Redefining the Role of Architects in the Rural Development

Ar. Anamika Vishal Jiwane¹, A. J. Sanyal²

¹Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur, M.S.

²Professor, Head of the Course, HCATP, Jabalpur, M.P.

Abstract: It is a general observation that the architects always limit their services to the wealthy and powerful people from urban areas. But the truth is that, it is the poor from the villages who need his services. The rural tribes in India have various shortcomings associated with their shelters. Architects need to step forward to help them tackle various shelter related issues that will ultimately lead to a healthy environment and living. There may be variations in the role of the architects depending upon particular situations. His main duty is to try to preserve, improve and create the required quality of built environment for the users towards the creation of sustainable world. The major objective of the paper is to study the role of architect and explore the various dimensions that can be added to his existing role with reference to rural context. The author aims of preparing a policy framework for architect's roles and responsibilities in rural development. The author conducted group discussions and surveys to gather the relevant data to explore the opinions on the role of architects. The respondents were the faculty and students of architecture at University of Bahrain. The data was analyzed following the qualitative methods of research to formulate the concluding principles. Finally the author has suggested recommendations to facilitate the role of architects to tailor the rural situations. It can be concluded that, the architects have the ability to understand the consequences of the design process and hence can advise and educate local people in any additions and improvements to their built environment. The local people can share their knowledge, but their knowledge is limited and based on the circumstantial experiences which are not always enough. Therefore, the knowledge and expertise of architects can assist the community in their decisions and initiatives.

Keywords: Role of architects, rural development, sustainable built environment, participatory workshops

1. Introduction

The sustainable development of villages is based on its socio-economic, political and physical development. This development should take place along the key words of culture, society, economy, health, education, technology, built environment etc. It includes developing and empowering the human resource in terms of their psychology, skills, knowledge, attitude and other abilities. The development cannot take place without the provision of basic amenities and services which include drinking water, electricity, education, transportation etc. to promote the development it is necessary to work out the role of local level institutions and restructure their role to facilitate the development objectives. These institutions include Gram Panchayat [Gram Panchayat- It is the cornerstone of a local self-government organisation in India of the Panchayati Raj system at the village or small town level.], self help groups (SHGs) [SHGs- Self-Help Group (SHG) is a small voluntary association of poor people, preferably from the same socio-economic background. They come together for the purpose of solving their common problems through selfhelp and mutual help. The SHG promotes small savings among its members. The savings are kept with a bank], cooperatives, local banks and credit institutions. These can play an important role and hence need to be activated oriented to the development goals. Above all, ,poverty eradication" should be a central objective of the development program as it can create a basic ground for the other non- economic developments. At local level, efforts are required to promote rural art and crafts through local resources. Alternate employment opportunities need to be created to tackle the unstable nature of agricultural economy. Shelter is a major problem for the villagers on account of its shortage, lack of services, improper planning etc.

Looking at the existing situation, to create sustainable communities the architects need to integrate the concept of sustainable community development in their actions both as citizens and professionals. The role of architects as professionals can be defined as ,a process to preserve, improve and create the required quality of built environment under the particular condition of each community, in an ideal and sustainable world". Their role as citizens should be to become sustainable member of their own community (San Chansomsak and Brenda Vale, 2007) Architects exercise a significant influence on the citizens through their work. Hence, they must ensure that they deliver physical infrastructure that is community responsive. It is necessary to identify the change in thinking, that instead of reducing the impact of sustainable development on environment, one can assess the opportunities and limitations the environment places on the development (CSIR, 2006).

Another important strategy in the process of achieving sustainable development is the involvement of local people in design and planning process. Architects can gain necessary knowledge from user involvement to ensure that their planning and design will meet the intended objectives in the most effective way (Wates and Kenvitt, 1987). The degree of users'' participation can range from informing to consulting, partnerships, controlling or even designing, planning and building (Wulz, 1990). The architect can act as a link between the user and the project. The architect can observe and enhance the participatory process where participants can share their knowledge and experience with others, gain motivation and learn how others overcome obstacles and apply this knowledge to their situation.

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According to Henry Sanoff (1990 b), the process of public participation increases people's awareness of responsibility for decision making. He further comments on the situation saying that, in such projects after the completion of architect's work, the local people can manage , evaluate maintain and adjust the design project to meet the changes in their needs. This way the participants feel proud and are always willing to take care and look for it (Wates and Kenvitt, 1987). The author realized this issue during one of the cases she studied for rural housing project at Kanhapur [Kanhapur: A small community of 25 units, Wardha District, Maharashtra, India designed by CSV (Center of Alternate science for villages, Dattapur, Wardha, India)], Maharashtra, India. During the construction stage for this particular project, the participants were involved only in the process of making of mud blocks and tiles, but were never asked to participate in design decision making process. As a result the community now shows no keenness and willingness in looking after any of the sustainable technologies designed and implemented in their built environment. They are always expecting the planners and developers to do the needful for them. Here, the major objective of people running their own sustainable cycle comes to a failure. In another case study by the author at Boldawadi [Boldawadi: A housing of 105 units in Hingoli District, Maharashtra, India designed by CSV (Center of Alternate science for villages, Dattapur, Wadha, India)], Maharashtra, India executed by the same team of designers and developers also reveals the similar attitude of ignorance towards the maintenance or management of sustainable practices implemented in design stage.

"Because the architects have the ability to understand the consequences of the design process" (McCamant et al., 1994) and "think spatially" (Day, 2003). The architects can advise and educate local people in any additions and improvements to their built environment. The local people can share their knowledge, but it is limited and based on the circumstantial experiences which are not always enough. Hence, the input from an architect is necessary.

"The knowledge and experience of architects can assist the community in their decisions and initiatives" says Sant Chansomsak and Brenda Vale (2009).

1.1 Objectives of the Research

- 1) To understand the need of sustainable planning an design for villages
- 2) To study the existing role of architects in rural planning and design
- 3) To attempt to redefine the role to bring about sustainability in rural built environment

1.2 Research Questions

- 1) Are the architects responsible to bring about the sustainable rural planning? If yes, how?
- 2) How is the current architectural practice frame work with reference to the rural development?
- 3) What measures can be taken to improve and redefine the architect's role to enhance the rural planning?

2. Literature Review

Many architects have presented their views on the role of architects in creating sustainable community planning. Some of them are discussed here by the author.

2.1 Role of Architect

According to Wates and Kenvitt (1987), the architects must use their knowledge and skills to help people solve their own problems rather than dispensing wisdom and solution. Further they added that the architects should act as enablers, rather than preachers and providers.

This is valid, because sustainability can be achieved through ,education" and not through ,provision". Through the method of provision, community can never get sense of identity and belongingness, hence will show no care and respect for their built environment.

Christopher Alexander identifies two opposing poles of architectural design. One is "Expert autonomous system" in which architect's own subjective ideas, values and design decisions are implemented. The other one "User autonomous" which emphasizes less and negligible influence of architect's ideas and considers client, user, entrepreneur and the architect to be the same. The researcher does not fully agree with this division in which architect is either fully responsible or fully/ partially neglected. Architects have knowledge and are experts in design and construction field, but they need to share their knowledge and skills with the community to make them more useful through their ideas and experiences. The community is no doubt gifted with its own vernacular system and has more knowledge about their own needs, but need to share this with the expert (architect) who can help them with scientific appropriateness and visualization of their ideas.

About the role of an architect, Laurie Baker (1998) says that the practice of an architect cannot be divorced from a builder. Architecture as a craft means its theory and its practice are indivisible.

According to Charles Correa (1988), architect has to act not only as a prima donna professional, but as one who is willing to donate his energy and ideas to the society. Way back, in the past client and architect in the form of Mistri [Boldawadi: A housing of 105 units in Hingoli District, Maharashtra, India designed by CSV (Center of Alternate science for villages, Dattapur, Wadha , India)] shared the same aesthetics, but now this has evaporated and the interface has diminished. Only about 10% of the people have resources to engage the architects in the architects trained projects and to the surprise only one tenth of them will think of engaging them. So here, Correa (1988, Mumbai), shows that the interface of architect with community as 1% and it encompasses the luxurious set of buildings.

The author wants to agree with Correa and believes that it is the poor who are in desperate need of architects. There is urban poor living in slums and unplanned squatters and the rural poor in haphazardly grown spaces. The question is "Is the Architect with specialized skills, going to find a way to be of any relevance to them?"

On this question Charles Correa (1988), answers that unfortunately the architects with social conscience to want to reach out to the poor, are really a- visual. But what the rural communities need is just not the compassion, but the professional skills of architect (visual as well as topological).To bring good results, site and service approach have to be approached with proper programs. The visually sensitive people (architects) can be given a chance to act as catalysts with the householders during their design process.

2.2 Different approaches adopted by architect:

There are 3 different approaches given by Burgess (1983) and Garrott (1983):

- 1) Facilitator approach- "I-give -them -what -I can"
- 2) Pragmatist approach-, give -them-what-they -want";
- 3) Egoist approach- ,give –them-what-I-want". The role of architect should be of facilitator because this is the only approach that gives values and respect to both the architect as well as an individual.

2.3 Architectural Education

Dr. Aruna Ramani Grover strongly emphasizes on the remodeling of architectural education. She says that the educational institutes must engage in dialogue with endusers, develop and test alternate design methodologies, and create new models for design and delivery of habitats. According to her, architecture and planning are the vehicles to deliver the promised quality of urban life. The author wants to add to Dr. Aruna's views by saying that the steps should be taken in rural context as well. The designers and planners must also care for the built environment and thereby the quality of life in villages.

The architect can be an important actor who handles the complex process and transferring of the end-users needs into the building process. Architectural knowledge can maintain the holistic view during the process and add both social and human values. The tools and preparations for this role must be handed during the architectural education stages. As questioned by Ingrid Svetoft (2008):

Does the architectural education support the role of handling a sustainable process and a sustainable product?

In the design process both design models and quality tools could be used to support the architects" role and also support a better learning from experiences made in the earlier projects. Better knowledge and understanding of building materials, technology, energy systems and economy could also be useful.

Several models and methods are used with the ambition to make people more involved in the planning process. There is a challenge to get a sustainable process as well as the development of the society. The professional actors at present are used to work without "interference" and people are used to leave the work to the experts. But a difference can be made in the working conditions and regulations to encourage everyone to participate actively in shaping the surrounding environment in order to increase the social durability. End-users" participation during the construction process will contribute to building better products that fulfil their needs and requirements. Contrary for the individuals, both the social value of health aspects are possible to influence in shaping the living environment and workingplaces. Previously, building one's own house was much easier when materials were accessible locally. Nowadays, the modern construction process is more controlled by standardization and rationalization and thus removing the end-users from the process.

Ingrid Svetoft(2008) adds that a stronger co-operation between the architect and the engineer during their education period by both students architect can lead the way to a better teamwork in the construction process. The architect's role is to interpret the end-users'' needs and requirements from where they will be converted into the planning and production process. The education system provides tools to express the architects'' ideas but less is focus on the technique to interpret the end-users'' needs. Changes in the architect's education system need to be oriented to meet the active participative role in the construction process of a durable society.

The architects" education can support the professional role as facilitator in the process of involving the local people who are the end-users. Their knowledge can also be of great importance to make sure that the process is going into the right direction. A survey was conducted by Svetoft (2008), among the architects and students. He mentions that answers from a questionnaire identify knowledge gaps and both the student as well as the professional architects argue that there is a weakness in the current foundation that is unable to support the end-users" involvement in the construction process while simultaneously be active in the whole process. The professional architects require a model and method to communicate better with the end-users.

3. Methodology

The author conducted group discussions and surveys to collect the information and opinions from people involved in the field of architecture.

- 1) Participant I: Faculty of architecture at University of Bahrain
- 2) Participant II: Students of architecture, University of Bahrain
- 3) Participant III: People from architecture and related fields- Online survey (Google.com)
- 4) Participant IV: Architects outside Bahrain

3.1 Group Discussion at University of Bahrain

A group discussion was arranged at the Department of Architecture and Interior Design, University of Bahrain with twenty two faculty members. These faculty represented different nationalities including the Gulf region (Bahrain, Dubai etc), Europe (England, Portugal etc), America, Australia, Africa (Tunisia, Sudan etc) and Asia (India, Pakistan, Bangladesh, Srilanka, Malaysia etc). The objective of this discussion was to gain an insight into different

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perspectives on the role of architect in the rural community planning. The group discussion was administered using a short questionnaire. Different issues were borne during the discussion. The outcomes were interesting. Some of the opinions could be quantified and some were analyzed in a qualitative way.

3.1.1 Data from the Survey

S.N.	Questions	Opinions (%)	Interpretation of opinions (according to the author)
1	Experience on the community development and planning projects	70% yes	Not all the participants had a hand on experience, but knew about community planning through academic curriculum; but 30% had participated in practical projects and shared useful experiences
2	Views on Public participation	100% must	All the participants agreed that , Public participation is an effective way of bringing development (mentioned in 3.1.2.1)
3	Role of architects in the community planning through participatory approach	100% needed	All participants realize that the architects have a major role to play as a link between the Govt. or housing agencies and the public. They all commented on the approaches they find feasible in linking the services of an architect with the community to yield better results of planning and development.
4	Success of public participatory tool in Rural / Urban context	30% rural 40% urban 30% both	Only some participants said that the participatory tools can be designed effectively irrespective of rural or urban context; whereas some said better in Urban context because of literacy and some said better in rural because of lack of stringent byelaws.
5	Comments on improving the role of architects towards rural community planning projects		The answers to this question could not be quantified, hence mentioned in the following report.(refer 3.1.2)
6	Cluster Planning: success/ failure	60% successful 20% failure 20% No comments	The participants commented on success and failure of cluster organization of houses based upon the lifestyle of the community. Also the cost of project is benefitted through cluster planning.

Table 3.1: Table showing the opinions of faculty of architecture at University of Bahrain

3.1.2 Significant comments during the discussion

The comments made during the discussion and volunteered interviews were categorized under two subheadings:

3.1.2.1 The approach of architects towards community planning:

"Architects must understand needs, changes with time frame, have dialogue, diagnosis, analyze, propose, discuss and evaluate" (Dr.Wafa Al Ghatam, Bahrain).

"Architects must see how people are living in their context, use of spaces, develop basic ideas, and improve skills through workshops...." (Prof. Syed, Sudan).

"Architects should sit with community, live with them, interact, educate, improve awareness" (Ar. Ayesha Shah, Pakistan).

"Observe and operate; clear the goals, group conversations, explain the project, informal discussions, observations, formal meetings, private conversations with key informants, making groups: gender wise and age wise, education not significant factor of division, no assumptions or fixed ideas, do not take the literal meanings of community outputs, interpret the matter, justify with hard evidence "EVIDENCE BASED APRROACH"(EBD)" (Dr. Joao Pinelo, England).

"Rural communities: analyze social fabric, check the acceptance levels, create the environment, awareness campaigns, office on site, no assumptions from architect"s side" (Ar. Susana Saraiva, Portugal).

"Make rational decision, act like wise man, advise, inform decision, guide, offer insights, negotiate, agree, disagree ..." (Dr. Ranjith Dayaratne, Australia).

"People should tell their problems and needs about their housing to the Architect like they do to the Doctor regarding their health, and let the architect diagnose the issues and find a solution which will involve his experience and expertise and follow the suggestions for the betterment of the health of their own built environment" (Ar. Malini Karani, Dubai).

3.1.2.2 Issue of architectural education:

"Architectural education should bring back the Roman Rules of the history where "Build a bridge and live under it" (Dr. Joao Pinelo, England).

"The basic education should give emphasis on social sciences" (Arch. Susana Saraiva, Portugal).

"The school education must have a course on Built Environment that spreads the awareness on the various issues related to the built environment from the childhood days" (Ar. Suha Babikir, Sudan).

3.1.2.3 Participatory Approach:

Dr. Ranjith (Srilanka) from his earlier experience of working on community projects in developing country like Srilanka, could comment on the attitude of rural community towards such projects. He mentioned that sometimes involving community in public participation can be problematic because the community is unprepared, unwilling, aggressive, opposing nature, have disparities in thinking process, and always look towards the housing agencies as providers etc. In addition he mentioned that architects need abilities to coordinate with the rural participants and to impart the required skills during construction process. But in doing so a care needs to be taken because, the time required for sharpening their skills may delay the length of project and may result into a low quality project. The community lacks imagination and their lack of experience can bring disparities in thinking process with the architect which in turn hampers the decision making process. This is one of the greatest worries in case of community participatory projects where the level of participation is applied at its maximum.

3.2 Students Survey at University of Bahrain

While discussing on the role of architect it is a must to know the opinions of the students of Architecture as they are the ones who will practice the profession in future. A questionnaire with open ended (6) questions was framed and distributed randomly to the students of Architecture and Interior Design at the University of Bahrain. It was responded by 53 students who belonged to different nationalities. The questions were targeted to achieve their opinions on : understanding for their role in future towards the society, their accomplishments with the type of education they are receiving, improvements in the architectural education to improve the role of architects especially for rural areas, readiness to participate in rural planning and development projects, keys to sustainable village planning etc. The opinions were tabulated to make concluding remarks useful towards the research.

3.2.1 Responsible role of architects in village planning and design

Majority of the students agree that the architects have a responsible role in village planning and development; the task cannot be left to the villagers themselves.

3.2.2 Future role as practicing architect with the current education system

This opinion has two interpretations: one is that the current education system will not make them able enough or encourage them to work with (rural) community and other is may be in future they want to make money out of profession which is possible only in cities.

3.2.3 Improvement in Architectural education to better up the village planning

Most of the students feel it is important to teach the subjects in sustainable built environment to improve awareness and knowledge. Also the introduction of design topics for rural planning and design in university will help to orient their creativity in this direction.

3.2.4 Participation in rural planning and design projects:

The students feel that the architects should stay in the villages and partially accept their ideas in design and planning for them. Only a few commented that the architect should work with a participatory process. But the other options selected from the ones mentioned in the survey questionnaire indicate the similar meaning.

3.2.5 Ways of enhancing interactions with the villagers

The students believe in interaction with the villagers which can give rise to Give and Take relationship among them which will prove helpful in achieving sustainable design. 3.2.6 Key to successful sustainable planning in villages

Public participation will prove to be the best tool for sustainable community planning; but the level of participation should be decided by the situation and generalization of participatory activities is not possible.

3.2.7 Suggestions: Important suggestions given during the survey are enlisted below:

- a) At University level, Competitions should be promoted that focus on design of rural communities; so that the students become aware of and eventually show interest in exploring the rural conditions of life and built environment.
- b) Architects can take up jobs in villages with humanitarian dedication so that the housing projects get proper backing of technical knowledge.
- c) Students can collaborate with their Professors in conducting research works for village development.

3.3 Online survey (Google.com)

A simple questionnaire with 3 closed ended questions was added to the online survey site. The target was limited to the respondents belonging to the related field of architecture. 528 responses were received within 10 days of its display. The answers as summarized from the received responses were: the architects have high moral responsibility towards the rural community planning to achieve sustainable cycle and this has to start with the early education in sustainable built environment.

3.4 Structured discussion (online) with the practicing Architects from different countries

A structured questionnaire was sent to few famous architects among whom the opinion sent by Prof. Sant Chansomsak, Thailand is stated here:

Architects may be the experts in design and planning, but only users are the experts in their lifestyle and relationships. Architects can gain the necessary knowledge from user involvement to ensure that their design or planning will meet intended objectives in the most effective way. Meanwhile, the local people will positively get the design that fits their needs.

Self-sufficiency is an appropriate solution. Improvement of a self sufficient lifestyle helps to reduce environmental impacts and create self-immunity to cope with situational changes, which people in the rural areas have to face when the impacts of city sprawl and global warming affect their community, lifestyles and living conditions. Accordingly, the design of the house should consider the potential of selfsufficient lifestyle and provide spaces and features to support such lifestyle. Providing spaces for growing food, installing rainwater harvesting systems and storage, considering the potential for energy production, and designing building with low environmental impacts, are some examples for design solutions.

Since rural people normally have limited resources and low income, their rarely have a chance to hire an architectural office to design for them. At the present, the architects who provide their services for rural people usually work as volunteers. Professional Fees scale is important and is calculated according to expenses incurred during the project execution. The community service or provision for lowincome or rural people should be moreover set as a requirement for every office and architect, when they want to re-register. The program may be similar to Continuous Professional Development (CPD) but as Continuous Professional Public Service, which each professional practice should provide technical aid services for the needs.

Educational institutes have to work with professional institutes to form the new professional practice. The positive value on participatory process and working for the needs should be promoted. To provide opportunity for architectural students, workshops should be placed on rural areas and participatory process should be applied. Architectural educators and curriculum should apply such a process in their courses.

4. Recommendations and Conclusion

The author framed some questions related to the role of architect that helped her in forming the concluding principles.

Q.1: What should be the role of architects in the rural housing projects?

Q.2: Can the architects plan the villages or are the villages grown organically?

Q. 3: Do the architects know and realize their responsibility towards rural sustainable development?

Q.4: Should the housing be left to people alone?

Q.5: If people start designing their houses; will the role of architects be undermined?

Q.6: Can it be said that: Houses as private spaces are responsibility of an individual and the common spaces are the responsibility of the architects?

The role of architects in the rural housing projects needs a proper framework. The options for his role can be: dominating, imposing, sharing, observing, participating, organizing, advising etc. It is important to know whether the architects realize their role in the rural development. The answer mostly comes as ,negative" because the architects are not educated with a structured course on these issues at University level. In addition to this can be mentioned that the school education lacks lessons of sustainable built environment. This in turn results in non- sensory experiences of rural sustainable development. Architects have a tendency to work for urban projects in order to get promising fees, and name with fame. The course syllabus does not have any scope for interaction with the rural communities in student phase, so none of them is interested in extending the architectural services to the rural areas. When the architects are appointed by the housing authorities/ agencies as team leader for the rural housing projects, they show lack of "User Study Approach" leading to disaster planning outcomes.

Many housing theorists have put up their comments on housing deign as the responsibility of an individual (private domain) whereas the community spaces (public domain) as the responsibility of the architects and planners. The view point behind this is that any individual has a right to design and construct his own house, but the problem arises when the individually designed house creates a risk for the community spaces or the houses of the others. Hence, the role of architect who is well equipped with the knowledge in the space planning of the built environment becomes important.

Allowing one to design his or her own house can not undermine the profession of architecture. Rather, the architects are the integral part of planning and design process of rural housing projects. All they need is to prepare a policy framework to allocate the participatory jobs to all the stakeholders involved in the housing process.

4.1 Generalization of Conclusion

Following are the concluding remarks framed as principles from the above discussion:

4.1.1 Principle I: Housing for the villagers should be considered in the context of sustainable development and as a carrier of their socio- cultural identity.

This includes the following tasks:

- Raising awareness among the villagers regarding sustainable development.
- Space planning for built environment within the natural environment.
- Reduction in the need and dependency on consumption of non renewable natural resources.
- Finding the solution of housing within the frame of vernacular trends of that place.

"If people are left out, if self styled experts and high handed planners push them around, then nothing can ever yield real fruit" (Schumacher, 2000:140).

"The purpose of planning and design is not to create a physical artifact but a setting for human behavior." (C. M. Deasy)

4.1.2 Principle II: The villagers should be made an integral part of the planning and design for them

- Architects as professionals equipped with the knowledge of built environment should take a lead and form a design and planning team with the villagers
- Allow the participation of dwellers in expressing their aspirations and needs
- Architects should conduct various interactive workshops to facilitate such participation from the villagers.

"When dwellers control the major decisions and are free to make their own contributions in the design, construction, or management of their housing, both this process and the environment produced stimulate individual and social wellbeing. When people have neither control over nor responsibility for key decisions in the housing process, on the other hand, dwelling environments may instead become a barrier to personal fulfillment and a burden on the economy." (John Turner)

"Nothing could be further from the truth! Improving our habitats requires visual skills. The poor have always understood this. With one stroke of a pink brush, a Mexican artist transforms a clay pot. It costs him nothing... And the Arab had only the simplest tools: mud and sky- so he had to be inventive! In the process producing the most glorious

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oasis towns ever seen. And it is not a coincidence that the best handicraft comes from the poorest countries of the world."(Charles Correa)

4.1.3 Principle III: Housing should be tailored according to the conditions and needs of people.

- Study and respect for people's culture: customs and traditions, ways of life, social manners, economic activities etc.
- Study of the physical aspects of community: Housing layout, space planning measures, climate, topography, use of spaces/ space behavioral studies, available natural resources etc.
- Study of the various housing theories: suitability to the context, acceptance by the community, affordability issues etc.
- Study and application of low cost materials and methods: allow the selection of local material, the technique responding to local climate and suiting to the economic status the locals throughout the life span
- Respect the vernacular trends of design in the local area.

4.1.4 Principle IV: To propose a sustainable community development for a village with the major focus on housing, it is essential to dig into any such existing cases for reference study and to learn in the outcomes (positive and negative)

The post occupancy evaluation (POE) [1 POE- It is the process of evaluating buildings in a systematic and rigorous manner after they have been built and occupied for some time] of existing housing projects proves very helpful to understand the relation between the project expectations, outcomes and application. The architects need to see how the theories can be practiced in rural areas with its limitations of resources and knowledge.

4.1.5 Principle V: To gain an insight into the Government policy framework

The housing provided to rural regions are majorly initiated and financed by the Government. It is therefore necessary to study government development plans, housing policies, institutional structure, rural development schemes etc.

4.1.5.1 Housing Policy: The present study shows that the house distribution by the government is only for the households below poverty line. Such families are generally selected on the information provided by the Gram Panchayat and accordingly few houses are provided. In some cases the houses provided have the same built up area irrespective of the household size; whereas, the plot areas are distributed in proportion to the family size.

4.1.5.2 Centralization: The Government shows an unfair role in allocating the funds at the central level for up gradation of rural development. Most of the powers of decision making are concentrated at the central and not distributed to the local level where the problems can be identified in a better way.

4.1.5.3 Priority: The policies framed by the government mark a priority difference; the urban areas are given priority in attending to their issues over the rural areas.

4.1.6 Principle VI: To identify the roles of architects A need has been observed to involve the architects to facilitate the process of housing in villages. They can coordinate the team of actors involved in the housing process: the people, the contractors, housing agencies etc.

- Identify the conditions of existing villages.
- Understand the needs and aspirations of people.
- Promote research for data gathering in the field.
- Conduct workshops to involve the people in their own housing design process.
- Avoid influential role in design process.
- Do not adopt peoples" suggestions without critical appraisal
- Keep the exploratory and analysis methods flexible

"The role of architects is situation specific."

"A good architect does not have to be fazed by working under severe economic constrains, however drastic they might be. Having perforce to use only the humblest materials, such as mud or sun-dried adobe bricks, need not prevent him from creating a joyous and triumphal piece of architecture" (Charles Correa).

4.2 Recommendations

Based on the conducted study and the opinions of various architects the author has recommended the following suggestions-

4.2.1 Sustainable Design

Architects should improve their knowledge about various strategies for sustainable design.

4.2.2 Design Considerations

They should know how to gather relevant information for environmental and cultural consideration.

4.2.3 POE

Post occupancy Evaluation (POE) can be used by architects to evaluate programs as well as executed design. This information provides data that can help to avoid potential errors and select better solutions for new built environments or the refurbishment of existing facilities.

4.2.4Building Performance

Architects should increase their understanding of the environmental performance of buildings, materials, systems and construction. In short, they should be familiar with how buildings perform rather than just how they look like.

4.2.5 Skills

Architects should have skills in communication, clarification of values, conflict resolution, and careful analysis of the situation. This is for dealing with not only clients and users, but also other experts and consultants.

4.2.6. Participatory activities

Consensus or participation techniques such as awareness methods, group interactions, brainstorming sessions, game simulation, workshops, public forums etc., should be used for collecting data as well as educating and training participants to create change in their own environment.

4.2.7.Attitude

For more effective cooperation, architects should reduce their ,traditional" ego and try to listen to and understand the values and opinions of others.

4.2.8.Tailor made solution

Because there is no absolute step-by-step solution, architects have to choose and apply their knowledge and skills as fits the particular situation.

4.2.9. Peoples" concern

To lead architects" decisions to become more sustainable, a responsibility for society and environmental ethics should be developed.

4.2.10. Professional ethics

Along with knowledge and skills, architects must improve their professional ethics and use sustainable development as the major objective of their actions.

In summary, the professional role of architects in sustainable community development can be defined as "a process of preserving, improving and creating the required quality of built environment under the particular condition of each community along with professional development to enhance such practices".

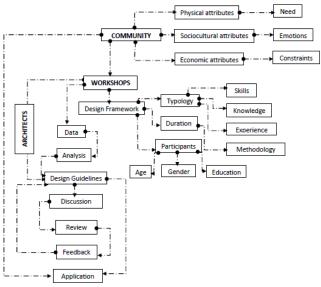


Figure 4.1: Role of architect

5. Summary

The challenge to work successfully with a sustainable development of our society requires a better cooperation between the actors involved. All inhabitants have the right to be part of the planning process in order to create a safe, healthy and social sustainable environment. All the knowledge that is available must be used in order to solve the complicated problems concerning energy efficiency and the environment. The actors can share the responsibility and the Government authorities or NGOs can give the necessary resources to the project. Quality in the end-product comes from using the available knowledge and skills from all the actors involved. The architectural education gives only a few tools for the architect to take a key role in future development of sustainable society. Required а

modifications in the education, resources of knowledge, manpower, experiences, etc can be used effectively to meet a great challenge for the future.

There seem to be some obstacles in the lack of methods and models to conduct and communicate the data for architectural outlines and the help is taken from social surveys and the interpretive methods. Results from the research also identify a lack of attempts from architectural fraternity in order to be part of the community development programs in villages. In future, a process of architectural surveys can be devised which will be more appropriate for architectural projects.

Concluding, possibilities can be found in such rural projects where a process with a joint ambition of rural society and the architects gives the right product. The possibilities can be the joy of working together with an important objective - to create a sustainable environment with benefits to the villagers who need an up- liftment in their status: socially and economically.

It must be noted that it is not an easy task to persuade the public to change their values and habits towards sustainable development by advocating what is possible by living in such communities. In such cases , it becomes must that people should be given social learning in early days of life about sustainable development and the relation of sustainability and the built environment. Finally, it is not the responsibility of the architects only, to ensure a sustainable future. In fact it depends upon all humans, through the decisions they take and actions they make. As Brand (1994) suggested the communities must know about sustainable building and construction.

The study had limitations in terms of sample size for survey and the major respondents taken from a single University only. But the author took the opportunities to have selection of respondents belonging to different countries with variety of experiences.

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Author Profile



Anamika Vishal Jiwane, is an architect with Masters in Urban Planning from RTMNU, Nagpur. Presently she is a Lecturer in the Department of Architecture and Interior Design at University of Bahrain, Kingdom of



Prof. A.J. Sanyal is a keen researcher and an academician with wide spectrum of subject expertise. At present he is designated as the Head of the Course at Hitkarni College of Architecture and Town

Planning, Jabalpur, M.P., India.