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Maximising Participation:
An Integrated Model Of Alternative Development And
Participatory Instructional Design.

A thesis presented in partial fulfilment of the requirements
for the degree of
Master of Philosophy in Development Studies
At Massey University, Palmerston North,
New Zealand.

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2002

Abstract:

This thesis is concerned with participation by third world people within an alternative development context. The thesis is aimed at identifying the current parameters within which participation is accepted and proposes that these should (and can) be extended. The thesis proposes a holistic alternative development model, which promotes maximum participation. This model is achieved by the integration of accepted alternative development practice and current instructional technology practice.

The thesis initially outlines the theoretical perspectives of both practices to define each process and identify relational, structural and methodological linkages. Investigation of relational linkages reveals a strong link between the two practices with corresponding steps occurring at each phase of the process. In addition the investigation reveals similar considerations, in respect to participation, particularly in the areas of needs analysis, design and evaluation. A parallel ideology in respect to participant input, empowerment and self-determination is also evident.

Secondly the thesis proposes an integrated alternative development model that maximises participation and achieves enhanced empowerment, equity and appropriateness. Primary research by way of a case study is utilised to further investigate the model. The case study (based in Vanuatu) gives comparison between current alternative development practice and the integrated model. The study reveals the integrated model significantly enhances participant input resulting in a development intervention that fully considers the instructional needs of participants and better promotes empowerment and efficiency.

Using a web based questionnaire as a research tool, the thesis also investigates current participatory trends in instructional design. This research aims to identify if development practitioners have 'picked up' on current instructional technology. The survey revealed that 88% of all respondents whilst promoting participation, did not seek participant input during instructional design.

The findings of the thesis show a definite developmental advantage in enhancing participation by the integration of the two practices. Additionally the integrated model proposed in the thesis gives a clear direction as to how this can be achieved.

Acknowledgements:

I would like to firstly thank all those that took part in the primary research component of this thesis and in particular Bob Loughman and his staff at Rural Skills Training Program Vanuatu. In addition the research would not have been possible without the frank and honest participation of the people of Nuvi, Lepa, Mate, Tasariki, Alepa, Tavio, Pelmol and Mantantas on the islands of Epi and Espiritu Santo, Vanuatu.

Secondly many thanks to John Overton and Donovan Storey for their guidance and frank input during the writing of this thesis, and for the financial support (by way of employment) given to me by the School of People, Environment and Planning.

Finally thanks to Author Cozens for his encouragement and support during the past year.

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Chapter One

Introduction

Current alternative development practice (development from below) emphasises participation leading to empowerment as a key developmental tool (Nelson and Wright, 1995, pp.1-18; Friedman, 1992, pp.14-36). As such participatory analysis of developmental needs and developmental outcomes are the norm. Additionally people participate by acquiring/applying new knowledge and skills that will assist them in achieving an improved quality of life. Such knowledge and skills are normally offered through a change agent utilising some form of instruction.

The principles of participation are acknowledged as appropriate and effective in respect to the areas they are applied to (particularly rural development), but it is questioned whether these principles are carried through the entire developmental process (Rahnema, 1997, pp.377-403; Uphoff, Esman and Krishna, 1998, pp.5-8). In particular the area of instructional design is of concern with indications that little consideration is being given to target population input by a majority of development practitioners during this critical phase of development. It could be argued that during this phase past inappropriate development methodology and attitudes are the norm with the 'expert' in a particular field of instructional requirement, without any input from the target population (other than a broad instructional goal gleaned from the latest PRA exercise), deciding instructional inputs (to achieve the identified goal), instructional methodology, assessment criteria and even limitations as to who can participate.

To grant the expert such licence in the developed world would be unheard of by those following accepted principles of instructional technology where emphasis is placed upon input from the intended recipients. Such input ensures instructional content satisfies instructional needs in the most efficient manner, due consideration is given to remedies other than instruction prior to identifying instructional content and the required knowledge and skills are taught in the most appropriate way. In addition the target group is fully considered in respect to how they learn best, cultural requirements, the best learning environment, how

instruction is best structured, and when, to whom and at what pace instruction is best delivered.

It is proposed that such anomalies can however be overcome by the integration of accepted instructional technology practices and theory into the alternative development model with such practice becoming part of, and an enhancement to alternative development. Such an integration is not considered to alter currently accepted alternative development practice but rather create a more holistic model that extends the principles of participation past that of identifying developmental needs, participation in the intervention and monitoring/evaluation. Proposed additional participation would ensure past anomalies in instructional design, particularly in respect to instructional efficiency and appropriateness, would be negated with fair and equitable participant input guiding the instructional design process.

This thesis therefore seeks to answer four key questions, how similar are the principles/methodologies of alternative development and instructional design, is the integration of the two models theoretically possible, what concrete advantage would arise from an integrated model and to what extent is participation during instructional design being considered by current development providers. To answer these questions the thesis incorporates three key tools of enquiry: a review of current theoretical literature, the application of evaluation research in a case study scenario and a web based survey.

This thesis is structured to first investigate current theory in respect to alternative development and instructional technology with a purpose of profiling a theoretical model that integrates them. The thesis then gives practical comparison of application of the separate models on one hand and an integrated model on the other, to the development process. Finally the thesis enquires as to current development practice in respect to instructional technology.

To this end chapters two and three seek to define firstly alternative development and secondly instructional technology to set the broad parameters within which the study is set. In addition the theoretical perspectives of both are investigated with emphasis being placed on concepts, the individual processes and like barriers to achieving these processes. Chapter four explores the relationship between

alternative development and instructional technology highlighting the structural linkages, process linkages and linkages in ideology. From consideration of these chapters a conceptual framework for their integration is derived in chapter five with the introduction of a diagrammatic representation of the integrated model and discussion of its advantages and what additional processes are incorporated into it.

Chapter six presents a case study based on a development intervention in Vanuatu. The chapter gives good example as to the use of the separate and integrated models and discusses methodology and evaluation. It also critically analyses outcomes and participant comment from the two different processes. In this chapter the advantages of an integrated model are discussed with all conclusions being based on participatory monitoring and evaluation.

To compliment the case study it is considered appropriate to investigate current trends in respect to participation (in instructional design) in the context of today's development organisations. Chapter seven introduces a web based survey designed to enquire as to what percentage of respondents were involved in instructional design on a regular basis with additional consideration being given to the amount of participant input. Questions in the survey further aim to identify the exact nature of participant input. A full analysis of results and logical conclusions from this analysis is also presented.

The thesis concludes with a discussion of both the theoretical and primary findings and seeks to draw conclusions from these findings in respect to the appropriateness and practicability of an integrated alternative development/instructional design model to better advance development practice and thus third world development.

Chapter Two

Alternative Development: An Overview

Introduction

This thesis is set within the parameters of alternative development. The concepts of participation, empowerment and 'bottom up' process are seen as the basis of effective developmental micro interventions (Chambers, 1995, pp.30-42). In particular appropriate forms of participation form the foundations of a process of empowerment that should evolve through the development program building on itself as participants contribute to each stage of the developmental program. As such, it is considered important that the validity of alternative development strategies is identified, alternative development is defined, and the processes/components surrounding alternative development are discussed. This chapter thus gives definition to alternative development, highlights its components/concepts, offers a model of the alternative process and discusses the common attitudinal barriers to achieving the process.

Defining Alternative Development

The development industry has evolved over the years through a never-ending shift of paradigms reflecting changing political, social and economic times. Initially proposing 'grand' theories of development, the industry sought to develop the South in a linear fashion moving from traditional society through a series of stages to developed society mirroring that of the North. By the 1990s development theory had shifted its emphasis to self-help and bottom up development. This shift resulted in an expansion of the development industry to a far broader base to incorporate this new theoretical position and a different style of development practice that focussed on participatory interventions in 'grass roots' situations (Preston, 1996).

Chambers (1983, p.147) gives good definition of emerging alternative development in a rural context in a critique of a proposed World Bank definition. He states:

Rural development is a strategy to enable a specific group of people, poor rural women and men, to gain for themselves and their children more of what they want and need. It involves helping the poorest among those who seek a livelihood in the rural areas to demand and control more of the benefits of development. The group includes small-scale farmers, tenants and the landless.

This definition reflects much of what the process of alternative development is about. The key factors of poor, want, need, livelihood and control depict an accurate picture of what development is involved with. In a later publication Chambers (1997, pp.9-14) follows the evolution of such factors when suggesting concerns of well-being, livelihood, capability, equity and sustainability are the key considerations of today's development practice.

Such considerations have led to the evolution of an alternative development style focusing on 'people centred, micro interventions'. Within these interventions the considerations of gender, environment and development from below, span the entire spectrum of development ideologies. As discussed by Korten (1990, pp.197-201) a people centred approach to development involving key principles of empowerment and participation is paramount to achieving good and equitable development at grass roots level. This observation is further supported by Brohman (1996, pp.251-276) when discussing participation and power. Although the elusive nature of achieving true participation is highlighted he identifies participatory processes as the 'backbone' of good development.

Cowan and Shenton (1995, pp.27-29) highlight the fact that development is rarely "coherently" defined and suggest the term "defies definition." This reflects the complex/diverse nature of development and it is suggested that true definition can only be achieved within specific areas/contexts. Although alternative development covers a broad spectrum of current development practice the key principles of equity, participation and micro intervention as discussed above establish the parameters within which it can be defined.

Within this context I therefore define alternative development as a process involving strategies of bottom up, people centred micro interventions resulting in the acquisition of a variety of material, social and environmental items/conditions particular to micro group needs within the context of the immediate environment; acquisition of such items/conditions normally equating to improved well being and quality of life.

Components/Concepts Of Alternative Development

Change and Outside Intervention. Change and development are intrinsically linked, development be it positive or negative depends on change. Change can happen internally through a 'natural' process or can be manipulated/accelerated through outside intervention. Outside intervention is central to Northern development methodology and as is seen as a precondition to change by most development agencies. Chambers (1997, p.3) cites change as "a natural condition of physical, biological and social systems" he depicts change as an unstoppable force that requires harnessing, shaping and direction if it is to achieve appropriate development. It could well be considered that 'outside intervention' is just one element of such change acting as an accelerant to, and a determining factor in, the way change evolves. In this context outside intervention may not necessarily be a precondition to development but rather an integral component of a particular development initiative (Chambers, 1997, pp.3-32; Pieterse, 1998, pp.344-355).

Participation and Empowerment. It can be argued that participation alone often contributes little more to the development process than the satisfaction of the requirement for the target population to contribute to the labour component of a project. Often this is the result of the development practitioner's need to involve local people thus satisfying the requirements of the donor with the needs of the local people being a secondary consideration (Burkey 1993; Brohman 1996, p.251). Broham (1996, pp.251-253), identifies this type of participation as totally undesirable labelling it "coerced participation" that is forced by a bottom down developmental approach, often imposed on participants.

Alternative development calls for participation of an entirely different nature described by Brohman (1996, p.252) as “spontaneous (bottom up) participation” reflecting “voluntary and autonomous action”. Such participation is seen as an whole developmental process spanning the entire developmental cycle.

As such the logical extension to participation is the notion that the involvement of the people should lead to them gaining the knowledge and skills to improve their own quality of life through personal/group empowerment. Moser (1989, pp.1814-1817) identifies participation as an absolute precondition for this process and thus emerges the additional concept of empowerment further quantifying participation and proposing a participatory process. This process leads to the disadvantaged having greater control their own lives and through the acquisition of knowledge and skills enables them to become better able to understand causes of their poverty. This newfound knowledge puts them in a far better situation to organise and use resources available to improve their quality of life and current situation (Burkey, 1993, pp.57-59; Potter, 1999).

External Agents. The process of alternative development normally requires an external catalyst to initiate it and to support its growth. This is provided through development intervention involving outside agencies and facilitated by an external agent. The agents general role is best described as a two way process of providing knowledge/advice to the local people and seeking/representing their views to outsiders involved with the intervention. The agent may not necessarily be one person and could be a local NGO, an external NGO, a development technician, or an appropriate person from within the local community.

The general role of an external agent is to provide knowledge/advice and seek/represent the views of the people. These general roles can be expanded into specific participatory activities:

- Assist in identifying developmental needs and problems through a program of critical awareness building.
- Promote group action and its advantages, encourage/assist in the building of appropriate group structures.
- Promote the broadest possible participation through the creation of interest groups using motivational strategies to ensure all have a voice.
- Encourage and assist in the development of leadership skills within the community.

- Assist and encourage communities to establish appropriate links and communicate their needs and grievances.
- Share specific knowledge that may be of advantage to the community in improving their quality of life.
- Assist the community in evaluation of the development intervention (including the performance of the external agent), encourage community input through all steps of the intervention.
- Continually review their own (the external agent's) performance and modify/improve undesirable aspects.

The preceding list highlights the key areas of concern to the external agent with activities being amended/added depending on the developmental situation. In addition it highlights the complexity of the job at hand and the need for an external agent to possess a special combination of practical skills and appropriate knowledge (Burkey, 1993, pp.78-81; Chambers, 1983, pp.145-148).

Participants. "Speak about 'the people' and it is the minorities of the oppressed – those sections of the world population who have no economic or social status in society if judged by the standards of the dominant structures – who come most readily to mind" (Carmen, 1996, p.4). This description profiles the broad base of participants in an alternative development context. Carmen (1996, pp.4-5) further qualifies his statement citing varying degrees of poverty and oppression covering a broad socio-economic spectrum within the third world. Chambers (1997, p.12) identifies the preferred participants as "the poor, weak, vulnerable and exploited." In addition both authors place an emphasis on rural women citing them as the most disadvantaged.

Chetkov-Yanoov (1986, pp.26.27) suggest that participants are intrinsically linked to, and grouped according to the type of activity that is taking place. This definition targets the community and components within it providing finite micro groups for each intervention and a second level of definition. Groupings such as "those who are suffering from a specific (problem) condition", "residents of specific geographic areas" and "clients or consumers of specific agency services" are all identified as such micro group participants (Chetkov-Yanoov, 1986, p.27).

Of extreme significance are the rights of such participants. For too long eurocentric idealism and top down models of development have proposed change to the cultural, traditional and personal rights of participants in the name of modernisation and progress. Economics have overshadowed social equity and an emphasis on modernity has often led to the deterioration of rights to tradition (including traditional access) and customary practice. (Friedmann, 1992, pp.1-13). Friedman (1992, pp.8-13) categorises participants' rights into three specific areas; human rights giving the right to an equitable standard of living in respect to the basic necessities of life, citizen rights reflecting recognition of citizen status and thirdly the right to conditions which enable a participant to develop to his or her full capacity as an individual (human flourishing¹).

Consideration of such rights is the cornerstone of alternative development with equity, capacity and self-determination coming to the fore. Friedmann (1992, pp.12-13) further argues that such consideration is both complex and at times even contradictory particularly in the areas of human rights and human flourishing. But emphasises that the right to free choice is paramount.

Alternative Development (The Process): Key Considerations

Shown below is a diagrammatic representation of the 'bottom up' alternative development process and lines of input from key players.

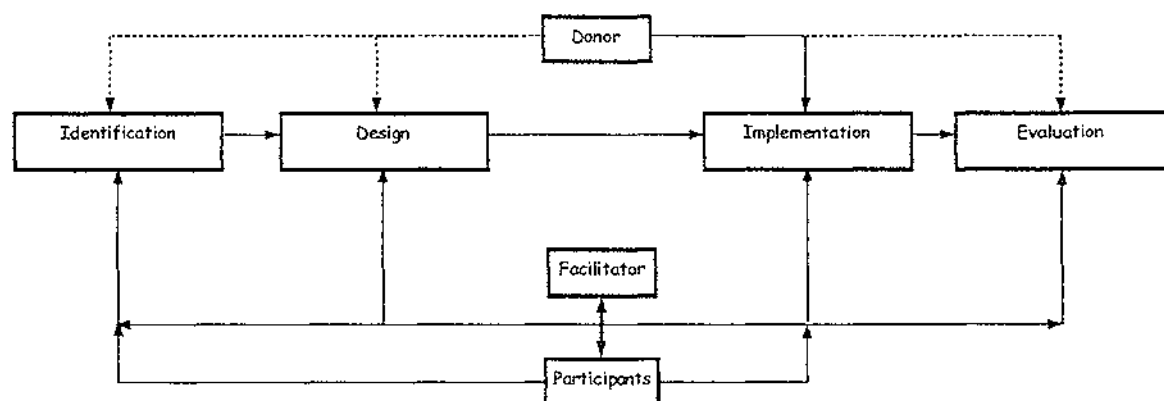


Figure one: The Bottom Up Alternative Development Model

Adapted from: (NZODA, 1996, p.9)

¹ A term Friedmann (1992) cites as originating from the works of Margaret Jane Radin challenging our consideration of the definition of a 'full human being' (Radin 1987)

As discussed the process of alternative development is people centred with participant input/control desirable during each stage:

Identification of developmental needs is normally achieved through a process of appraisal involving participants and an outside facilitator (change agent). The most commonly accepted method to achieve this is some form of Participatory Rural Appraisal (PRA). Chambers (1997, p.102) proposes PRA as a process that enables local people to actively participate in the identification of their developmental needs in an equitable manner that gives them fair control over the process and enables full consideration of their knowledge of life and local conditions.

PRA offers proven participatory methods of enquiry including; local analysis of secondary sources (such as detailed maps, photographs), mapping and modelling, seasonal calendars, time and trend analysis, Venn diagramming, daily time use analysis, shared presentations and analysis and participatory planning (Chambers, 1997, pp.117-119). Central to all such activities is the principle Chambers (1997, p.117) names "handing over the stick and they do it." In other words the participants are given control (empowering them to make the decisions) whilst the outsider takes the role of facilitator only.

Design of the intervention is best described as the phase in which the facilitator, the participants and sometimes the donor identify alternatives for the intervention, identify the most appropriate alternative and plan appropriate methodology. Within alternative development practice the past rigidity of the logistical framework and project is somewhat redundant with a preference being shown for open-ended development programs (sometimes supported by a loose logistical framework plan). This approach is proposed by Cusworth and Franks (1993) as the "adaptive approach" to development relying on maximum participant input and flexibility in methodology to better reflect the needs of the participants thus resulting in appropriate, equitable development. Such design becomes an ongoing factor of the intervention and although more time consuming (something much resisted by larger development agencies and governments) the end result is a program of development that has evolved rather than being enforced which reflects satisfaction of the participants absolute needs within the context of their

particular social/cultural conditions and their immediate environment (Cusworth and Franks 1993).

Implementation in an alternative development situation follows the design process and should be virtually seamless with it. Given that interventions are small, people centred and focussed, and that the program of development is continuously adapting to achieve improved equity and appropriateness there is often no clear entry point for the main development effort but rather a gradual shift towards major development activities rather than planning activities. This transition often creates concern when the donor is governmental or a large institution where the focus is often on project based fixed term development. Of key importance during implementation of the program is the recognition that significant input/feedback from the participants is paramount during the entire process. This initiates further design modification of the program as it continues (Cusworth and Franks, 1993, pp.85-86).

Evaluation is a process that reflects the people centred approach and the 'evolving nature' of many alternative development programs. As such monitoring and evaluation of interventions must fit two key criteria; firstly it must be ongoing throughout the entire program and for some time after participants consider developmental objectives achieved. Secondly monitoring and evaluation methodology must be such that equitable participation (of participants) is achieved in partnership with other key players resulting in participants being considered partners in the process rather than "objects of the evaluation" (UNDP, 2002). Chambers (1999, p.2) suggests that PRA methodology is the most appropriate to achieve participatory monitoring and evaluation citing the three common elements of the PRA approach; responsibility², equity/empowerment, and diversity, as the common base of all participatory processes.

² "Individual responsibility and judgement exercised by facilitators, with critical self-awareness, embracing error" (Chambers 1999, p.1)

Common Attitudinal Barriers To Achieving Good Alternative Development

Alternative development promotes a partnership between participants and those facilitating the development. This partnership is by no means one sided but does place a responsibility on those outsiders concerned with the initiative, in respect to creating the appropriate 'climate' within which good and equitable development can happen. Creating this partnership is normally the responsibility/role of the external agent who provides the catalyst for development. In an alternative development intervention the agent is the key tool in achieving knowledge transfer. As such and given the complexity of the job, the extensive range of skills required and the diverse nature of target groups there are many factors that can, and do, negate the effectiveness of the external agent. Failure of many development programs although adhering to the principles of participation and empowerment can be directly linked to the attitudes and resulting methodologies of the external agent. Attitudinal factors negating effectiveness can be separated into four main categories: human bias, culture, communication and personal motivation (Chambers, 1983, pp.2-6; Rahnema, 1992, pp.122-123).

Human Bias is well explored by Robert Chambers (1983, pp.13-27) who cites humankind's bias towards: self comfort (the air conditioned vehicle, the civilised environment, fine weather), preferred persons (the elite, male, the innovators, the active), the most obvious (the project, the model), and the favoured (the progressive, the land owners, the entrepreneurs, the leaders), as being a direct barrier to achieving participation of all key players. In a practical sense such bias can lead to:

- Exclusion of poorer households due to difficult access.
- Development focus only on communities within easy commuting distance of an urban centre.
- Little appreciation of development problems during adverse conditions such as the monsoon season.
- Lack of consideration of the needs of marginalized groups such as women, the aged and youth leading to development methodology that reflects the needs (and aspirations) of those already advantaged.
- Little evolution of power to the extremely poor resulting in a lack of true representation in respect to identification, control and initiation of development activities.

Culture plays a large part in any development initiative and in the case of external agents is equally important. It is not only the culture of the target population that is of concern but also the culture of the external agent. "Outsiders fall into two main cultures: an academic culture, mainly social scientists, engaged in unhurried analysis and the culture of practitioners, engaged in time bound action" (Chambers, 1983, p.28).

In general the culture of the practitioner centres on action and positive optimism. This unfortunately comes with its own set of pitfalls; the emphasis is on success and as such the practitioner will often in the interests of program acceptance and funding: manipulate input from the people to fast track the development process, embellish reports to reflect appropriate achievement when that is not the case, resist attempts at 'good' evaluation, shun constructive criticism and forecast outputs that are over optimistic/unobtainable.

The academic in contrast adheres to a culture of critical evaluation and is often seen in the role of consultant, acting as an external agent on a short-term basis. A tendency to emphasise the negative combined with theoretical postulations and intellectual rhetoric often overshadows the main objective of the program or an acceptable but partial success and in many cases alienates the target population through the sheer complexity of methodology/terminology (Chambers, 1983, pp.30-35; Burkey, 1993, pp.81-84; Rahnema, 1992, pp.123-125)

Lack of consideration/understanding of the target population's culture is also an important factor negating the effectiveness of the external agent. The key word in facilitation is partnership with which comes the concept of acceptance. Far too often partnerships become unworkable through lack of acceptance of the external agent by the people due to cultural blunders. Additionally developmental concepts sometimes work against other cultures (e.g. gender issues, devolving power) and as such an intimate knowledge of cultural ideals is essential in introducing them for consideration.

Communication whether written or verbal can pose extreme barriers to the effectiveness of the external agent. Lack of proficiency in the local language or cross cultural communication leads to misinterpretation, misunderstanding and leads to a shift in power favouring those that speak the agent's language. The

most obvious case of this is the use of local interpreters who often gain power both over the agent and the people through their position. Such power is commonly misused for the interpreter's own personal gain. Additionally external agents often rely heavily on an interpreter's advice, which does not necessarily represent the view of the majority. The tendency of many external agents to produce/use written media also poses problems. Such media normally reflects the culture of the writer/producer normally alien to the local population. Often great lengths are taken to translate such media but this is still of little value to the illiterate and the use of written media is often instrumental in setting the communities power base within those that are literate. In addition procedures that rely heavily on the production of overcomplicated media promote a culture of agreement by reflex through lack of understanding (Agunga, 1996, pp.233-245).

Personal motivation is often the greatest negative factor in respect to external agents. What individually motivates the agent is the driving force behind that way they operate. In a group organisational situation (e.g. NGO's) similar motivational needs are often the cornerstone of the group's ideology. As such, the change agent's motivation directly effects development methodology and outputs as well as the target population's perception of the agent. People are motivated by an extreme variety of factors such as: self-glorification, paternalism, religious fanaticism, personal gain and pity, none of the preceding have a place in the development arena. Such motivational factors lead to distrust, hidden agendas, conflict, and manipulation.

On a positive note many external agents overcome the above barriers to assist in the achievement of good and equitable development. Burkey (1993, p.76) cites Freire's comments in respect to this which state: "It is necessary to trust in the oppressed and in their ability to reason." Mutual trust and respect provides the cornerstone to the external agents role and although attaining this can be a complex task, many succeed.

Summary

Alternative development is defined as a process concerned with people centred development from below, focussing on micro interventions and the developmental needs of specific groups. The objective of alternative development is the improvement of quality of life of such groups, particularly the poorest of the poor.

The focus of alternative development is change through empowerment, often accelerated through outside intervention. The key concepts/components of alternative development are; the participants, who are normally a like group often identified as such due to the activity that is taking place; participation (leading to empowerment), and an external catalyst (agent) to facilitate appropriate participation. In particular the consideration of the participants rights is integral to the process.

The process of alternative development follows four specific stages; identification of developmental needs through a participatory method of enquiry such as PRA, design of the developmental program to satisfy developmental needs, implementation of the program and a process of evaluation that considers not only developmental outcomes but monitors the entire developmental process and its impact on the participants and their surrounding environment. Although the process follows a set pattern of stages, there is absolute consideration of this process as an evolving program with mechanisms (through evaluation) to facilitate necessary program changes to better reflect the expressed needs of participants.

Key barriers to alternative development lie in the attitude of those (agents) facilitating the partnership between donors, change agents and participants. The key to success of such development is equity and effective knowledge transfer. As such inappropriate bias's of personal preference or towards certain preferred groups; rigid eurocentric cultures pertaining to change agent's particular operational background; a lack of acceptance/understanding of the participants' culture, poor communication skills on behalf of the change agent and inappropriate personal motivation reflecting such attitudes as self glorification, paternalism or even religious fanaticism all create impenetrable barriers between the agent and the participants leading to lack of equity, poor knowledge transfer and developmental failure.

Chapter Three

Instructional Technology

Introduction

Instruction technology and its appropriate usage within a development context forms the primary base of this thesis. Having discussed developmental parameters it is appropriate that current accepted trends within instructional technology are also discussed. It is considered that the use of modern and proven instructional technology is an integral component to achieving good knowledge transfer within an alternative development setting. It is therefore paramount that 'best practice' instructional technology is identified in conjunction with current accepted methodologies. I see no difference between instructional technology as practiced by Northern business/industry and that, which is used in alternative development. It is noted however that some adaptation of methodology is often necessary to fit the development situation and ensure that equity within the participatory process is achieved.

The predominant Northern industry standard in instructional technology and design is based on a systematic process such as that proposed in the works of Robert F Mager. A majority of large instructional designers/providers world wide including those involved in governmental training, training in commerce and military training³ propose systems based on such a methodology. This thesis follows suit and proposes Mager's strategy of instructional development (Mager, 1997) as an appropriate base to achieve good instructional technology in respect to the third world. This chapter therefore explores the parameters of instructional technology, gives definition to it and discusses its components.

³ For example: Canadian, New Zealand and Australian Armed Forces.

Defining Instructional Technology

*When we set out to help people to do something that they cannot now do but need to do, we dip into a bag of procedures currently referred to as "instructional technology." These are the techniques and procedures by which we influence what people **can do**. When there is a skill or knowledge deficiency to be eliminated, one dips into this bag and selects one or more remedies to solve the problem. (Mager, 1997, p.6)*

Whether in conjunction with a Northern government training centre or in a village developmental intervention in the third world, instructional technology is the vehicle by which specific knowledge and skills are identified as a need for a certain group and then passed on to participants. Instructional technology has four main objectives based on efficiency and effectiveness. These objectives are: "to ensure that: instruction is the correct solution to the problem, the objectives of the instruction are derived from demonstrated needs, the substance of the instruction is adjusted to what each student (participant)⁴ needs, and instructional practices contribute to, rather than detract from, student (participant)⁴ eagerness to learn more" (Mager, 1997, p.1).

Instructional technology embodies the "key components of the instructional craft" (Mager, 1997, p.2) and as such incorporates the systems of identification of instructional needs, instructional design, instructional delivery and validation of instruction. Good instructional technology is paramount in assisting to achieve the learning goals and objectives identified by participants. Mager suggests that his models of instructional systems are to assist "those who teach so that others may achieve intellectual and economic independence, as well as self respect, in their own worlds" (Mager, 1997, p.2).

In respect to efficiency Mager states;

The only justification for instruction is that one or more people cannot yet do something they need or want to be able to do. Unless these two conditions exist, there is no valid reason to instruct. (Mager, 1997, p.5)

⁴ My addition.

Good instructional technology ensures that these criteria are met avoiding the waste of scarce resources, participants' valuable time and the potential to 'alienate' participants through lack of recognition of current skills.

The Process Of Instructional Development

The process of instructional development systemises the main techniques and procedures involved within instructional technology. Instructional development (as is the case with the process of alternative development) follows a logical sequence of activities as shown below:

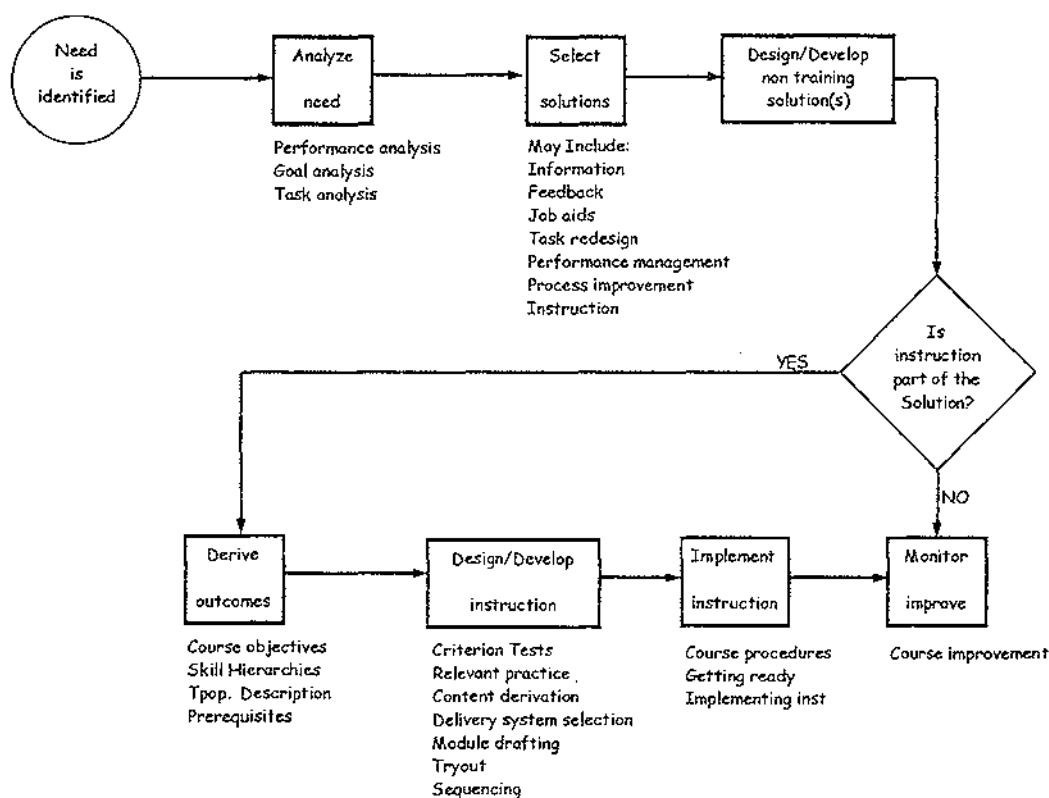


Figure two: Strategy Of Instructional Design. (Mager, 1997, p.14)

As shown each activity is sequential and has a specific function. These are described as follows:

Need is identified is the catalyst to the process and as such can occur in many different ways. Within a northern industrial context this often occurs when a

specific deficiency within a process is identified⁵ this naturally could be paralleled to a development context where development has failed or people are becoming poorer and specific needs have been identified through PRA type processes.

Analyse the need is the first step in moving towards possible instructional intervention. Analysis assists in satisfying the following questions:

- Can the need be satisfied/partially satisfied by instruction?
- If the need cannot be addressed/fully addressed by instruction what other remedies could be applied?
- If instruction is applicable what should be taught?
- Who will the participants be (in the instructional process)?
- What should the instruction achieve i.e. what are the desired outputs of the instruction?

To answer these questions three key analysis are conducted; *performance analysis* which enquires as to the appropriateness of instruction to satisfy the need and identify other effective options, *goal analysis* which assists in setting desired outputs and performance standards later to assist in monitoring and evaluation and *task analysis* which breaks down the instructional need into a type of 'blueprint' which reveals all the components of the need that must be taught to achieve it (Mager, 1997, pp.15-18).

Selection of solutions may not necessary include instruction but as part of the process offers opportunity to identify other methods of satisfying the identified need. This step is derived from performance analysis and offers the instructional designer the opportunity to seek other more relevant and cost effective options to the problem. Often this step results in the splitting of solutions to include instruction and other options (Mager, 1997, p.14). In a development situation this step is often expanded to include further PRA type problem solving exercises to investigate the participants' ideas as to how best satisfy the developmental need.

Design/Develop non-training solutions provides an exit point for interventions that do not involve instruction but rather some other form of performance assistance.

⁵ For example the poor performance of checkout operators in a supermarket when entering prices for produce that has to be weighed resulting in till overruns.

Such assistance could range from a simple aide memoir to the creation of new structures to facilitate the identified performance (Mager, 1997, p.14). From a third world perspective particular attention must be paid to this stage as often during the design of non training solutions further training needs are identified.

Deriving outcomes involves absolute identification of what is to be taught, in what sequence it will be taught, who will be taught and what knowledge and skills are required by the participants prior to receiving the instruction⁶. This process results in the setting the course objectives, the production of skill hierarchies⁷, a target population (participant) description and the identification of instructional knowledge/skill prerequisites. The process relies heavily on input from participants through participatory target population analysis and workshops designed to facilitate equitable participant input into the process (Mager, 1997, pp.19-20.)

Design and development of instruction moves the process from a analytical platform to that of hands on design. This is not to say that some analysis still occurs particularly in the areas of instruction trials and revisions. The process follows the set sequence of:

- Development of performance checks or tests which enable both participants and instructor to assess whether they have reached a required standard in one unit of instruction and can move to the next.
- Development of relevant practice strategies that enable participants to practice the skills that they are learning in an appropriate and (if possible) true to life situation.
- Derivation of instructional content to facilitate the accomplishment of each objective.
- Selection of how the instruction is going to be delivered including the means by which participants will be taught, media production and instructional settings.
- Breaking down of instruction into teachable modules (lessons) to facilitate appropriate sequence and good feedback at each stage of instruction.
- Tryout of instruction (i.e. pilot course which in many cases is the first delivery of the course).

⁶ In a development situation this may well lead to other instructional requirements.

⁷ Diagrammatic representation of the relationship between skills and tasks to be achieved.

- Final sequencing of lessons into a logical and interesting order to facilitate participant interest, skill building and periodic practice of skills already learnt (Mager, 1997, pp.20-22).

Implementation of instruction is the process of actual delivery. This process aims to help participants learn “as efficiently and humanely” (Mager, 1997, p.23) as possible. In a development context implementation is often frustrated by environmental/social conditions, the development situation and an absolute need to consider participants cultural, traditional and day to day work requirements. Implementation therefore is rarely perfect but a compromise between the needs of participants and the ‘perfect situation’ for instruction. Implementation will normally involve setting the course procedures after consideration of both the ideal situation and local constraints, pre course preparation for instructors (including training for trainers if needed), and actual course delivery (Mager, 1997, pp.22-24.)

Monitoring and course improvement is a process that sets instructional development into a cycle. Of extreme importance (particularly in a development situation) is the need for good participatory feedback from participants during and after instruction. In addition feedback from participants after new skills have been implemented/used is paramount. Such feedback ensures that the instruction remains appropriate and evolves as methods change and new participants (from a different group) become the target.

Instructional Technology: Key Considerations

Burkey (1993, pp.88-104) cites the effectiveness of participatory training when instructing local change agents, his many quotes from trainees strengthening his position that such instructional methodology is absolutely appropriate. The writer agrees with this stance as it also illustrates one of the main principles of instructional design, the more realistic the instruction the more effective the outcome. Such considerations are only achieved however through equitable and appropriate input from participants during all stages of the process. Thus a key consideration of instructional technology is the ability of participants to contribute in a fair and equitable manner. Participant contribution should not be limited to identifying needs and as willing recipients of instruction but additionally should

challenge the instructional designer through participatory evaluation and contribute to setting the parameters, standards and required skills of the instructional intervention. (Burkey, 1993, pp.88-114.; Cusworth and Franks 1993; Mager, 1997, pp.1-12)

Of absolute importance is the fact that instructional technology embodies an entire process of instructional design. This (sequential) process is the key to appropriate, effective and efficient instruction. The days of the 'expert' instructor (selected just on her/his particular knowledge), the formal lecture (as the main instructional medium), on the job training (as the training alternative) and those instructors that taught all they knew to participants (rather than what the participants needed/wanted to know) are long gone (Havelock and Havelock, 1973; Mager 1997, pp.1-3). Instructional technology now offers a process where efficiency and effectiveness can be achieved through a diverse number of methodologies that target/consider the participants, consider the physical and cultural situation, and best meet participants' instructional needs.

Key barriers to effective instructional technology parallel those discussed in chapter two in respect to alternative development. Good instruction means full participation and as such preconceptions in respect to instructional content, the existing knowledge and skills of participants, how instruction should be conducted and how to best test end results have no place in the current instructional design process. Human bias as discussed by Chambers (1983, pp.13-27) can be even more destructive in the instructional design setting than it is in respect to development interventions.

Literature within development studies does address issues in respect to particular components of instruction development (particularly need identification and the development/delivery of instruction) with a considerable amount being written about instructional delivery methods by such philosophers and educational theorists as Mahatma Ghandi, Paolo Freire, A.T. Mosher and Anisur Rahman all who have developed extremely effective approaches to non-formal education. In addition much has been proposed in respect to participatory approaches to needs assessment, research, and evaluation by such theorists/practitioners as Robert Chambers, Stan Burkey and Terry Bergdall. Such works contribute greatly to achieving good instructional design and overcoming some of the main barriers to

good instruction. These works however must be considered within the context of the entire instructional design process (Eckman, 1994, ch.3).

Summary

Instructional technology is defined as the process by which specific knowledge and skills are identified as needs and passed on to participants. As such instructional technology embodies all the components of the instructional craft. The process involved with instructional technology is a system of instructional design that follows a number of procedural steps each considering one function. These steps include: identifying the instructional need; analysing that need (in respect to what can be satisfied by instruction, what should be taught, who should be taught and what should be achieved after instruction); the identification of alternative solutions (other than instruction) to satisfy the need; the design and development of alternative solutions; the derivation of instructional outcomes; the design and development of instruction; the implementation of instruction, and monitoring and course improvement (including the evaluation of instructional content, instructors, long term impacts of instruction).

Instructional technology considers several key principles during this process. Of absolute importance are the principles of fair and equitable participation, efficiency, effectiveness and the cultural and physical instructional situation. These considerations parallel those of alternative development in respect to participation and non-formal education and as such contribute greatly to the overall process of instructional design. Barriers to achieving good instructional design hold a lot in common with those barriers of human bias evident in alternative development.

Chapter four

The Relationship Between Alternative Development And Instructional Technology

Introduction

The main thrust of this thesis is to enquire as to whether instructional technology is being effectively and efficiently incorporated into the process of alternative development. As such it is considered necessary that the relationships between the two processes are discussed to demonstrate the linkages and dependencies within them. The end result of this relationship must be better development. Discussion in chapters one and two has highlighted the individual components and methodologies within each process but not the correlation between them. This correlation is the basis of a logical linkage between alternative development and knowledge transfer. This chapter examines these linkages, highlights like processes and compares ideology.

Structural Linkages

The processes of alternative development and instructional design are not dissimilar. Each is initiated by identification of a need and follows a series of like steps to achieve an end result. This result is aimed to gain some form of improvement of quality of life for participants whether it be from a material or cognitive perspective. Additionally both processes require a form of ongoing evaluation and can be considered as 'evolving' processes often cyclic in nature. It is significant that instructional design allows for solutions other than instruction if need be promoting flexibility to the process and opportunity to introduce other developmental techniques. The similarity of the processes allows them to be directly linked to each other with alternative development becoming the primary process paralleled by instructional design. These linkages are shown over:

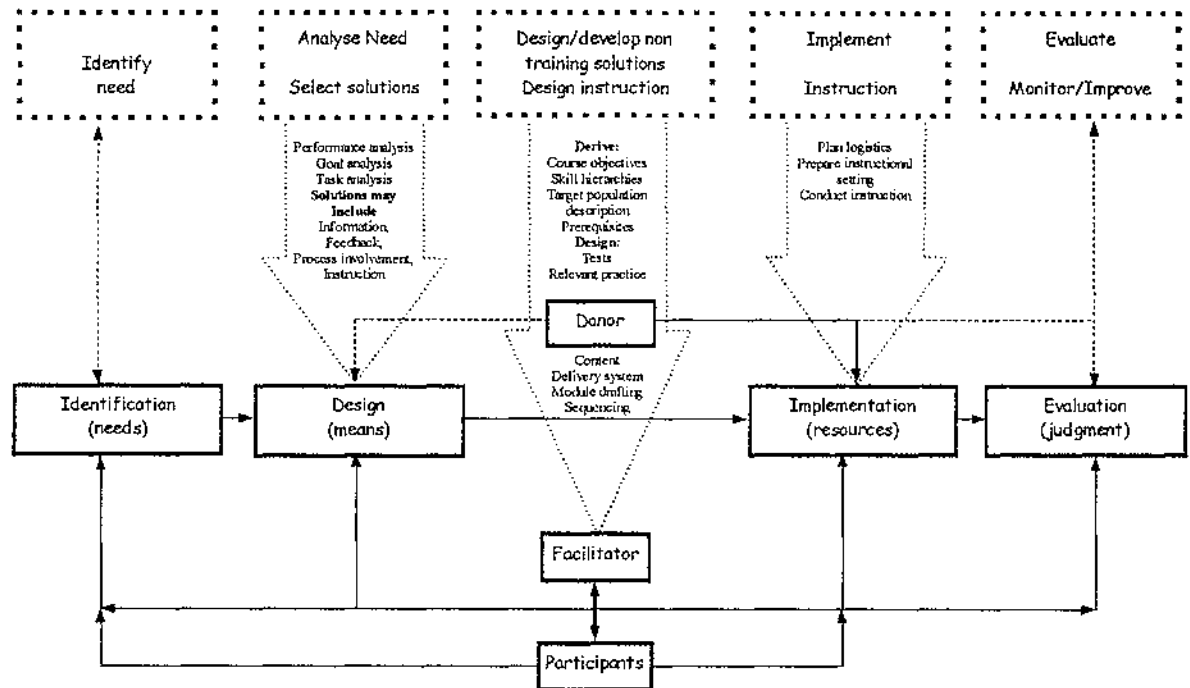


Figure three: Bottom Up Development & Instructional Design

Adapted from: (NZODA, 1996, p.9) & Robert F Mager (1997)

Process Linkages: Methodological Considerations

Needs identification in respect to alternative development requires a participatory process of enquiry such as PRA. The process is people orientated and allows equitable input from all participants. The end result of the process is the identification of the participants developmental needs (Chambers, 1997, pp.102-61). In a development situation this process satisfies the identification of needs that may be acquired through instruction and thus the first step in the instructional development process.

Design of the development intervention leads to the identification of alternatives for the development process and the most appropriate methodology. It is during this phase that instructional needs are identified. This process is participatory in nature and involves participants plus other key players. The process of instructional needs analysis (including performance analysis, goal analysis and task analysis) is closely linked to this phase of the development intervention as it is at this stage that participants and other key players should further investigate those items initially identified as being satisfied by instruction. Thus instructional technology becomes an extension of the developmental process further investigating the most

appropriate methodologies, identifying absolute instructional goals, investigating the target population and setting instructional standards. In addition the instructional development process makes allowance for better solutions (i.e. solutions that better satisfy the need than instruction) to be identified and designed (Cusworth and Franks 1993, pp.1-11; Mager, 1997, pp.15-18).

An extension of the alternative development design phase in respect to instructional technology is the development of training solutions and instruction. This process in a development context must involve both the participants and the change agent. In addition it may also directly involve the donor or other agencies. Normal methodology for this phase is to obtain input from participants through group discussion or the formation of a equitable participant panel. Further information in respect to participants can be gathered through participatory social analysis (Pratt and Loizos, 1992). The end result of this process is the actual instructional plan (including objectives, lesson plans/notes, instructional descriptions and desired participant evaluation criteria) reflecting the absolute needs of participants from a developmental, cultural and environmental perspective (Mager, 1997, pp.19-22).

Implementation of the development resource by definition may well include implementation of instruction. There is little difference between these two processes with the instructional intervention normally becoming part of a holistic development program each part of which requires participant feedback and often modification.

Evaluation in the context of alternative development is an ongoing process that is participatory in nature. This parallels the evaluation required by instructional technology. Of key significance is the parallel between evaluation of the interventions performance to deliver development and evaluation of the facilitator (change agent) and instructional content as to effectiveness/appropriateness. Instructional technology requires evaluation input from those receiving instruction and those effected by its outputs (Mager, 1997, pp.251-259). As is the case with alternative development monitoring and evaluation are the key tools in identifying the need to modify and update instructional programs.

Linkages In Ideology

The key ideological linkages between alternative development and instructional technology are predetermined by alternative development practice/theory. Thus if instructional development is to satisfy the principles and ideology of alternative development it must become an extension of that process taking a secondary position that reflects such ideals. Given the structural nature of the two processes linking them to reflect one process and thus one thread of ideology is not at all complicated. Table one below shows the linkages in ideology between alternative development and instructional technology in tabular form:

| | <u>Alternative Development</u> | <u>Instructional Technology</u> |
|----------------|--|---|
| Participation | The key ideological hub. A prerequisite. Main methodology of all stages. Promotes equity. Focus on the most needy. | A prerequisite. Main methodology of all stages. Promotes equity. Focus on the most appropriate recipient. |
| Empowerment | Linked to participation in the development process. Promotes equity and appropriate development. The vehicle by which development is achieved. | Linked to participation in the instructional process. More a by product of instructional methodology. Knowledge and skills gained through instruction lead to empowerment. |
| External Agent | The facilitator of alternative development. Requires equity to be effective. Needs to be unbiased and culturally aware. Must have the ability to effectively communicate with participants. | The facilitator of instruction and instructional design. Requires equity to be effective. Needs to be unbiased and culturally aware. Must have the ability to effectively communicate with participants. |
| Participants | Participants are identified as the most needy within a specific development situation. Because of the program's micro nature this is often a smaller group of people with like needs. | Participants as identified as those that need the knowledge and skills instruction will provide. If the content has been identified through a PRA process this will equate to the most needy and the same micro group. |
| Efficiency | A desirable output but not at the expense of other prerequisites/ideals. | Significant emphasis but allowances to consider other prerequisites to achieve equity and flexibility evident. |

Table One: Ideological Linkages Between
Alternative Development And Instructional Technology

As previously discussed the concept of participation forms the main ideological hub of alternative development (Brohman, 1996, pp.251-276) promoting equity at all stages of the development program. Participants cover a broad base of those in the third world and in particular the oppressed and the needy. Within the context of instructional development participation at all stages of the instructional design process is also considered paramount. In a third world context (when designing instruction for development) participants parallel those identified within the alternative development process but the focus shifts slightly to those that are the most appropriate recipients of instruction. In other words those individuals within a micro developmental group, that already possess the knowledge and skills being taught may be excluded from instruction for reasons of efficiency. This does not mean that they are excluded from the developmental process but rather from that specific instructional component (Mager, 1997, pp.92-110).

The ideology of empowerment spans both the process of alternative development and instructional technology. As Broham (1996) explains participation alone is not acceptable but must be linked to a process of empowerment. Nelson and Wright (1995, pp.7-11) cite the three dimensions of empowerment as: personal empowerment concerned with the development of "confidence and abilities (including undoing the effects of internal oppression);" relational empowerment in respect to gaining the ability to, "negotiate and influence close relationships;" and collective empowerment embracing, "working collectively to have greater impact" than that of one individual. The process of instructional design requires equitable participation and input from participants. It could be claimed that the change agent (instructional designer/instructor) acts only as a facilitator in respect to the participant decision making process of setting the parameters for instructional content, methodology, goals and standards handing power to the participants to virtually design their own instruction and thus developing confidence and abilities. Participatory monitoring and evaluation of instruction further contributes to equity (particularly in respect to the evaluation of the instructor and instructional content) by placing participants in a position of control and influence a situation Chambers (1997, p.xvii) describes as "putting the first last". The instructional process itself (implement instruction) also becomes a vehicle for empowerment often promoting group action through instructional methodology (particularly in a non formal situation) (Eckman, 1994, ch.17)

The concept of the external agent be it an individual or an organisation also spans both processes with the agent in the case of instructional technology becoming the facilitator of good instructional design and delivery. In the case of alternative development type instructional interventions the preferred methodology of instruction is informal (Eckman, 1994, ch.3) thus placing the instructor (change agent) in exactly the same role as she/he would undertake for any alternative development program. The pitfall of attitudinal barriers discussed in chapter two are equally as applicable to a change agent concerned with instruction as to one facilitating other forms of development. Thus the ideology of promoting equity through partnership becomes integral ideology linking both processes as does the need to address human bias, cultural concerns, communication barriers and inappropriate motivation (Chambers, 1983, pp.1-6). Burkey (1993, p.73) discusses the external agent from the perspective of instructional provider citing such an agent as a natural component of any development agency who facilitates self reliant, participatory development training.

The key ideology of development participants spans both processes. Alternative development calls for addressing the needs of the most needy (participants) (Chambers, 1997, p.12). Instructional technology seeks to deliver (identified/needed) information to all who will benefit from it. In practical terms if needs identification is executed correctly instructional technology will always deliver information to the correct participants on an equitable footing with no bias towards a preferred group. In addition the key ideology of efficiency from the perspective of instructional technology assists in ensuring that all those participants that should receive instruction do so (Mager, 1997, pp.81-110).

This emphasis on efficiency is of great significance to the instructional process from two separate perspectives; firstly efficiency means delivering instruction in the most efficient way ensuring that the correct participants are identified and instruction achieves its aim of passing on knowledge to all who require it. Secondly efficiency within instructional material offered is considered paramount resulting in instruction that covers all the knowledge and skills required to achieve the instructional goal. Such instruction however excludes those knowledge and skills that are required to achieve the goal that participants have indicated they already know or are competent at completing (Mager, 1997, pp.1-12). The significance of this ideal in an alternative development perspective is obviously one of efficient

use of resources and manpower as instructional technology ensures that time and resources are not wasted through inappropriate instruction.

Summary

The structural linkages between alternative development and instructional development follow similar patterns. In a development situation development becomes the primary process with instructional design paralleling that process through a series of like and closely linked steps. Needs identification is satisfied by a PRA type process in both situations, design of the development intervention can be extended to consider instructional design with added considerations involving all key players in respect to actual instructional goals, content and delivery. If instruction is required by the development intervention the process will be a normal part of the development implementation phase with monitoring and evaluation considering the instruction as well as other development activities. Instruction itself will also contain an additional component of monitoring and evaluation in respect to instructional content and the performance of the change agent (instructor).

Key linkages in ideology reflect like considerations and base ideals. The ideological hub of participation becomes a prerequisite of both processes. Empowerment, an integral component of alternative development, is enhanced by good instructional practice and is a desirable output of good instruction. The external agent plays a key role in development as a facilitator and in instruction as an instructor/facilitator. Dependant on instructional methodology this role can move from a less desired role of formal instruction to a preferred role of informal instruction where the change agent facilitates rather than instructs. Ideologies concerned with participants reflect similar concerns and in practical terms good initial selection through the developmental process combined with appropriate needs assessment should result in appropriate participants being identified for any instructional intervention. The key (instructional technology) ideal of efficiency is not undesirable in the development context and although it can be argued that if parameters to efficiency become too rigid gaps in those who receive good instruction/development could occur in practical terms this is highly unlikely due to the recognition that alternative development is the primary process and that instructional design is intermeshed with it.

Thus in the context of the alternative development process instructional design reflects similar structures and ideologies as the primary function. In fact in many cases the ideology of both processes is inseparable.

Chapter Five

The Integration Of Alternative Development And Instructional Technology: Conceptual Framework

Introduction

Although there are a great number of works on instructional delivery from a development perspective, (Freire, 1970; Havelock and Havelock, 1973; Rahnema, 1992; Eckman, 1994; to name a few), little has been written on the integration of alternative development and instructional technology. Although alternative development is in part an educative task (Litwin, 1986, p.40) it appears little has been done to strengthen the linkages between the two processes. It is however considered that such linkages are possible and would result in extreme advantages to the overall development process. In this chapter a model achieving integration of the two processes is proposed, the advantages are discussed and practical methodologies highlighted.

An Integrated Model

As already discussed previously, in any attempt to integrate the two processes alternative development must be the prime theoretical and methodological thread. To this end integration becomes no more than an addition/merging of instructional technology procedures to each phase of alternative development. In many cases such additions/merging mean little more than additional considerations during an activity already commonplace in the alternative development cycle (e.g. PRA). In other instances specific consideration must be given to instructional design functions. A diagrammatic representation of the two processes integrated is shown over:

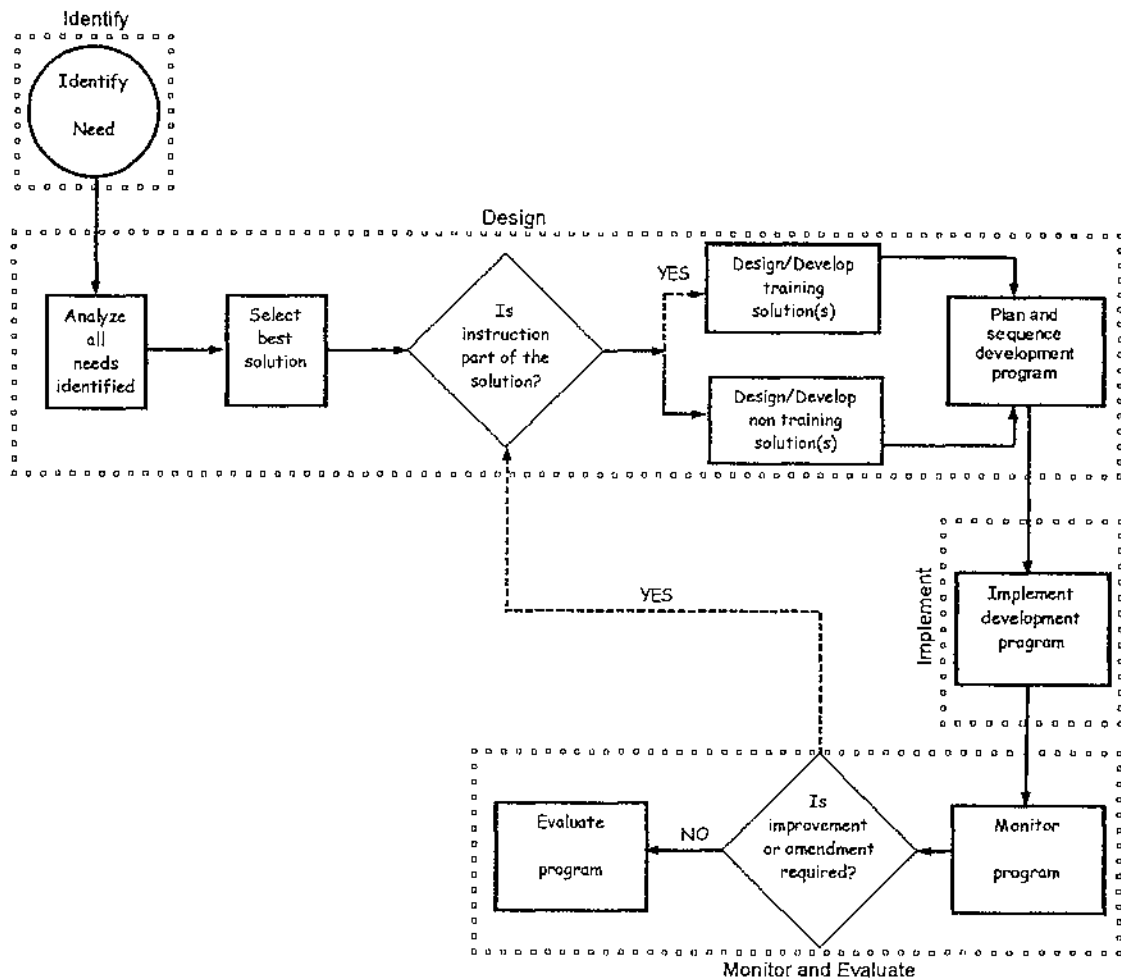


Figure four: Alternative Development Considering Instructional Technology
Adapted from: NZODA (1996) & Robert F Mager (1997)

The above diagram clearly depicts the maintenance of the alternative development process as the prime thread (identify, design, implement, monitor and evaluate). Of key significance is the introduction of methodology from the instructional technology thread to enhance the entire process. These methodologies include formal needs analysis of all identified needs (rather than just training needs); selection of the best solutions as a formal process; and planning (in particular sequencing) the development program to ensure appropriate (and practical) development input (be it instructional or non instructional). In addition the formal function of instructional design is recognised as a component embodying the full spectre of instructional development. Program monitoring is designed to facilitate either amendment of training solutions or amendment of non training solutions thus maintaining the principle of flexibility and evolution of the program (Cusworth and Franks 1993, pp.8-11).

The Advantages Of The Integrated Model

As (Litwin, 1986, p.40) emphasises participatory (alternative) development normally incorporates some form of education as a primary function. To this end the integrated model recognises the instructional component of development as an entire process, rather than what is often a poorly executed 'tack on'. In addition with alternative development (and its principles) remaining the primary function the benefits of proven strategies/methodologies are incorporated into the instructional design process. Of particular significance is the use of participatory methods of enquiry such as PRA, which are readily transferable to instructional design methods and contribute greatly to instructional content that reflects the absolute needs of participants and instructional methodology that is appropriate to the situation and culture of the participants. The use of such techniques also contribute significantly to the process of empowerment through power reversal. As Chambers (1995, p.30) states this process "enables local people to do their own analysis, to take command, to gain in confidence, and to make their own decisions."

The integrated model also addresses one of the key issues of development instructional design and methodology today, the fact that instruction delivered in many development situations is imported from other development initiatives or from instructional manuals designed in the North.⁸ Eckman (1994, ch.3-4) highlights the need for better training design and methodology which moves from a formal to informal approach to delivery and involves participants fully at all stages. Havelock and Havelock (1973, p.52) emphasise the need for "relevance" in training programs citing relevance to social need, immediate environment and participants expressed needs as prerequisites to good instruction. As Mager (1997) promotes throughout his book appropriate instruction only comes by involving those whose needs are being satisfied (the participants) in each step of instructional design. In other words those who know best what their needs are, and how to best satisfy them within the context of their own environment, are those whose needs are to be met.

⁸ For example: Training for Transformation (Hope A and Timmel 1987); Workshop on Gender Health and Development (PAHO 1997).

The integrated model also formalises a process of selection of the best solution to meet developmental needs. This process again allows for participation and moves away from the rigidity of formal planning to an experimental approach to program design (adaptive approach) (Cusworth and Franks, 1993). Not only does this phase ensure absolute participant input but it considers development needs, and solutions to these needs, in a holistic manner. It is not argued that such analysis is not already present within the alternative development process but rather that recognising it as an integral step in the process adds to its efficiency and impact in respect to participant input and needs.

With preferences in respect to planning alternative development firmly aligned to an adaptive approach the clear separation of design (i.e. design the actual input/process) and plan/sequence the development program assists in setting a number of activities in logical sequential order rather than setting a rigid planned developmental framework. The integration of the sequencing function of instructional technology greatly assists in this process as it promotes logic and flexibility whilst still considering an adaptive planning process. Logistical frameworks⁹ if required can easily be derived from the process but tend to be more flexible in nature (a desirable characteristic) as the sequencing process offers options rather than rigidity.

The integration of training technology also significantly enhances the participatory monitoring and evaluation requirements of alternative development by introducing evaluation of instructional content during and immediately after the instructional intervention. In addition is the process of instructor (change agent) evaluation, which as discussed contributes greatly to equity and also provides the change agent with immediate valuable feedback as to her/his performance. Such evaluation is integral to the adaptive nature of the intervention and provides a solid basis for change (to the program) as required.

⁹ A common developmental planning tool often referred to as a logframe (Cusworth J and Franks 1993)

Descriptions: Additional Processes

Integration of instructional technology into alternative development obviously calls for some modification as to the instructional design process used by Northern industry. In the case of Northern instructional design although the overall goals are the same (appropriateness, effectiveness and efficiency) the focus is commerce based and thus inappropriate to a development situation. It is however not impossible to adapt these process to reflect a developmental base. The integrated model reveals three key processes that are additional to the alternative development norm. These are; analysis of all needs, design/development of training solutions and monitoring of instructional inputs and outputs.

Needs analysis consists of the components; performance, goal and task analysis:

Performance analysis seeks to enquire as to what participants are currently doing and what they desire to do. If there is a discrepancy between these two questions then there is an obvious need to determine whether there is a skill deficiency that contributes to the situation or some other deficiency. Performance analysis will result in identification of discrepancies, determination of the cause of them and identification of remedies to address them (Mager, 1997, pp.29-39).

Goal analysis is concerned with better definition of discrepancies that normally are not physical in nature¹⁰ and is used to better define and identify the exact human performance that would indicate a discrepancy had been overcome.

Task analysis is simply a process that identifies all the tasks that are needed to be achieved to satisfy the discrepancy. Mager (1997, p.56) describes task analysis as: a set of techniques used to help make components of competent performance visible." *He adds*, "It's a set of ways to draw a picture of what competent people actually do, or should do, when performing a task. From this picture it is then

¹⁰ For example if a particular building (say clinic) was identified as a discrepancy it stands as an identifiable object but if 'participants have a negative attitude towards preventative medicine' was identified as a discrepancy this would need further analysis in respect to definition.

possible to derive skills that anyone would have to have before they, too, can perform the task competently”.

The components of needs analysis thus better inform us as to the absolute nature of the developmental need identified by participants. Each analysis can be (and should be) conducted in a participatory nature seeking input from participant. The actual process of each type of analysis is discussed at appendices one to three.

Design and development of training solutions formally recognises the craft of training design and considers a systematic approach to it. The approach moves through the two key procedures of deriving instructional outcomes and developing instruction:

Deriving instructional outcomes is concerned with describing in detail what is to be taught. This process is initiated with the identification of the objectives (description of outcomes) of what will be taught. Objectives are derived directly from the task analysis and are concerned with participant performance, the product of instruction, the conditions under which the performance occurs and the standards of acceptable performance. Objectives are themselves organised into skill hierarchies which are simply diagrammatic representations of the logical sequence in which objectives should be taught. In addition the procedure is also concerned with participant description which involves recognition of participants as a unique group and aims to enquire as to their preferences as to instructional methodology and instructional delivery. The participant description is considered by Mager (1997, p.93) as an extremely important part of the process. He states, “If you spend even a tenth of the time thinking about and describing your students as you do thinking about the subject, you will develop a powerful tool for ensuring the effectiveness of your instruction.” Finally the process seeks to identify any prerequisites (particularly skills but sometimes other physical/social factors) that may be required by those participating. In a development context this often leads to the identification of further instructional needs (Mager, 1997, pp.74-110). Simple guidelines to developing instructional outcomes are shown at appendix 4.

Developing instruction is concerned with the production of actual instructional content. This procedure is often the normal entry point for development

practitioners (but obviously not the most appropriate one). Instructional development follows the established sequence of:

- identifying the most appropriate method of participant assessment (setting criterion tests) in respect to their achieving instructional objectives. Or as Mager (1997, p.114) states; "If it's worth teaching, It's worth finding out whether the instruction was successful".
- Identifying how participants will practice (to develop the knowledge/skill) each component of instruction.
- Deriving instructional content or deciding what the participants need to know before they can practice the objective.
- Selecting the instructional delivery system (in respect to formal/informal, verbal/print etc).
- Drafting instructional modules. (not lessons but open ended instructional packages)
- Trying out instructional modules (if possible through pilot course)

Developing Instruction is further discussed at appendix five.

Monitoring of instructional inputs and outputs is additional to the normal program monitoring process. It is concerned only with the instructional components of the developmental program and as such involves those participants who received the specific instruction in question. Although the evaluation process follows the norms of participatory monitoring and evaluation (Guijt and Gaventa, 1998) it enquires into three key areas; the effectiveness of the instructor, the effectiveness of the instructional material (in respect to delivery) and the effectiveness of the overall instruction as to what knowledge and skills were gained. Such monitoring and evaluation provides feedback on the entire instructional process and is the key to further instructional design, upgrading of instructional content/methodology and modification of the instructors instructional techniques if required. The process gives participants the absolute right to input and is considered a key contribution to the process of empowerment. It is emphasised that this process is only the first step in a (normal) broader monitoring and evaluation process enquiring as to the entire development program but as such contributes significant data to that process.

Summary

The integration of instructional technology into alternative development is achieved by a simple merging of the two processes. Alternative development remains the key thread in the new model and as such retains all its key methodologies and principles. The new model does however become more precise and incorporates several specific functions of instructional technology. These functions are related to achieving good instructional design and include formal analysis of all identified needs, program sequencing including that of all instructional modules, instructional design and additional monitoring and evaluation.

The integrated model has distinct advantages over other alternative development models (and separate developmental instructional design) in respect to placing further emphasis on participation and empowerment; producing instructional models that fully consider the social, environmental and cultural conditions of participants; promotion of selection of the 'best' developmental solution; further reinforcement of an adaptive approach towards development planning, and better monitoring and evaluation.

The key additional processes brought to the integrated model include; needs analysis (covering the analysis of performance, goals and tasks), a formal (systematic) training design process which moves through a logical sequence of participatory training design(which includes deriving instructional outcomes, and developing instruction), and specific monitoring of instructional inputs/outputs.

Overall the integration of the two processes leads to an alternative development program that recognises instruction as a key component to any development intervention and negates a tendency to introduce such instruction as an 'add on' reflecting inappropriate instructional design and methodology.

Chapter Six

The Integration Of Alternative Development And Instructional Technology: A Case Study

Introduction

This thesis seeks to address two key areas of enquiry, firstly the effectiveness and practicability of a integrated alternative development/instructional technology model both from a theoretical and field perspective, and secondly the number of development providers that are currently employing such a model. Such an enquiry called for two explicit approaches with on the ground evaluation research satisfying the first area, and a broad-spectrum survey the second area. This chapter deals with research conducted in the field to satisfy the first area of enquiry.

Evaluation Research

Evaluation research for this study spans some twelve months of development work in Vanuatu. The research is based on my own developmental experiences which in the main were focussed on alternative development methods with an emphasis on knowledge transfer and instructional design. My early work in this field led to the identification of inadequacies and a lack of efficiency in respect to developmental instruction. This became the catalyst to carry out research to identify a more effective method of knowledge transfer.

Evaluation research methodology offered the broadest model to achieve the specific research purpose and in addition allowed a range of methodologies to add flexibility to the method of enquiry (Babbie, 1995, p.338). The key method of enquiry for this research involved initial groups of participants who received instruction from providers utilising separate models of alternative development and instructional design and later, groups of participants who received instruction from providers utilising an integrated alternative development/instructional technology

model. All instructional providers came from within the same organisation providing consistency in instructional delivery methods, purpose and goals. The area of instruction resulted from earlier PRA and involved the construction of ventilated improved pit (VIP) toilets.

The main method of enquiry was based on a standardised system of instructional validation and assessment through action (actual construction of VIP toilets). The enquiry sought to determine the effectiveness of instruction, the efficiency of instruction and the appropriateness of instruction.

The effectiveness of instruction was measured against the end result of the intervention with participants physically carrying out the procedures they had been taught. These procedures were observed through all phases to determine how effective instruction had been.

Efficiency of instructional content was measured through group discussion. The key focus of this research was to identify any instructional components that had been taught unnecessarily (skills participants already knew or did not need to know). In addition the time spent in instruction was considered (time being a paramount consideration in respect to rural people).

The appropriateness of instruction was also investigated again through group discussion. The main thrust of this enquiry was to ascertain whether what was taught was really what participants wanted to know and if their initial needs identification matched instructional outputs.

The enquiry used a standard set of questions each discussed by participants during an evaluation process that followed some one week after the intervention. Results were presented in a report format reflecting consolidated data and have been interpreted into a case study spanning some twelve months and eight instructional interventions. The participants of the study were rural Ni Vanuatu from the islands of Epi and Espiritu Santo.

The Case Study

Introduction. Rural Skills Training Program (RSTP) was raised as a joint venture between the Government of New Zealand and the Government of Vanuatu in 1993. The program sought to increase the quality of life in rural Ni Vanuatu through a bottom up development process that focused on the provision of new skills through instruction (Hatton and Loughman, 1994). RSTP methodology involved micro interventions targeted at village level. Each intervention firstly considering village needs through a PRA type process. RSTP (as an organisation) then considered what needs could be met through training and which could be satisfied through other means these items being passed to the Vanuatu Department of Local Government to be met through that agency. RSTP then carried out a separate process (in Port Vila) of instructional design for all instructional needs identified and finally returned to the village concerned and delivered the instructional package.

The Field Program (Village Needs Assessment). RSTP commenced its program in the field in 1994 both on the islands of Epi and Espiritu Santo. The first phase of the operation was to carry out a village needs assessment in each of some 10 villages. It was considered that from this assessment a like training subject could be identified and training designed to satisfy this need. Village needs analysis identified a moderate development agenda with several like priorities the preferred (by village members) of which was that of improving sanitary arrangements as current pit latrines were considered a health hazard both by village people and the Vanuatu Ministry of Health¹¹. To this end RSTP saw as its first priority an instructional course to facilitate the construction of properly placed ventilated improved pit toilets.

The Field Program Stage One. The instructional course was designed by RSTP in late 1994 and was based on previous courses that had been conducted by the Vanuatu Department of Rural Development in conjunction with United Nations Development Project (UNDP). A standard guide to construction was available as

¹¹ Iron deficiency anaemia is linked to poor hygiene standards (and malaria). (FAO 2003)cites VIP toilets as having a direct impact on the reduction of this condition.

well as a good instructional plan and program. The instruction was designed to be conducted in afternoons over a five day period and covered the following subjects:

- Day one: Introduction to the topic, general discussion on advantages of VIP toilets, how to correctly site a VIP Toilet.
- Day two: Building the frame for the pit slab including measurements production of keyhole template etc.
- Day three: Mixing concrete, pouring the slab
- Day Four, Pit Construction, placing/sealing the slab.
- Day five, construction of 'the small house'.¹²

Instruction at the village of Nuvi a small (approximately 20 households) settlement on the eastern coast of Epi Island. was duly conducted by a Ni Vanuatu counterpart and myself. The course was based on the construction of two VIP toilets (one each for the chiefs Nakamal¹³ and the women's group meeting house). Instruction went well with one participant from each household taking part (with plenty of additional interested parties) and two well sited/well constructed VIP toilets resulted at the end of the five-day period. Participants were on the final day supplied with the materials they would require to construct their own household toilets (paid for in part by a barter system) and all contracted to construct a toilet per household within the next month.

Evaluation. Within one week it was found that participants had organised and as working cooperatives had constructed all the required toilets to an exemplary standard. Such results were far better than expected with an added bonus of the course assisting in the motivation of participants to get on, organise and construct. Subsequently the course evaluation process was immediately initiated to gain further feedback on the intervention. The evaluation was conducted over a period of two days once again using only afternoons. The process was initiated with a group discussion on how well the training was conducted and how appropriate it was to the needs of the participants. The form used as a checklist for the discussion is shown at appendix six. It was during this discussion that two key anomalies were identified; with all participants agreeing that of the length of the

¹² Top enclosure of the toilet built from local materials.

¹³ Village Meeting/Kava house.

intervention was too long and claims that a majority of participants were already familiar with most topics covered. Further discussion revealed the following points:

- Participants were well aware how to site toilets this being part of their normal procedure when digging uncovered pit latrines.
- Participants all knew how to make a concrete slab (concrete making from coral lime was common on Epi), but were unsure of dimensions and placement of the keyhole/production of a template and placement of the vent.
- The construction of the 'small house' did not require instruction as it followed traditional local methods.

It was agreed by participants however that there was some value in completing the whole process of VIP toilet construction in future courses as they felt other villages may not have the same knowledge they already possessed.

The second evaluation process concentrated on the end result of the intervention (in this case the VIP toilets) and whether participants saw it as appropriate to their situation, whether what they had learnt had raised new developmental issues, and whether the end result reflected the need they had identified. The questions addressed during this discussion are shown at appendix seven. This discussion was added to by a period of observation to gauge how accepted the new technology was and if it had any negative impact on village life.

In the main this discussion and period of observation reflected a positive response to all areas of enquiry with key advantages of better access to toilet facilities, less flies, less smell being cited. Additionally village members showed exceptional pride in the new structures and if anything carried out family programs of excessive maintenance/cleaning (mainly by the male family members). This attitude was not seen as a hindrance to village life in any way but rather that additional village pride had been fostered a fact that was later supported by voluntary village beautification programs initiated by families. It was concluded from such observations that the RSTP developmental process had not just built toilets but had significantly contributed towards an organising process within the village that had led to increased village pride and future village empowerment.

Resulting Action. With the evaluation in mind RSTP set about considering amendment to instruction to better reflect the local situation. It was considered that amendment of instructional content was appropriate but that other participants may not share the same existing knowledge as the people of Nuvi and if the instruction was amended too severely (i.e. cut back to the basics and not promoted as an entire process) that participants may fail to acquire the knowledge and skills they needed. In addition it was considered that with a significantly shorter course the process of organisation, building village pride and empowerment may not eventuate. Although RSTP's aim was to construct VIP toilets this additional benefit of the course was seen as positive and extremely important to retain. To this end the course was amended by RSTP staff to cover four rather than five days with the only instructional exclusion being building the 'small house'.

The Field Program Continued. The second round of instructional interventions took place in the villages of Lepa, and Mate on the island of Epi and the village of Tasariki on the island of Espiritu Santo (a larger village that required two back to back courses). Evaluation of these interventions resulted in similar comments as those of participants from Nuvi and results remained positive in respect to construction and later village organising. Of interest was the comment from Tasariki where participants already had the skills of making concrete but this being due not to traditional knowledge but rather to exposure to other training interventions in respect to construction of concrete floored buildings. In addition Lepa and Tasariki participants felt that the intervention had disrupted their normal daily routine too much and resulted in a negative impact on their households¹⁴.

A Change In Methodology. At this stage it was obvious that although course results were both desirable and effective that instructional content was inappropriate to the individual village situation and did not acknowledge existing knowledge and skills. The impact of a four day course on village life had proven to be particularly negative in two cases this was totally undesirable from RSTP's point of view. Development methodology in respect to participatory processes had become far more accepted as appropriate by this point in time in Vanuatu (1995)

¹⁴ This was in the main due to the location of water and gardens with significant time spent travelling to and from them. Attending the course severely limited participant efforts in respect to garden maintenance and water provision. Water provision problems were later solved in these villages by reticulation

with recognition of PRA as an effective assessment tool by this stage in time (Wyatt, 1996, p.13). Paralleling this trend RSTP staff had received workshop training (in conjunction with the Peoples Federation of the South Pacific) in PRA principles and practices. Consideration of newfound knowledge and evaluation information gathered so far initiated a move by RSTP to introduce a development model that gave serious consideration to soliciting far more participant input during instructional design. Thus the RSTP system evolved to formally consider instructional design as part of its participatory processes rather than a process carried out by the organisation's staff in isolation. The process adopted by RSTP reflected a simplistic approach to such integration with PRA being extended to consider "training needs analysis" which included goal and task analysis. In addition a formal system of village analysis was introduced to assist in fully considering the participants social, environmental and cultural situation and thus better 'shaping' the instructional intervention to local conditions. The new RSTP model is shown below:

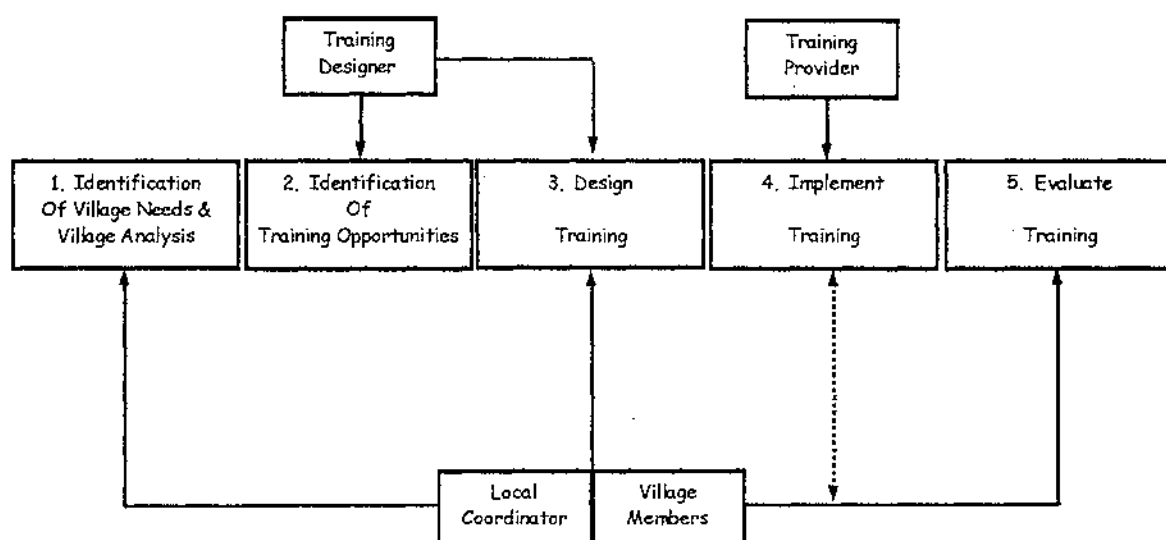


Figure five: RSTP (Integrated) Development Model

Application of the new Model. Introduction of the new RSTP model occurred in the next group of interventions RSTP was concerned with these took place in the villages of Alepa (Epi), Tavio (Epi) Pelmol (Santo) and Matantas (Santo). Of these villages Matantas was of extreme significance as it was involved with the Vatte Conservation Initiative, which had through inappropriate methodology created friction amongst village members. This initiative was on the brink of collapse and RSTP had been requested to assist in reshaping the direction of village development and act in an additional role of conflict resolution.

RSTP applied its new development model to each of the villages concerned. This involved adding to the already completed needs analysis by way of a village analysis and then a period of training design carried out in the village with input to the process being offered initially from the village as a group and secondly from a village training team elected by the village. Input from these groups during training design highlighted the same concerns of existing knowledge and time as past evaluation had identified with all villages opting for an instructional package consisting of a one-day workshop that briefly covered the principles of VIP toilets but concentrated on a hands on session where participants (in groups) constructed VIP slabs. In the case of Matantas there was some resistance to the process but village members agreed that it was a worthwhile initiative and opted to carry on with the training component.

The One-Day Workshop. In each of the four villages the one-day workshop was duly conducted. Workshops were staggered to enable me to observe each in turn to gauge participant reaction and solicit immediate participant feedback. The whole workshop process appeared to be more relaxed than past interventions with participants treating them as a break from the normal daily routine and becoming fully involved. An attitude of 'these are our workshops, we helped design them,' was evident and as participants were given free reign in respect to how they organised the actual slab construction even at the early stages of this process a new pride and better organisation prevailed. The main feature of the workshops was that all enjoyed them and participants considered that they were fun. At the end of each workshop participants were supplied with materials to construct family toilets and negotiated contracts as to completion dates.

Evaluation of the New Model. The same evaluation process that RSTP had applied to all its training was utilised to evaluate the one day workshops. Feedback from this process was extremely positive with all village members keen to try other such interventions. The organising/empowerment if anything was more evident with the new training committees formed during the process approaching RSTP with more ideas as to what village members considered additional needs. All villages had completed their family toilets within the next month (the contracted time) and once again an increase in village pride was evident. In the case of Matantas past differences between village members seemed to have been

minimised¹⁵ and village members appeared keen to consider ways to advance the conservation project.

Research Findings

It is not argued that both the RSTP models of development (separate development and training design, and integrated development/training design) did not achieve the desired end result identified by the PRA process. Rather it is suggested that comparison of the two processes raises questions of efficiency, appropriateness of methodology and inappropriate impact on participant household routines. Table two below highlights these concerns through comparison of the two processes in respect to consolidated participatory evaluation comments.

| <u>Internal Validation</u> | <u>Separate Models</u> | <u>Integrated Model</u> |
|---|----------------------------------|----------------------------------|
| SA: Strongly Agree, A: Agree, D: Disagree, SD: Strongly Disagree | | |
| The language used in the training was easy | SA (A) D SD | (SA) A D SD |
| The trainer was not the right person to conduct the training | SA A D (SD) | SA A D (SD) |
| The training was inappropriate to the local situation | SA A D (SD) | SA A D (SD) |
| The training was too long | SA (A) D SD | SA A D (SD) |
| There was not enough time for discussion | SA A (D) SD | SA A (D) SD |
| Most of the topics covered we knew | (SA) A D SD | SA A (D) SD |
| We think the training we received will improve village life | SA (A) D SD | (SA) A D SD |
| <u>External Validation</u> | | |
| Have the knowledge and skills learnt during training been used: | (Yes) Maybe No | (Yes) Maybe No |
| Was the training delivery method appropriate to village life: | Yes (Maybe) No | (Yes) Maybe No |
| Do you consider the training will improve your quality of life: | (Yes) Maybe No | (Yes) Maybe No |
| Were there any difficulties that hindered you doing what you learnt:: | Yes Maybe (No) | Yes Maybe (No) |
| Do you think the training prepared you well to achieve its main goal: | (Yes) Maybe No | (Yes) Maybe No |
| Was the training time: | (Too long) Too short About right | Too long Too short (About right) |
| Were there any parts of the training you had difficulties with: | Yes Maybe (No) | Yes Maybe (No) |

Table two: Consolidated Evaluation Results

The key question of efficiency is evident in the comparison in respect to the time taken to deliver instruction. Efficiency in this perspective is aligned to efficient delivery versus time taken. Obviously the longer the time taken to achieve instructional goals the more the cost. Additionally time has a direct impact on the number of interventions possible in a given period. Funding in most development situations is not unlimited (particularly in respect to rural development) and

¹⁵ Due in part to the training course which was designed as part of the conflict resolution process.

unfortunately many donors (particularly governmental) place time restrictions on the development program. Thus the more efficient the instruction the wider the developmental coverage. Hypothetically the integrated RSTP model was a minimum of four times more efficient than the individual model. This highlights the absolute need for good participant input in respect to what knowledge and skills participants already possess and what the true instructional needs are. These facts were readily identified when the integrated model is used.

Appropriateness of delivery methodology has long been argued within development circles with those proposing alternative development seeking to promote a less formal approach. This argument is strengthened when comparing the two RSTP models. The five-day course (individual model) was far more structured and presented more formally than the one-day workshop. Although both models did prove to promote group action and contribute to a process of empowerment there was good indication that the integrated model was more effective in achieving this. In particular participants comments as to improving village life reflected a strong (rather than moderate) response in respect to those who completed the one-day workshop. Training committees formed under the integrated model additionally contributed to a solid village organisational base. The workshop approach to the intervention was decided in conjunction with participants. It was their call as to how delivery would be best achieved illustrating the value of participant input promoted by the integrated model.

Inappropriate impact on participant household routines is a key consideration in respect to any alternative development intervention. In the case of the initial RSTP model instruction disrupted four to five days of village routine (a program predetermined by RSTP staff). This was found to be unacceptable by nearly all participants and although they managed to balance the course and household maintenance requirements it is questioned if such disruption should be tolerated. In the case of the integrated model participants had the opportunity to input to the structure of the course and its timings. This directly contributed to instructional time being reduced and timings being introduced to suit participants, thus the impact on household routines being minimised/acceptable.

Summary

Primary research for this thesis covers the case of Rural Skills Training Program in Vanuatu and its instructional initiatives in respect to the construction of ventilated improved pit toilets. An evaluatory approach to research was applied to RSTP's interventions over a one-year period. The approach incorporated participatory evaluation and in the field observation of RSTP's efforts over this period.

RSTP was raised a joint venture between the New Zealand Government and the Government of Vanuatu. The program sought to improve the quality of Ni Vanuatu village life through the provision of knowledge and skills identified as developmental requirements by participants.

RSTP initially embarked on a development model that considered bottom up development and training design as individual processes. This approach was applied to three villages on the island of Epi and one (larger) village on the island of Santo. Evaluation of this approach revealed specific anomalies as to the subject matter covered (most participants already had many of the knowledge and skills taught), and as to the length of the intervention (four-five days), which was considered disruptive to village household maintenance. On the positive side the intervention achieved its desired goals with an added bonus of fostering village organisational ability and pride.

As a consequence of the anomalies resulting from its initial intervention RSTP redesigned its development model to integrate alternative development and instructional design thus facilitating better participation of village members during the instructional design process. This new model was used in respect to the development of four villages (two each on Epi and Santo).

The introduction of the integrated model resulted in positive and valuable input during the instructional design phase of the intervention from participants. This led to the intervention evolving from a five (half) day semi-formal course to a one-day informal workshop. Participatory evaluation of this workshop revealed that not only was it better suited to the social and household needs of participants but also it was a more effective tool in fostering organisational ability and pride.

Analysis of evaluation data comparing the two models of intervention highlighted the fact that village participation during instruction fostered by the integrated model had significantly contributed to efficiency and appropriateness. In addition the impact on village household routine had been reduced by an instructional intervention that minimised time wastage and was conducted to timings chosen by participants.

Chapter Seven

Current Trends: An Enquiry

Introduction

The second research component of this thesis was to investigate current trends in respect to participation in instructional design by the target population (participants). The purpose of this enquiry was to assess whether the present development community (providers) had in any way acknowledged that participant input during all/some phases of instructional design was a desirable component of the development initiative. It was considered of importance to assess whether development agencies had 'picked up' on current accepted instructional design trends (as had RSTP) and were applying them to development situations¹⁶. This chapter deals with this enquiry, the research methodology adopted and the results.

Research Data Collection

The main thrust of the enquiry was to cover as broad a spectrum of those organisations concerned with alternative development as possible. To this end a survey type enquiry was instituted with data being gathered by self administered questionnaires (Babbie, 1995, pp.258-261). Research design revealed three key problems, how to identify an appropriate survey sample, how to administer the questionnaire to a sample with such a diversity of physical location and how to try to ensure that an appropriate number of the respondents would complete the survey.

¹⁶ Although it would have been desirable once such groups had been identified, to assess their entire operation (in respect to integration of the development and training processes), this was considered a too large (and costly) research target thus the enquiry was confined to current trends.

Identification of an appropriate survey sample and method of administering the questionnaire are somewhat interlinked. Information collection from a perfect survey sample (all/a large group) can be prohibitively expensive (de Vaus, 1995, p.60) and as such the method of administering the survey to some extent contributes to decisions on how best to select the sample. In the case of data collection for this enquiry it was decided to incorporate a web based approach to the survey. To this end it was important to identify a sample that had an electronic mail address and access to the Internet for purposes of completing the questionnaire. Subsequently a search was made of the World Wide Web to ascertain whether a broad enough spectrum of development agencies met these two key criteria. Two websites were identified as providing good information in respect to this, they were: the Directory of Development Organisations (Wesselink, 2003) as a primary source and the Dev Zone Pacific Development Directory (DevZone, 2002) as a secondary source. These two sites provided listings of over 20,000 development organisations giving key information that included, types of activities carried out, contact information and countries of interest (examples of listings are shown at appendix eight). A specific sample group of some 1,000 agencies that met the criteria of being involved in (alternative) development, having an electronic mail address and being an organisation that in all probability utilised instruction as a development tool was selected from these sources.

Motivating respondents to complete the return considered; stimulating interest in the questionnaire, ease of access to the questionnaire and questionnaire design that encouraged response (de Vaus, 1995, pp.106-125). The key principle of administering the questionnaire was to foster and maintain interest in it and to this end it was decided to initiate the process through electronic mail (giving explanation as to the survey) with provision of a hyperlink directly to the survey that was placed on an independent web site. Thus respondents could read the electronic mail, go directly by hyperlink to the questionnaire, complete it and submit it. The questionnaire itself was designed to enquire through drop down selections as to:

- Whether the organisation was concerned with training in the third world
- Whether the organisation designed its own training
- Whether training was designed in the country it was going to be delivered in
- Whether the intended participants were involved in training design

- How participants assisted in training design

Opportunity was also given for additional comments. A copy of the web page is shown at appendix nine.

It was decided that the survey sample should cover some 200 organisations (considering a sample error of about 7%) (de Vaus, 1995, p.71), in addition a further 50 organisations were added to the sample list to allow for outdated email addresses. Random selection of 250 organisations was achieved by sending an electronic letter to initiate completion of the questionnaire to one quarter of the specific sample group of 1,000 by choosing every fourth organisation listed.

Survey Responses

Of the 250 enquiries sent by email 63 were returned a 'address not valid'. It can therefore assumed that the true sample consisted of some 187 enquiries. Of this 187 replies were received for 76 equating to a 41 percent response rate (a list of these organisations is shown at appendix ten). Information supplied gave far more detail (through the comment boxes) than was expected and gave insight into not only instructional design across a broad spectrum of development agencies but also (in some cases) the effectiveness of participation within that design.

The design of the questionnaire also allowed for specific decisions as to the organisations use of current technology by the inclusion of a requirement to comment on participation in respect to the more technical aspects of instructional design. These indicators allowed me to build a broad picture of how many agencies had adopted a systems model of instructional technology and how many were in reality still utilising older pre systems models.

Consolidated results of the survey and explanation of results for each specific area of enquiry are shown over.

| Total Enquires Mailed: 250. Enquiries returned (no such address): 63 | | | | |
|---|------------------------|----------------------|-----------------|---------------------|
| Enquiries answered: 76 of 187 (41%) | | | | |
| <u>Statement One</u> Our organisation is concerned with delivering training in the third world. | YES 76% | SOME TIMES 24% | NO 0 | |
| <u>Statement Two</u> Our organisation designs its own training. | YES 88% | SOME TIMES 11% | NO 1% | |
| <u>Statement Three</u> Training in the main is designed in the country we will deliver it in. | YES 90% | SOME TIMES 9% | NO 1% | |
| <u>Statement Four</u> When designing training the people we are going to train are involved in the design process. | A LOT 79% | MEDIUM 11% | A LITTLE 10% | |
| <u>Statement Five</u> The people we are going to train assist us in our training design during. | GOAL ANALYSIS 4% | TASK ANALYSIS 3% | BOTH 4% | NOT SELECTED 89% |
| <u>Statement Six</u> The people we are going to train assist us in our training design during. | DERIVING OBJECTS 2% | OTHER (See ?) 88% | BOTH 10% | NOT SELECTED 0 |
| <p>? Other Activities: •Pilot course input: 7%. •Use of peer trainers: 11%. •Needs identification: 58%. •OTHER not described: 15%.</p> <p><u>Informal training:</u> •Identified by 71% in addition to the above.</p> <p><u>Needs identification:</u> •Includes the 10% that selected BOTH in statement six.</p> | | | | |

Table three: Consolidated Questionnaire Results

Statement one of the questionnaire was designed to ensure identification of those replying as being involved in third world development and training delivery. In addition it was of interest to identify what percentage of organisations saw training as a main function of their development initiative. All organisations completing the questionnaire met these two criteria with 76% identifying training as a main function.

Statement two of the questionnaire sought to identify what percentage of those replying designed training within their organisation. It is obviously this group that are most likely to involve participants in instructional design. 88% of the group fitted this category; however those that only sometimes designed their own training reflected elements of participation in later answers.

The third statement gave indication as to in country design of instruction (being the first indicator in some sort of participatory process and checking the statement two response). The response to this statement reflected that of statement two indicating those who designed their own training normally did so in the country of the intervention.

Statement four sought to gauge participation of the target population in the instructional design process. All respondents claimed some involvement in the process with 79% claiming significant input, 1% claiming medium input and 10% claiming minimal input.

Responses to statements five and six were gauged to ascertain the type of participant involvement respondents sought and whether such participation contributed to currently accepted instructional design methodology. Responses from these two statements (and qualifying comments) clearly showed that 89% of respondents did not contribute to currently accepted instructional technology stages (goal and task analysis) with the main focus of their input being through a participatory method of needs analysis (58%), and input to a pilot type course (7%). In addition the use of local peer trainers (11%) was identified as a participatory component. Respondents additionally identified participatory informal training as an additional component (71%).

Additional comments to the standard questionnaire in the main consolidated the position of participatory needs analysis to identify instructional components of the development intervention (in the main PRA) as being the key focus of respondents.

Conclusions Arising From The Survey

It is emphasised that the survey was not designed to obtain quantitative statistics but rather to profile a general trend as to the current utilisation of participatory instructional design methodology by development organisations. Consideration of the data collected clearly demonstrated that although participation was a key consideration for respondents in the majority of cases there appeared to be little participant input over and above the identification of instructional needs during PRA. In addition comments on added participation through the employment by

organisations of informal instructional techniques led me to conclude that the key emphasis of most concerned was participation that fell well within the norms of an alternative development model rather than the type of participation one would expect from a model that integrated alternative development and instructional technology. The few organisations that indicated participation outside this scope (11%) reflected a move towards some type of integration of training design into the development process.

Summary

This thesis's second research component was a web-based survey to enquire as to current trends in instructional design in respect to development organisations involved with (preferably) alternative development in the third world. The main thrust of the survey was to gain data that would build a profile of how such organisations incorporated participation into their instructional design. Survey methodology was by way of an initiating email linked to a web-based questionnaire. The survey involved an initial sample of 250 organisations with 63 invalid addresses reducing that number to 187. The survey received 76 replies (41%).

Survey data in the main revealed a commitment to participation in instructional design but one that was severely restricted to participation normally found within the alternative development model and in the main consisting of participant input during PRA (identifying instructional needs) and increased participation during instruction through the introduction of alternative informal methods of training. This trend reflected a definite separation between development activities and instructional design with little indication that any attempt to integrate the two or extend participation past 'accepted norms' had occurred. On a percentage base 88% of all respondents fell into the aforementioned category with the remainder (11%) reflecting a better understanding of (and considerable participation in) a process of instructional design that considered participant input at all stages, with indications that some of this group had moved towards integration of instructional design into the development process.

Chapter Eight

Conclusions

Introduction

The main thrust of this thesis is to investigate the integration of alternative development and instructional technology from both a theoretical and practical perspective. To this end literature on both subjects has been investigated with the purpose of proposing a simple effective model of integration. In addition a case study has been presented to illustrate such integration in practice. Finally an investigation as to current trends in respect to instructional technology in the current development community has been presented to gauge whether present alternative development practice considers such integration. This chapter summarises the main findings of this enquiry.

A Theoretical Perspective

Development studies, and practice today have moved towards an emphasis on a bottom up, participatory process of development. Such idealism has been encompassed in a broad spectrum of theory and practical application to form the alternative development paradigm. The key principles identified within this paradigm are those of improvement of quality of life in the third world, particularly on respect to the poorest of the poor and as such the most marginalized.

Alternative development addresses this issue from the perspective of participation and empowerment embodying a process of identification of developmental needs, participatory design of the development intervention, implementation of a micro developmental program, and evaluation of that program through a process of participatory monitoring and evaluation. Given the micro nature of such programs and the emphasis on participation a change agent is normally involved as a catalyst to development. As such the key barriers to such interventions are normally attributed to human nature and inappropriate human bias.

Instructional technology finds a theoretical base in the works of such writers as Robert Mager and is normally considered from a Northern Perspective. Within

development studies the works of writers such as Stan Burkey have contributed in part to promoting alternative approaches to instruction and thus enhancing instructional technology in the development environment. Instructional technology seeks to identify a group of specific knowledge and skills that are needed by participants and pass these on to them. Much of the ideology evident in instructional technology (particularly , participation, efficiency, effectiveness and the cultural and physical situation) parallels that of alternative development. The process of instructional design follows a path of needs identification/analysis, design of instruction, implementation of instruction and validation of instruction. The process closely resembles that of alternative development but pursues knowledge transfer rather than a holistic development process.

Instructional technology also possesses close linkages to the ideology of alternative development. These linkages include participation (being the ideological hub of alternative development and a prerequisite of instructional development), empowerment which in both cases is linked to participation evident in each process, the use of an external agent as a facilitator, the concept of participants as a micro group with like needs (developmental on one hand instructional on the other) and the concept of efficiency as a desirable output.

The integration of instructional technology into the alternative development process is relatively seamless. The key consideration to such integration is that alternative development remains the predominant function with instructional technology considerations enhancing the process. To this end an integrated model retains all the components of alternative development but within those components consideration is given to the broader spectrum of instructional design and instructional delivery (including needs analysis, design/development of training solutions, development of instruction and monitoring of instructional inputs/outputs). Such a model effectively combines the two processes and results in mutual enhancement.

Alternative development is enhanced by giving better consideration to participation during the instructional design process with that process further contributing to empowerment. In addition considerable additional input is gained through this (added participation) contributing to better flexibility and adaptability within the development program.

The instructional design/delivery process is also significantly enhanced. Participation through all stages of the process (promoted by the model) leads to more appropriate instructional content that considers the expressed needs of participants rather (than has often been the case in the past) the perceived needs of participants. This in itself all but negates undesirable trend of 'importing' (often inappropriate) instructional courses from outside sources and ensures that instructional content is socially/culturally appropriate, efficient and effective.

Additionally the integrated model contributes to more awareness (particularly in the case of instructional designers/instructors) of the human bias barriers that contribute to negating good development and thus good instructional technology. Such barriers are extremely well addressed within alternative development theory/practice but are given less consideration within instructional technology theory/practice.

Monitoring and evaluation of instructional outputs and the development program is also enhanced within the integrated model. Participatory processes of evaluation contribute greatly to the cyclic nature of instructional design thus adding to program flexibility. The introduction of new evaluation techniques also enhances the development program as does the consideration of new areas of evaluation from the instructional perspective (namely the instructional content, the delivery method and the instructor). Such additional evaluation not only contributes to appropriateness, effectiveness and efficiency, but also adds to the empowerment process.

Application Of The Separate And Integrated Models

The Rural Skill Training Program (RSTP) intervention in Vanuatu gives good comparison of the application of firstly a separate alternative development/instructional development model and secondly an integrated model. The case study revolves around some twelve months of development concerned with the construction of VIP toilets. This initiative was identified by rural NI Vanuatu on the islands of Espiritu Santo and Epi (through a process of needs analysis) as partially satisfying a development need for better hygiene and sanitation.

The initial RSTP program utilised separate models of alternative development and instructional technology with all instructional input being designed by RSTP staff in an office situation. The resultant instructional intervention spanned some four-five days per village and covered all components of VIP toilet design. Evaluation of the program (three villages) revealed serious anomalies in respect to efficiency (much of what had been taught was already known) and appropriateness (the course was considered too long by participants and a disruption to daily household routine). The instruction had however proved to be effective with all goals being met (including an additional observed output of enhanced village pride and organising skills contributing to empowerment).

As a result of the identified anomalies RSTP modified its methodology to reflect an integrated model of alternative development and instructional design. This new model included participant input in the area of instructional design, which resulted in participants opting for an instructional intervention that revolved around a one-day informal workshop. In addition village members formed a training committee in each village to assist in the participatory process. Evaluation of this workshop (four Villages) revealed a positive response to the workshop and all goals were met. It was considered that in addition village pride, organisation and empowerment had been better advanced with village training committees taking an active role in the development process.

The RSTP intervention gave good example as to the added benefits and appropriateness of the integrated alternative development/instructional technology model. Although both models used during the RSTP intervention achieved the desired end results the integrated model resulted in significant enhancement to appropriateness, efficiency and effectiveness. In addition the integrated model added to the overall effectiveness and appropriateness of the development program through better contributing to the process of empowerment.

Current Trends

Investigation into current trends in respect to instruction within a development situation was considered as an important addition to this thesis. It was seen as

appropriate to once having discussed the appropriateness/effectiveness of the integrated system to enquire as to how many development agencies had adopted similar systems. The main investigative vehicle for this enquiry was a web-based survey involving some 250 development organisations randomly selected from web databases. Of the initial 250 enquiries 187 received an initial email inviting them to participate (the other 63 enquiries were returned due to invalid addresses) of these 76 (41%) completed the web based survey form.

The survey data obtained reflected a group of 88% that were involved in instructional design on a regular basis. Data further showed that 79% of respondents considered that participants had considerable input into the instructional design process. Questions in the survey further aimed at identifying the exact nature of participant input and it was the response to these that set the true parameters in respect to the type of involvement and whether such involvement indicated some type of integrated system. Only 11% of respondents indicated participants were involved in the instructional design process beyond the identification of instructional objectives. In the main respondents identified training needs identification during PRA and participatory informal training as the two key components to participation in instructional design.

Survey results clearly showed that although a small number of respondents were using some form of integrated alternative development/instructional design model the majority considered participation in instructional design purely from within an alternative development context where accepted participatory practice encourages the identification of needs (including those that can be satisfied by instruction) and informal training methodology.

Summary

The individual theoretical parameters of both alternative development and instructional technology possess similar components in respect to ideology and methodology. The integration of these two bodies of theory to reflect an enhanced integrated model of alternative development is not only possible but also extremely desirable. Such an integrated model offers better consideration to a participatory process that encompasses not only development but also instructional design.

The key benefits from this model include an enhanced process of empowerment, increased efficiency, increased equity and instruction that fully considers the needs (cultural, social and developmental) of participants.

Application of a simple integrated model was achieved during the RSTP intervention in Vanuatu. This resulted from identification of severe inadequacies when using separate models of alternative development and instructional technology and thus gave opportunity for comparison between the two methods. The use of an integrated model revealed a significant advantage with increased efficiency, appropriateness and empowerment.

A survey of current development providers to ascertain normal practice in respect to instructional technology today revealed that 88% of respondents identified participation in respect to instructional design solely within the parameters of alternative development practice (identification of needs and informal training methodology) and gave no consideration to integration of the two processes to obtain better instructional efficiency or effectiveness and thus better development. Such a trend raises serious questions as to whether current alternative development theory and methodology recognises the full potential of participation in respect to achieving better instructional design leading to an enhanced process of empowerment and thus improved/more appropriate development outputs.

Appendix One

Performance Analysis

Performance analysis is concerned with identifying what needs should be satisfied by instruction and what other alternatives are available that may be more appropriate to satisfy particular needs. Figure six below shows the steps, decisions and activities that should be taken during the procedure of performance analysis in a development situation.

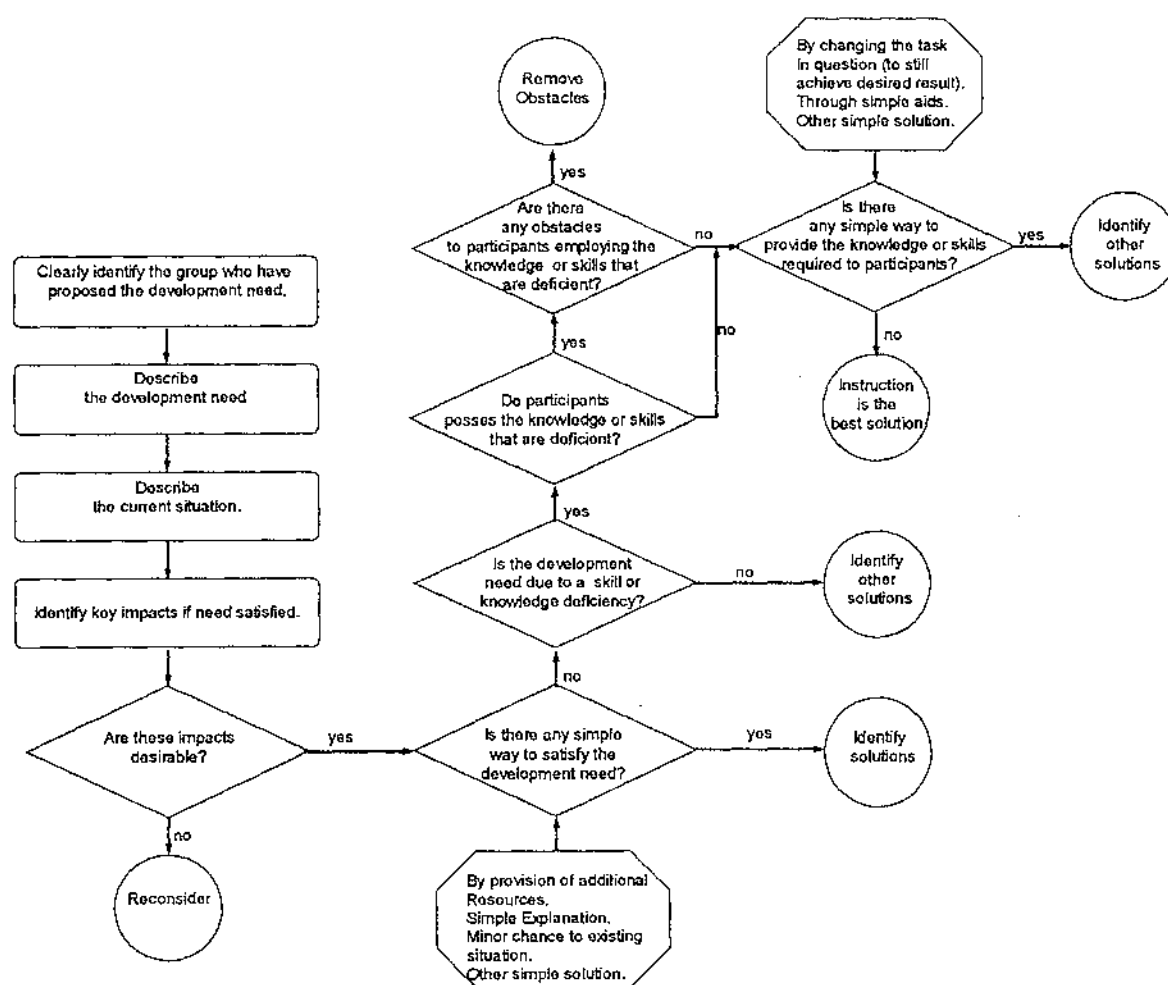


Figure six: Performance Analysis.
Adapted from Mager (1997, pp.29-39)

Appendix Two

Goal Analysis

Goal analysis (think of the goal in terms of achieving an identified development need) is concerned with 'people' performances. As such not every goal is suitable for such an analysis but the nature of possible goals within an alternative development context makes it highly likely that most goals will need analysis. Goal analysis is employed to gain full description of the goal particularly in respect to selecting the means to achieve it (Mager, 1997, pp.41-47). Goal analysis follows five procedural steps, which are described below:

| | | |
|--|--|---|
| <p>Step One:</p> <p>Write the goal in results orientated terms.</p> | <p>Comments:</p> <p>Use terminology that describes outcome rather than process</p> | <p>Example:</p> <p>Goal: To have a working knowledge of Pidgin English.</p> |
| <p>Step Two:</p> <p>List all the performances people would have to be doing to achieve the goal. In addition list any performances that people may have to refrain from doing in order to achieve the goal</p> | <p>Comments:</p> <p>Do not edit this list just write it down. List all the performances you can think of.</p> | <p>Example:</p> <p>Can communicate in pidjin. Can understand pidjin speakers. Can read pidjin. Can write pidjin.</p> |
| <p>Step Three:</p> <p>Sort the list by identifying any performances that are still not clearly described. Mark these performances. Apply steps one and two to these Performances until you have a list of performances that truly represent the goal</p> | <p>Comments:</p> <p>Your list should reflect all the things people should and should not do to achieve the goal.</p> | <p>Example:</p> <p>Can express themselves verbally in pidjin. Can repeat accurately what is said in pidjin. Can read work related documents Can write reports and letters in pidjin</p> |
| <p>Step four:</p> <p>Qualify each performance by expanding it to a sentence that describes not only the performance but when/how often/to what standard, it should occur</p> | <p>Comments:</p> <p>Think in terms of the limits you wish to place around performances.</p> | <p>Example:</p> <p>Can express themselves verbally in pidjin well enough to be understood by village members. Can repeat accurately what is said in pidjin. Can read work related documents and can accurately describe what is read. Can write reports and letters in pidjin well enough to be understood by local government staff.</p> |
| <p>Step five:</p> <p>Test performances for completeness.</p> | <p>Comments:</p> <p>Normally you will end up with about seven items. Ask the question, if all these performances were done would the goal be achieved?</p> | |

Table four: Goal Analysis
Adapted from Mager (1997, pp.45-53)

Appendix Three

Task Analysis

Task analysis further investigates the performances that contribute to satisfying the development need. The task itself can be defined as one of the steps that will lead to achieving the desired outcome. In other words every desirable outcome is achieved by completing a series of tasks, it is these tasks that analysis is concerned with. The simplest way of constructing a task analysis is by flowchart. From the flowchart it is a simple process to derive the skills that are required by anyone to do/complete the task. Below is a flowchart showing the decision points and steps for the procedure of task analysis:

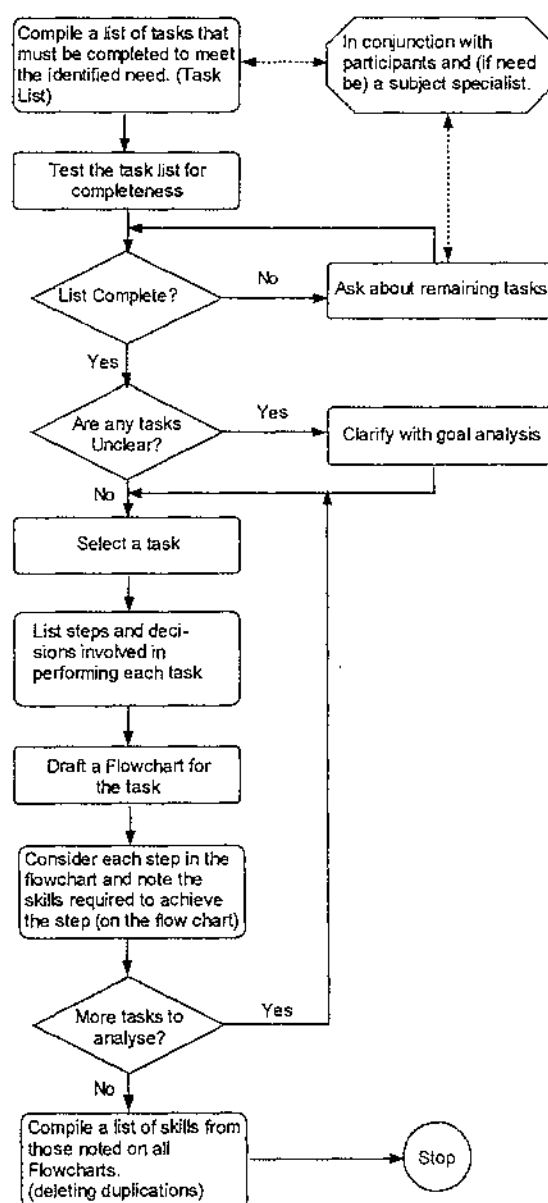


Figure seven: Task Analysis.

Adapted from Mager (1997, p.69)

Appendix Four

Deriving Instructional Outcomes

The derivation of instructional outcomes is the step in instructional design that assists in developing an absolute verbal picture of what participants need to do during instruction. This phase of design will assist in developing actual instructional content and in guiding participants as to what is required during instruction. Table five below illustrates the steps in this process.

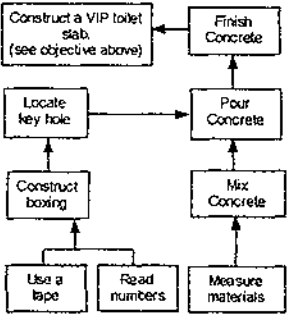
| Step One: | Comments: | Example (Task) |
|---|--|---|
| <p><u>Write objectives.</u> Each task needs a description which is written in objective form. In addition each of the key skills that need to be learnt before performing the task need to be described in objective form.</p> | <p>An objective describes participant performance. It describes the product of instruction. It describes the key conditions under which the performance occurs. It describes the standards of acceptable performance. Write an objective for each task and each key skill needed to perform the task. Information for writing objectives comes from task analysis in the main.</p> | <p><u>Performance:</u> Construct a VIP toilet slab. <u>Given:</u> all the necessary materials, required tools, key hole template, all measurements. <u>Criteria:</u> Key hole in correct position, concrete cured correctly and reinforced, slab the correct dimensions.</p> |
| <p><u>Step Two:</u></p> <p><u>Compile a skill hierarchy.</u> Objectives need to be organised into a logical form that shows how they are related to each other.</p> | <p><u>Comments:</u></p> <p>The skill hierarchy shows a picture of the prerequisite relationships between skills. It identifies those that depend on knowing other skills to enable completion and those skills that stand alone. The emphasis is on what must be learnt and the order it must be learnt in.</p> | <p><u>Example:</u></p>  <pre> graph TD A[Construct a VIP toilet slab (see objective above)] --> B[Finish Concrete] B --> C[Pour Concrete] C --> D[Mix Concrete] D --> E[Measure materials] F[Construct boxing] --> G[Locate key hole] G --> H[Use a tape] G --> I[Read numbers] </pre> |
| <p><u>Step three:</u></p> <p><u>Write target population description.</u> This description is aimed at two specific areas: the cultural/social setting and existing participant knowledge/skills. The description should clearly identify likely cultural/social barriers to instruction as well as what participants already know (in respect to the tasks identified as appropriate for instruction)</p> | <p><u>Comments:</u></p> <p>The target population description will help you decide at what level to start instruction. In addition it will help you identify appropriate examples, what vocabulary/language to use, what media and procedures best fit the situation, what are appropriate timings for instruction, what cultural considerations must be taken, in what situation participants learn best and any other specific considerations that may effect instruction</p> | <p><u>A Checklist of Considerations:</u></p> <ul style="list-style-type: none"> Age range. Gender distribution. Educational background. Why participants want to attend. Participant attitudes towards the intervention. Participant culture. Biases within the group. Key participant interests. Recreational preferences. What participants see as rewards. Topics considered inappropriate by participants. How participants organise best. Other specific characteristics/preferences. |
| <p><u>Step four:</u></p> <p><u>Identify Course Prerequisites.</u> Prerequisite participant skills and knowledge must be identified. Comparison of task analysis material and target population description will normally reveal prerequisite skills that participants may not have. These skills can then be taught to those who need them at a prior course or be added to the existing course (and taught to those deficient in them)</p> | <p><u>Comments:</u></p> <p>To attain effective instruction the knowledge and skills participants must already possess to benefit from instruction (if any) must be identified. In a development situation rather than imposing prerequisites on instruction this step identifies further instructional needs for part of the group.</p> | <p><u>Example.</u></p> <p>On the VIP slab course it was identified that to finish concrete participants would have to possess the skill of using a metal concrete float. Perusal of the target population description revealed that tools within the village were limited to traditional items. Thus the decision was made to introduce this new tool prior to instruction and explain how to use it.</p> |

Table five: Deriving Outcomes

Adapted from Mager (1997, pp.72-110)

Appendix Five

Developing Instruction

This appendix is not written as an absolute guideline to developing instruction but rather it highlights the sequential steps that should be taken to achieve the development of good instructional content. These steps are:

Develop Criterion Tests. It is considered that all instruction should be tested to gauge its effectiveness. In an alternative development situation this is predominantly achieved by observing participants using the new skill after instruction. There are however situations that do call for more specific testing (often where observation is impractical) in which case good test design is imperative. The key to good test design is to design a test that reflects as closely as possible a demonstration that participants can achieve the performance (as stated in the objective) under the conditions stated, to the criterion the objective lays down (Mager, 1997, pp.113-125).

Design Relevant Practice. Before testing instruction and during each phase of it participants must be practiced at the particular skill of application of the particular knowledge that they are learning. To this end it is important to identify what constitutes relevant practice. The design of relevant practice follows the standard steps of:

- Note the items needed to facilitate the practice (of the performance).
- Note how feedback on the adequacy of practice will be provided.
- Decide who will diagnose whether the practice (performance) is acceptable or not and how feedback will be given to the participant.
- Decide how inadequate performance will be corrected and by who.
- Draft all decisions into a short description of the relevant practice for the objective (Mager, 1997, pp.127-138).

Derive Instructional Content. Instructional content spans all components of the lesson that are required to achieve the objective. It must be noted that a lesson is

thus aligned to accomplishment rather than any time constraint. The end result of this phase is a plan which contains (in the order shown) the following items:

- Lesson description: The name of the lesson (label) and the objective.
- Relevant practice description: Description of conditions under which and how participants will practice the skill and how feedback will be delivered.
- Content derivation: An explanation of how content was derived
- Module content: Explanations of, the objective, the performance checks the relevance of content, how to demonstrate correct performance, how to recognise the correct performance, how to practice participants and give feedback, how to evaluate participants performance (Mager, 1997, pp.139-152).

Select A Delivery System. The instructional delivery system should reflect both economy of delivery and appropriateness. The delivery system should be aligned to the instructional module, not an entire course. The following steps/considerations are taken in respect to selection:

- List items required to provide appropriate practice of the objective.
- Ensure physical items listed will allow students to achieve the most appropriate/maximum practice.
- Decide how other items on list are best (and appropriately) provided.
- Identify how you will present lesson content.
- Ensure items/presentation is appropriate to the culture and situation of participants, modify if necessary.
- Ensure all items selected are available, if not modify.
- Ensure items are the most practical and simple for participants to use.
- Test items against cost and identify any cheaper (but as appropriate) alternatives.
- Write a delivery system description under the headings; participants (describe), relevant practice (what is required) and delivery (what is required) (Mager, 1997, pp.1153-159)

Draft An Instructional Module. The instructional module is the actual plan of instructional content and requirements. It combines the target population description, objectives, relevant practice description, and content summary. In addition it contains a specific lesson plan. The instructional module is written to a set sequential plan that includes:

- Overall Picture: Enables participants to identify where they are in respect to the entire instructional intervention.
- Objective: Shows participants the objective they will achieve in simple terms.
- Skill Check Description: Describes what participants will have to do to demonstrate they have mastered the objective.
- Relevance: Explains/demonstrates why the objective is important to participants.
- Demonstration. Demonstrates the performance to participants (if needed).
- Instruction: Teaches the participants the knowledge and skills they require before they can practice the objective.
- Practice/Feedback: Gives participants practice in the objective and feedback as to their performance.
- Self Check: Gives participants a method to check whether they are ready to be tested on the objective (as needed) (Mager, 1997, pp.163-164).

The actual skill check (test) to ensure participants have gained the desired knowledge and skills is not normally included in the module. In a development situation it may however be appropriate to do this (as a separate item headed evaluation). If this is not the case the skill check will be reflected in the monitoring and evaluation descriptions.

Action Practice Instruction. Practice instruction should be conducted during instructional development (individual modules) and as a whole package (normally after sequencing by way of a pilot course). In the case of a package aligned to a development situation individual modules can be assessed by a colleague and additionally (desirable) by a random group of participants. The assessment should consider appropriateness, simplicity of delivery, sufficiency of content, effectiveness of communication methods and wording.

Pilot courses should seek to gain significant feed back on the whole instructional package through participant evaluation. This evaluation process should consider the course as a whole as well as individual module and seek to solicit comments on effectiveness, efficiency and appropriateness. (Mager, 1997, pp.188-195)

Sequence Instructional Modules. If the instructional package consists of more than one module it is appropriate to sequence their delivery to the most logical order giving consideration to prerequisite skills/knowledge for each module (Mager, 1997, pp.197-207). In a development situation such sequencing is normally conducted within the sequencing of the overall development program.

Once sequencing of the development program has been completed the instructional development process is complete.

Appendix Six

RSTP Internal Evaluation Form

Internal Validation Questionnaire

Village.....Training Attended.....

Facilitator.....Date.....

Note: The aim of this discussion is to seek information from the trainees in respect to the training being conducted that may be useful in improving the design and the standard of the instruction in the village. Please facilitate the discussion in an honest and constructive way that allows those taking part full input. Take some notes during the discussion to support answers to the below questions.

SA: Strongly Agree, A: Agree, D: Disagree, SD: Strongly Disagree

The language used in the training was easy SA A D SD

The trainer was not the right person to conduct the training SA A D SD

The training was inappropriate to the local situation SA A D SD

The training was too long SA A D SD

There was not enough time for discussion SA A D SD

Most of the topics covered we knew SA A D SD

We think the training we received will improve village life SA A D SD

Additional Comments Over Please

Appendix Seven

RSTP External Evaluation Form

External Validation Questionnaire

Village..... Training Objective.....

Facilitator..... Date.....

Note: The aim of this discussion is to seek information from the trainees in respect to the training conducted and the end result of that training, that may be useful in improving the design and the standard of the instruction in the village. Please facilitate the discussion in an honest and constructive way that allows those taking part full input. Take some notes during the discussion to support answers to the below questions.

Have the knowledge and skills learnt during training been used: Yes No

Was the training conducted appropriate to village life: Yes No

Do you consider the training will improve your quality of life: Yes No

Were there any difficulties that hindered you carrying out what you learnt: Yes No
Note Difficulties:

Do you think the training prepared you well in respect to its main goal: Yes No

Was the training time: Too long Too short About right

Were there any parts of the training you had difficulties with: Yes No
List:

Additional comments over please.

Appendix Nine

Web Questionnaire

The web questionnaire is shown below with all drop-down menus exposed.

Questionnaire Instructional Design

Simply pick the response that best describes your organisation in questions 1 to 6, add any further comments, then hit the submit button

Contact: jhatton@xtra.co.nz

| | | |
|--------------------------|---|---|
| Question 1: | <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Sometimes ▾</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Yes ▾</div> <div style="border: 1px solid black; padding: 2px;">No ▾</div> | Our organisation is concerned with delivering training in the third world |
| Question 2: | <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Yes ▾</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Sometimes ▾</div> <div style="border: 1px solid black; padding: 2px;">No ▾</div> | Our Organisation designs its own training |
| Question 3: | <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Sometimes ▾</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">No ▾</div> <div style="border: 1px solid black; padding: 2px;">Yes ▾</div> | Training in the main is designed in the country we will deliver it in |
| Question 4: | <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Never ▾</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">A Lot ▾</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Medium ▾</div> <div style="border: 1px solid black; padding: 2px;">A Little ▾</div> | When designing training the people we are going to train are involved in the design process |
| Question 5: | <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Not Selected ▾</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Goal Analysis ▾</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Task Analysis ▾</div> <div style="border: 1px solid black; padding: 2px;">Both ▾</div> | The people we are going to train assist us in our training design during |
| Question 6: | <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Not Selected ▾</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Deriving Objtvs ▾</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">Other ▾</div> <div style="border: 1px solid black; padding: 2px;">Both ▾</div> | The people we are going to train assist us in our training design during |
| Describe 'other' (Q6) | <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | |
| Any Further Comments | <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | |
| Your Organisation's Name | <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | |

Appendix Ten

Survey Respondents

ACCION International
 ACDI / VOCA (Mozambique) - Agricultural Cooperative Development International
 ACF - Action Contre la Faim
 ACLEDA Bank
 ADF - African Development Foundation
 ADRA - Adventist Development and Relief Agency International
 AFD - Agence Française de Développement
 AGENDA - Agenda for Environment and Responsible Development (Tanzania)
 ARMS - Australian Relief and Mercy Services
 Association for The Alleviation Of Poverty
 AT projects inc
 Aus Health International Pty Ltd
 AustReach Pty Limited
 Avivet LTD
 Ayuda Micronesia Medical Missions Foundation
 Care International (Cambodia)
 CARE International (Mozambique)
 Caritas Aotearoa NZ
 CCB - Cambodia Community Building
 CDRI - Cambodia Development Resource Institute
 CIDA - Canadian International Development Agency, PSU - Program Support Unit
 CIUK
 Concern
 CORDAID - Catholic Organisation for Relief and Development
 CRS - Catholic Relief Services
 DAWN - Development Alternatives with Women for a New Era
 Enterprise Works Tanzania
 FAO - Food and Agriculture Organization
 Farm Support Association
 Foundation for the Peoples of the South Pacific
 FPA International Development
 Franciscan Missionary Union
 Global Consultancy LTD
 Global development research centre (Japan)
 HAI - Help Age International
 Heartlands International Ltd
 HELVETAS - Swiss Association for Development and Cooperation
 ICRC - International Committee of the Red Cross
 Intermediate Technology Consultants (ITDG)

International Women's Development Agency
John Leonardo Development Consultant
KEDA - Kilimanjaro Environmental Development Association
Khanya Rural Development
KIWOHEDE - Kiota Women Health and Development (Tanzania)
Maryknoll
Medecins Sans Frontieres
MS Training Center for Development Cooperation (Tanzania)
NPA (Mozambique) - Norwegian People's Aid / Ajuda Popular da Noruega
OXFAM
Pacific Development Institute
PALMS AUSTRALIA
Project design and Management Ltd
Quaker Peace Centre South Africa
RSTP Vanuatu
Salesian Society Inc
Save The Children Australia
Solomon Islands Development Trust
St Dominic's Rural Training Centre Vanga Point
TEAR Fund NZ
The Foundation of the Peoples of the South Pacific International
The Seed Savers Network
TRC - Trainers' Resource Center (JVC Cambodia)
UNDP (Cambodia) - United Nations Development Program
UNDP (Fiji) - United Nations Development Program
UNICEF - United Nations Children's Fund
UNV - United Nations Volunteers
US Peace Corps
Vanuatu National Council Of Woman
Vanuatu Pre School Association
Vanuatu Rural Development Training Centres' Association
Village Education Programme
Volunteer Service Abroad
Voluntary Service Overseas
World Vision International
WRC - World Relief Corporation
Yeoman Ward International

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