early stage. This approach, related to the social transformation programme, focused on the involvement of the poorest groups or classes in the analysis if their need as an educational process in taking action for development. On the other hand Fransie Vio Grossi envisaged that the sociological science, in the context of social-political upheavals and transformation in Cuba, Parauguay, Colombia, Chile and Venezuela, has realised the established notion of Scientism model of social science has an inability in diagnosing the real trends of change in these societies. In opposition to this established notion and under the climate of socio-political changes in Latin American countries in 1960, a critical notion of looking at society has been developed.

- Consciousness to the social reality of the social phenomena to that of the theoretical knowledge as the suitable concepts to cope with those social problems were the dimensions of the 'Critic' position of social science development of 1970's in Latin America.

- Disengagement of the status quo, moral indifference of the traditional social science research to obtain social change and to find solutions to social problems were thought of in Latin American countries.

- Rather, one could say that there was recognition of the divergence between the elite notion of theoretical and methodological discussions and the realities of the socio-economic problems of less privileged.

- This kind of recognition was the 'critic' position of social science in 1970's. Many social scientists have proposed "Investigative Action". The major objective of this investigation is as follows:

The advocates of participatory research codified that the participatory research is not only a research; it is also an educational and social mobilisation process. B.K. Cain has particularly stated that either the research or the participation cannot produce change without appropriate action supportive of that change in an environment; as the liberative potential of human is a possibility. So he formulated criteria for participation research as a process;

- Change the subject – as – object research approach

- Ask questions concerning values and motivation rather than or as well as quantifiable factors

- Implement and interpret research by insiders

- Priorities for the development among the researchers, insiders and agencies and

- Permit the benefits of the research to be felt by the insiders

In the context of the increased and precise efforts within the above perspectives and in evolving a social policy towards Social Development and Social Change, "Social Science Nature of Participatory Research is in a fundamental crisis is in the need of Credibility in social science. It is all the more true in developing countries where the credibility gap is evident between social sciences research and its end – use. This credibility gap may be much attributed to "the several shortcomings of the survey research approach and to the changing concepts of development.

An effort may be envisaged in closing the "credibility gap by combining the community participation in decision making, with methods of social investigation". Accordingly, it has to aim to be a Reality to have a scientific focus on involvement of those of the "researched" by serious minded social scientists in formulation, collection of data and interpretation of information.

In brief, the participatory research:

- provides immediate and direct benefit to a community;

- involves the community or population in the entire research project from the formulation of the problems to the discussion on seeking solution and the interpretation of the findings;

- remains as a total educative experience which serves to establish community needs and awareness and commitments within the community,

- acts as a dialectic process- a dialogue over time and not as a static picture from one point in time;

- liberates human creative potential;

- mobilises human resources for the solution of social problems and

- Implicates ideological content also.

The insights into the areas like *"development from below", "people's initiative", "mass awareness", "developing leadership"* and *"human resources"* appear to be the keynote objectives of developing society. A majority of the population in India will benefit if these suggestions are related to the integrated with the Participatory development programme.

To sum up, a crucial standpoint is that the Participatory Research and Participatory Development have to tread the contemporary sociological theory to proceed on some significant steps.On this, one does not believe that it is possible to justify the credibility of sociological theory purely on the basis of philosophy of science alone that essentialises what the research and development is for allegedly through the new ways of *"causality"*. Nor even does the theme of participation get extrapolated through the crossing of the disciplinary fence like Medicine, Engineering, Technology and Social Sciences. The question is whether the Participatory Research and Development have been connected with the New Identities for a Fresh Knowledge on Society with all the pitfalls of Social Reality to ponder over whether the laws of individual human nature in the actions and passions of human beings are the bases of the laws of understanding society.

Similarly, the debate is also on the disposition of the Observer and Actor in generating knowledge through social science method *(N. J. Smelser, 1976).* The following diagrammatic representation elucidates the four fold perspectives of the actor and observer relationship in the research process.

Observer/Actor	Actor Passive	Actor active
Observer passive	Sociological positivism	Phenomenology, Historicism.
Observer active	Sociological nominalism	Interpretative Sociology

While all these debatable points are presented here, the concern of the social scientists towards the scientific explanation is more than the method which should be resorted to, as the enquiry in social sciences depends more on the nature of the field. The process of Observer Active and Actor Active is the best tool for a New Paradigm of Social Science for Social /Development Action through Participatory Research. So, this best tool is considered to obtain the changing character of knowledge that requires the changing approach in Social Science. Accordingly a new social science with a new methodological concern called as Participatory Focus is called for.

In yet another way, I would like to point out that the status of social science research with all the methodological orientations unlike the princely disciplines like natural and physical science is less formal in its methodology to such an extent that social science characteristics of Participatory research and Development incorporates not the Contradictions but the Diverseness of the various methodological predilections in constructing social reality. Related to it, the debate on methodological issues of Participatory research in its transition to Reality should include Ten Scientific considerations:

- The distinction between factual and opinionated data,

- Individual and social factors,

- Empirical and normative frameworks and also their relationships,

- Rationality and objectivity,

- Voluntarism and determinism,

- The methodological standpoints on the paradigm shift of causality,

- The critique of modernity and post-modernity,
- The construction of frameworks and models derived from theoretical conceptualizations,
- The relationship between micro and macro phenomenon in theory and thinking it at the problem level,
- Conduct of survey with its relationship to the socio – economic structure of the field.

These are few of the methodological frameworks relating to the way in which the Participatory Practitioners have to think and reflect on whether Participatory research is a Myth or Reality. Thus, Participatory Research Method could have a transition from the Myth to Reality within the above Ten considerations.

References

1.   Abras, C., Maloney-Krichmar, D., & Preece, J. (2004). User-Centered Design. In W. Bainbridge (Ed.), *Encyclopaedia of Human-Computer Interaction*. Sage Publications.

2.   Azeem, S., et al. (2020). Athens Declaration Process and GEF IW: LEARN, Activity D2. *Journal of Environmental Governance, 15*(3), 321-335.

3.   Baur, H., & Kradi, C. (2001). Integrating participatory research methods in a public-agricultural research organization: a partially successful experience in Morocco. *Agricultural Research & Extension Network, Network Paper No. 109.*

4.   Cain, B.J. (1977). Participatory research, working paper no.3, Toronto, International council for adult education.

5.   Caren, J., & Panofsky, A. (2005). TQCA. *Sociological Methods & Research, 34*(2), 147-172.

6.   Douglas, J.D. (1976). *Investigative Social Research*. Beverly Hills, CA: Sage Publications.

7.   Foung, A. (2003). Institutional design Choices-a survey. *Journal of Political Philosophy, 11*, 338-367.

8.   Freire, P. (1970). *Pedagogy of the Oppressed*. Continuum Publishing Company.

9.   Hall, B. L. (1977). Research methods, Participation and Development. Occasional papers, International Council for Adult Education.

10.   Hall, B. (1975). Participatory research; and approach for change. *Convergence, 8*(2).

11.   Horowitz, I.L. (1972). Social Science and Public Policy in foundations of Political Sociology. Harper Publication.

12.   Integration of Sociology of Irrigation in Technical and Agricultural Universities. *Technical Report No.61, By Prof. D. Sundaram Professor of Sociology & Dean of Extension, University of Madras, Chennai.*

13.   James, Postma, & Otte (2003). Qualitative Information Appraisal: Using people's perceptions in large development projects.

14.   Katsui, H. (2007). What is Participatory Research Method? Andrea Cornwall, Rachel Jewkes.

15.   Krishnaswamy, A. (2004). Participatory Research: Strategies and Tools. Practitioner: Newsletter of the National Network of Forest Practitioners, 22, 17-22.

16.   Management of Shared Groundwater in South Eastern Europe. (2010). Ashgate.

17.   Minkler, M., & Wallerstein, N. (2008). Introduction to Community Based Participatory Research. JOSSEY BASS.

18.   Özerdem, A., & Bowd, R. (Eds.). (2010). Development and Post-Disaster/Conflict Reconstruction. Ashgate.

19.   Pahl-Wostl, C., Craps, M., Dewulf, A., Mostert, E., Tabara, D., & Taillieu, T. (2007). Social learning and water resources management. *Ecology and Society, 12*(2), 5.

20.   Participatory Design and Product Development: An Infrastructure for Engagement. Personas, (1997). *Social Science & Medicine, 41*(12), 1667-1676.

21.   Pretty, J. (1995). Trainers Manual for Participatory Learning and Action. IIED1999 International Institute for Sustainable Development.

22.   Ragin, C. (1987). *The Comparative Method*. University of California Press.

23. Ritas, C., & Hunter, P. (2003). Speaking Truth, Creating Power: A Guide to Policy Work for Community-Based Participatory Research Practitioners. Hunter College Center on AIDS, Drugs and Community Health.

24. Shillingford, A. (2006). Data collection protocols & participatory research techniques-Training of trainers manual. Sponsored by the Caribbean Development Bank (CDB) and the Department for International Development (DFID).

25. Smelser, N. J. (1976). *Comparative Method in Social Science*. Prentice Hall.

26. Sundaram, D. (2000). Water Governance (Irrigation Management Transfer) Farmers' Participation: A Conceptual Framework.

27. Sundaram, D. Participatory research for Social Action in India.

28. Smelser, N. J. (1976). *Comparative Method in Social Science*. Prentice Hall.

29. The Effects of the Institutional Design on the Utilization of Evaluation: Evidenced Using Qualitative Comparative Analysis (QCA). *The International Journal of Theory, Research and Practice, 12*(3).

30. Troyo-Diéguez, E., Cruz-Falcón, A., Nieto-Garibay, A., Orona-Castillo, I., Murillo-Amador, B., García-Hernández, J. L., & Ortega-Rubio, A.

31. Zukoski, A., & Luluquisen, M. (2003). Participatory Evaluation- What is it? Why do it? What are the challenges? *Community-Campus Partnerships for Health*.

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