

28. Rapid rural appraisal applications in Africa: Achievements and problems

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Rapid Rural Appraisal, as documented in this paper, has moved into the "tool kit" of data gathering in Africa. Its use is seen as diverse in terms of countries, but basically limited in number of studies and its focus on the agricultural sector. The Nigerian setting and specifically the International Institute for Tropical Agriculture (IITA) and Obafemi Awolowo University (OAU) appear to be the focal points for methodological development and diffusion in Africa. Based on this review, use of RRA in Africa has been dominated by international researchers. However, this situation appears to be rapidly changing with the support of donors such as the IDRC and the work of the author and her colleagues. If the well developed critical analysis of methodological strengths and constraints continues along the lines outlined in this paper, RRA in Africa will provide a complement to other forms of research. - Eds.

OWING TO THE growing concern over the cost, duration, accuracy and relevance of conventional research methodologies in the late 1970s and mid-1980s, and the growing concern over the slow adoption, utilization and/or commercialization of research results, considerable interest has been generated in an emerging methodology known as Rapid Rural Appraisal (RRA) for rural development-related research. This methodology, which was introduced in 1978 and streamlined after worldwide applications of its techniques and tools [1] has been applied extensively in most parts of the developing world, especially in South East Asia.

This methodology has several advantages, among which are: a community focus that can involve local communities in problem identification and action planning; an interactive and iterative approach in which scientists and community members learn from each other; and a potential to generate accurate useful information on rural conditions in a timely and cost effective manner. In the various parts of Africa where it has been used, RRA has been recognized as being capable of serving a powerful tool to advance the development objectives.

Rapid rural appraisal (RRA) in East and Southern Africa

Since the Khon Kaen University Conference in 1985, several attempts have been made to popularize RRA in Africa. It has been used extensively to study subjects such as post harvest problems, technology development and adoption, nutrition, sanitation, impact assessment, natural resources assessment and management, agro-forestry and rural development in general [1-7].

Until recently, the practice of RRA in Africa had been limited mainly to Kenya, Ethiopia and Zimbabwe. Rochleau *et al.* [8] adopted RRA and ecological methods for community-based agro-

forestry (AF) research in the Machakos District of Kenya. The study relied heavily on informal surveys of groups, households and individuals in the community and acknowledged local expertise. Researchers developed and used a "chain of interviews" approach to successfully identify factors influencing the selection of indigenous wild plants for gardens. The studies had agro-forestry implications. Regarding the methodology, the authors noted that RRA needed careful planning. They prescribed follow-up but cautioned that the success of such activities would require continued local participation and a strong partnership between the community and the research team.

Cromwell called for RRA research to be used more to study nonagricultural income sources, micro-economic systems and service infrastructures. A narrow focus on agricultural study using RRA introduces methodological weaknesses that predispose such studies to the "...very tendencies of ill-informed prescriptiveness that RRA seeks to overcome [9]."

Cromwell applied RRA to the non-agricultural sector, studying carpentry enterprises in Zimbabwe. Using the techniques of guided interviews, technical appraisal, tool demonstration, tool and skill scoring, occupational calendars and ranking of major constraints, he was able to unravel the socioeconomic problems of rural carpenters and relate them to the carpenters' social status within the rural community, their training needs, and the viability of international intervention to assist them to self-capitalize through production of wooden tools. One notable strength of this work was the presentation to the carpenters of a prototype of the technology being appraised for transfer. This enabled the carpenters to provide immediate feedback on the technology and helped the research team to respond to the carpenters' requirements and make the necessary modifications.

In another study on the application of RRA in Ethiopia, Sandford [3] demonstrated the use of photography in rural interventions. He used aerial photography to discuss land use planning with a village settlement. He found that farmers were able, through this medium, to discuss and agree on a proforma land use allocation. Also agricultural extensionists and other technical staff were able to identify a new, unknown area, characteristics of lands and visualize development options.

Scoones [5] used an RRA participatory technique to focus on management of the hillside closure areas in Wollo - an Ethiopian village. He enumerated several problems and biases that needed improvement. Important among these constraints were biases in the selection of contacts for discussion groups, group representativeness, gender issues that restricted focused topics, and the problems of ensuring continuing participation by the different groups in both the planning and implementation stages of a given project.

Other studies in Eastern and Southern Africa employing the RRA techniques include Dewees [10], Thompson and Veit [11], and Rifkin and Annett [12].

RRA in West Africa

RRA is relatively new to West Africans. In 1988 the International Development Research Centre (IDRC) Regional office in Dakar gave a training workshop on RRA with a field study built into

it [13] to some selected West African researchers working on post-harvest projects. Researchers obtained a basic understanding of RRA methods and techniques. The general opinion after this workshop was that this methodology held promise for development research and participants departed with plans to employ RRA in part or whole to study new and on-going projects. In addition to IDRC, other international agencies such as the International Institute for Environment and Development (IIED) have trained individuals and groups in the use of RRA [14].

Since 1988, RRA has been applied significantly by a number of researchers in Nigeria, and a few in other parts of the sub-region, have applied RRA to both agricultural and non-agricultural issues. Shortly after the 1988 Dakar workshop, a seminar on RRA was organized at the International Institute of Tropical Agriculture (IITA) in Nigeria.

Participants were researchers from five agricultural research institutions involved in a project to study state of the art of soybean threshing in Nigeria. The seminar introduced RRA methods and techniques to the research team as a tool to help assure that project planning, problem identification and followup activities relating to the study would be relevant and well received by the beneficiaries.

The general methodological approach for this RRA survey has been used somewhat consistently. The major steps follow:

Research design

The studies commenced with a one day seminar to acquaint the multidisciplinary team of researchers involved in field work with RRA principles. A general checklist to be used as a guide in field work was prepared based on the objectives of the project and with inputs from the team of researchers.

Team composition

The field work team consisted of a socio-economist/policy analyst, an agronomist (these two researchers participated in all the field work), and agricultural economists and agricultural engineers from participating institutions. Agricultural extension officers and home economists were co-opted from different study areas as needed. This latter group usually acted as interpreters and also helped to identify key informants.

Selection of study areas

Study areas were based on a review of secondary data to identify the major and minor soybean growing areas in the different states. The largest soybean producing areas were selected as primary areas of investigation while the smaller producing areas served as spot checks.

Data collection

Data collection used several RRA techniques:

- Use of secondary data
- Identification of key informants
- Direct observation (seeing, drawing, filming and writing)
- Participant observation (harvesting, threshing, drawing, games)
- Semi-structured interviews (where only a few questions are predetermined, leaving room for new questions)
- Use of diagrams (maps, transects, seasonal calendars, etc.)
- Historical profiles
- Preference rankings
- Wealth rankings

Scientists approached the study areas, not as opinionated intellectuals, but as research students ready to learn from the wisdom of the rural people as they in turn learned from the scientists. Flexibility and adaptability were maintained through semi-structured interviews. Accuracy was achieved through "triangulation," which involved use of diverse methods, perspectives, and information sources rather than a qualitative question. Unnecessary detail was avoided.

Each day, the team met to compare and discuss notes and draw a more focused checklist in view of experiences. Researchers dressed casually (like the farmers) and presented themselves as research students eager to learn from the rich wisdom and experiences of the farmers and the village people. Thus good rapport was created and a great deal of knowledge was gathered and shared.

A feature of this RRA which improved the study significantly were village sessions where conclusions reached by the team were taken back for validation. Spot checks of sampled villages were also undertaken. These measures significantly increased confidence in the data collected and facilitated report writing.

Analysis and report writing

The multi-disciplinarity of the team was an asset in data analysis and report writing. Members compared notes taken from different perspectives. These were analyzed critically until consensus was reached. It was only then that the final reports were written.

General findings

While there were minor environmental differences, the consensus was that RRA methodology could be successfully applied in almost all the states and that it would be a very useful means to collect a mass of information (P.O. Oyekan, personal communication, 1984). The engineers in the team were particularly enthusiastic about the prospects for developing an appropriate threshing device for the farmers. Specifically the study found out that:

- The farmers overwhelmingly identified soybean threshing as a major post-harvest problem, acknowledging the existence of poor conditions of farm labour.

- Unlike crops like cowpeas that only need to be extracted from the pod, for soybeans the whole stalk has to pass through the machine. Therefore, straw and debris have to be separated and discharged from the thresher.

- It was estimated that farmers could thresh about 300kg of crop manually per day. They expressed the wish to own machines that would process about one-half to one ton daily, basing the lower limit on profitability and the upper limit on perceived need for portability. They were also emphatic about the need for a motorized device, rejecting a less expensive manually or pedal-operated machine. They were willing to pay between N7,000 to N10,000, which they could afford on a cooperative basis. Engineers on the team agreed that, for whole crop threshing, mechanization was required and that such a machine's capacity could be up to one and one-half tons per day.

- The farmers were generally involved and showed keen interest in the study. A strong rapport was developed, and the farmers regarded themselves as helping in the development of the thresher. The teams encountered no serious problem in the application of RRA methodology.

This was the initial attempt to involve a considerable number of researchers in the use of RRA in Nigeria. Parallel to this soybean threshing study, the IDRC, and PPS project on soybean utilization in Nigeria also incorporated RRA into its study methodology. The objective of their study was to investigate the possibility of using soybeans to combat protein deficiency in the country through the preparation and introduction of several soybean recipes. RRA was useful in establishing preference rankings for these recipes and their receptivity.

In order to assess the extent and effectiveness of the use of RRA methodology in the region, an international workshop was organized in May 1990 under the auspices of the IDRC, PPS Unit, which has facilitated popularization of the RRA methodology in West Africa. This workshop was hosted by the Technology Planning and Development Unit (TPDU) of the Obafemi Awolowo University, Ile-Ife, Nigeria. This workshop was aimed to attract researchers throughout Africa, but particularly those from West Africa, who had experience in the use of RRA. Case studies were presented and the state of the art of this emerging methodology was to be explored. This workshop attracted thirty participants, a few presenting case studies in the use of RRA, and the majority contributing to the discussions on the fine-tuning of the methodology.

It became apparent that RRA had been applied to a number of projects in the sub-region with varying degrees of success. In one study, Olukosi and Arinze [15] used RRA techniques in identifying crop-drying problems facing farmers in northern Nigeria. The methodology enabled them to determine the willingness and capabilities of farmers to invest in improved crop dryers.

Olaniyan [16] used several basic principles of RRA in farming systems research in the Middle Belt agro-ecological zone of Nigeria and found it useful. Osho [17] attempted to use RRA to study an urban small scale company in Southern Nigeria. Though it was discovered that RRA was not used well, the study raised several important methodological issues with regard to the leadership of an RRA team and the restricted applicability of some of the RRA techniques.

Niameogo [18] reporting on efforts made in the Republic of Benin to use RRA, discussed the preparations associated with using RRA to investigate the status and problems of household food security.

More recently Adjebeng-Asem [19] gave a seminar to senior staff members of the Oyo State Agricultural Development Programme (OSADEP) on the use of RRA for diagnostic surveys.

A research team which was composed of those attending this seminar went to the field immediately afterwards to experiment with the new technique, which a number of them had initially received with skepticism.

After the field work, however, feedback indicated that the RRA techniques really do work. What was commended most was the mass of information collected in a few days and the rapidity with which the field report could be written.

Assessment of RRA methodology

From the available literature, discussions with researchers, and personal experiences with RRA as a methodological tool, the following emerged as its strengths and limitations:

RRA'S NOTABLE STRENGTHS There is a consensus of opinion that RRA is a very useful methodological tool, whether used independently or in conjunction with other conventional methods, for development-oriented research. Among the strengths identified are:

1. RRA is multi-disciplinary

There is a general belief that the adoption of a multi-disciplined approach is one of the strongest advantages of RRA. Multidisciplinarity brings different perspectives into problem identification, planning, evaluation and monitoring and enriches the final outcome. Multi-disciplinarity acknowledges the complexities of social phenomena and underscores the need to look at the systemic nature of social problems and to pool disciplinary expertise.

2. Triangulation

It is argued that, since RRA aims at capturing the breadth, diversity and complexity of a given situation, it pursues the use of different sources and methods for getting information. Each aspect of an issue is investigated in a variety of ways using multiple sources, multiple techniques and multiple approaches [20]. Triangulation is technique employed in selecting methods, sites, teams, and respondents such that usually a minimum of three methods are used. The aim is to obtain a holistic knowledge of a given situation through the rapid build-up of diverse information.

3. The adoption of the "emic perspective"

That is, looking at problems from the point of view of the user/ informant/beneficiary. This is one strength of RRA that has won the admiration of many of its users. In underscoring the power

of the emic perspective, it has been argued that most development strategies have failed to significantly improve the lives of the target population because these strategies have often approached the issues from an outsider's point of view. Chambers [21] has pointed out that successful rural development projects have been those responsive to beneficiary needs and those that focus on rural people rather than on the planners. It is further stressed by the practitioners of RRA that strategies that allow more direct dialogue between researchers and rural inhabitants yield more fruitful results than do conventional socio-economic surveys. The emphasis of this emerging development paradigm is on the participation between rural people and development professionals. While it is acknowledged that this approach is beneficial, especially in the diffusion and receptivity of research results by end-users, it is noted that it does not advocate the total rejection of the "ethic" perspective, that is, expert inputs or Western science and innovation. Rather, it seeks for an appropriate blend of local and outside help.

RRA is also acclaimed for its ability to extract information that is otherwise difficult to attain. Through the use of such techniques as wealth ranking or drama, researchers are able to gather sensitive and otherwise difficult-to-gather data quickly and easily.

Another frequently mentioned advantage of RRA is rapidity in the writing of RRA reports. While conventional research reports take anywhere from three months to forever to write, RRA reports are either finished in the field or very shortly thereafter. This rapidity allows for timely intervention.

More can be said about the usefulness of RRA, but as with many new paradigms, there are real and potential limitations that must be recognized and alleviated in order to push the frontiers of this methodology.

LIMITATIONS OF RRA The limitations of RRA could be considered from two points of view: those inherent in the methodology itself, and those that result from its application.

1. Inherent limitations and suggestions

It is argued that the word "rural" in the title of the methodology is misleading since it can be applied to urban settings as well. A change or modification in the title may be desirable.

It has been pointed out that sometimes adherents of RRA portray it as a panacea for all research problems. However, in spite of the numerous advantages in this methodology, it must be seen as only a means to an end and not an end in itself. It should complement or be supplemented by other conventional methods as and when appropriate.

One methodological impediment to the success of RRA field work can be the problem of language. In many situations in Africa, researchers may not be well versed in the local dialect of the target group because many dialects exist in the region. In such situations, researchers cannot adequately translate some technical terms into local languages; for example, engineering terms. This, certainly, will affect the research results negatively.

To deal with the first issue, it is suggested that, insofar as possible, a research team be composed so that some core members are versed in the local language. It is further suggested that an extension worker with adequate working knowledge of the target group be on the team.

On the question of technical issues, vis-a-vis local language/ dialect, it is suggested that where there is a problem of adequate interpretation, the use of visual aids such as photographs, films, or drawings that graphically represent those ideas or prototypes be considered. Such aides have been successfully used by Cromwell [9] in Zimbabwe.

2 . Limitations resulting from application

There are three critical limitations of RRA that may be reflected by the composition of an RRA team.

Leadership: An important prerequisite for the success of RRA field work is competent, experienced leadership. A competent leader will be able to determine the optimum size of a group for an effective RRA. It is generally held that a minimum of three researchers and a maximum of seven is desirable to allow for effective triangulation and for optimum derivation of benefits from the multi-disciplinarity of the experts.

Team selection: Selecting a poor team can introduce bias into RRA field work and nullify its result. The criteria for selection should be strictly dictated by the topic or issue under study and the experience of prospective members. The members of the team should be selected according to the relevance of their disciplines to the issue under study. It is also suggested that on any gender-sensitive issue, there is the need to have both male and female members on the team.

Administration of semi-structural questionnaire: In situations where a team of researchers is not well versed or trained sufficiently in the administration of a semi-structured questionnaire, wrong results will be collected and wrong conclusions reached. This methodological weakness can render an entire RRA project useless. Because the semi-structured questionnaire is at the heart of RRA, it is suggested that researchers develop the skill of administering such instruments. The team leader should ensure this and also insist that the questions asked are probing in nature. The six important questions are: What? When? Where? Who? Why? How? The leader must ensure that team members avoid questions that are leading and be sure questions are asked in a logical manner.

The issues of "rapidity" and cost: RRA techniques may be rapid, but the process of development is not. Therefore, practitioners must take into consideration the long preparation period needed for effective mastery of these techniques. Recognizing associated cost, it is argued that RRA may not be as cheap as proponents care to believe. An example is a situation where costing does not include the time and inputs necessary to take high level professionals into the field for several days [14].

It is suggested that all elements need to be specified to enable practitioners to have a complete picture of cost and avoid any unrealistic illusion of cheapness.

Conclusion

RRA is gaining increasing acceptance in Africa. This is evident from the diversity of its application and its geographical spread. Because this new paradigm emphasizes the need to look at reality from different perspectives and diverse expertise, and focuses on the study group rather than on researchers and/or planners, it has yielded quick, solid insights into rural problems and has enabled most research results to be socially relevant and well-received. However, caution must be exercised not to make RRA a "super" methodology, a panacea for all methodological problems. It can be used independently only in a few small-scale research projects with homogeneous populations. In most research situations, it can best be used as a method complementary to other conventional research approaches.

RRA is still emerging; it is therefore important that in the African region, researchers apply it to many more diverse situations. Continued dialogue on the strengths and limitations of this method will enable Africa to contribute to the continued building of this methodology and to extend the frontiers of knowledge in social research.

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