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**EVALUATING CHANGE IN EDUCATIONAL DEVELOPMENT:
A case study of two Namibian education projects**

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Abstract

The Life Science Project (LSP) and its impact assessment at project closure (van Harmelen, *et al* 2001) not only provided insights into the analysis and evaluation of educational change from the project's developmental perspective, but served to inform institutional learning of the implementing agencies. The latter aspect has in turn played a considerable role in shaping the Formative Monitoring and Evaluation process designed and developed for a second education project currently being implemented, Support for Environmental Education in Namibia (SEEN). A key focus of both of these projects, located in post-independent Namibia (Namibia having gained its independence from South African control in 1990), is on bringing about change within the tenets of educational reform as identified by the Namibian government. The reform goals are based on redress, equity, access, quality and democracy in education, and are underpinned by social constructivism as the guiding epistemology. The Life Science Project (1991-2000) was a DANIDA funded project implemented by the Danish NGO, Ibis, in partnership with the Ministry of Basic Education and Training. The SEEN project, currently a pilot project, is similarly funded and implemented. ¹

Introduction

Educational change by its very nature is problematic. Assessing educational change in a developmental context requires more than measuring the supply of learning support materials or the numbers of educators trained in a given period. Education research alerts us to the fact that much of what is regarded as change in education is simply 'cosmetic', and as such maintains the status quo (Popkewitz 1987, Giroux 1992, Garbers 1996). Programmes and projects focusing on educational development, particularly in previously disadvantaged communities, are concerned with reversing the educational effects brought about by inequity and oppressive regimes. In such projects the developmental aim assumes paramount importance in evaluating change that moves beyond the cosmetic and in assessing the project's impact.

The focus in this paper is on the lessons learned from an evaluation process for the Life Science Project that have subsequently informed the approach for the formative monitoring and evaluation of the SEEN Project (Supporting Environmental Education in Namibia). The contextual similarities of both these Namibian projects, funded by DANIDA and implemented by Ibis, a Danish NGO, include their educational focus (both in partnership between the implementing agency and the Namibian Ministry of Education); their focus on curriculum development; professional development; the development and/or dissemination of relevant learning support materials and capacity building. Further to this, both are located in the epistemology and tenets of the Namibian educational Reform process, *i.e.* learner centred

¹ The Life Science Project, awarded the Comenius Medal (2001), was identified as one of the most successful projects of its nature implemented by Ibis. ¹

education (within social constructivism), access, equity, quality and democracy. The focus on environment in both projects (implicit in the Life Science project and explicit in the SEEN project) is a further area of commonality.

The evaluation brief for the Life Science Project was two-fold, to evaluate how well the project had achieved its general objectives and to assess the project's impact in terms of the developmental objective. The evaluation report was to provide a critically reflective analysis at project closure of the ten-year period of implementation that would inform institutional knowledge.

Given the above, the Life Science evaluation elected to adopt a broadly participatory approach that attempted as far as possible to fit the project ethos relating to capacity building and professional development and that of the Namibian educational context. The determining factors for the selected approach for this evaluation were the tenets of the education reform process. The epistemology underpinning educational reform, however, proved to be the key factor. The location of the research approach within social constructionism informed the selection and adaptation of the principles of procedure (adapted from Guba and Lincoln's Fourth Generation Evaluation, 1989); the evaluation model (an adaptation of McKernan's, 1996 action research model); the selection and application of the evaluation tools (these included case studies, interactive workshops, contextual analyses, as well as interviews, document analysis, and base line surveys), and the processing and analysis of data.

The evaluation/ impact assessment of the LSP may be of interest to the international debate on monitoring and evaluation of educational programmes located in the area of educational development for the following reasons:

- The aspects that shaped the methodology employed for the impact assessment provide opportunities for reflection, particularly in relation to the way the institutional learning gained through this study is informing monitoring and evaluation of the SEEN project.
- The relationship between Ibis, as the client, and the team of evaluators was regarded as unique in the context of this organisation. First, because it was based on an interactive and ongoing process of negotiation and critical scrutiny over the entire period of the assessment. Second, the time period of a year in itself was a departure from the more traditional approach taken for projects such as this. The lessons learned from this model continue to have relevance to the SEEN project.
- The particular participatory approach adopted for this impact assessment was based on capacity building for internal evaluation and impact assessment. This is yet another aspect that is informing the Formative Monitoring and Evaluation process of the SEEN project.

The relationship between project proposal development, the monitoring processes, the implementing agency and project management and staff is traditionally tenuous. The lessons learned from the impact assessment of the Life Science Project have highlighted potential solutions that we believe can have greater relevance to the needs of educational reform and /or transformation in the future.

Development in Education

In considering development in education this section is not about change theory, but rather focuses on some of the issues related to assessing change and development. Development in an educational context tends to be prefaced by the adjective 'better', *i.e.* better teaching, better learning, better use of resources etc. Better than what, is a key question faced by educational research and evaluation. The notion of better carries with it the connotation of change. The question here is change from what to what? The developmental objectives of education programmes and projects generally specify the particular changes that are anticipated. For example, 'learners who leave the junior secondary phase are provided with skills such as self confidence, ability to solve problems and co-operate with others' and '[have] an understanding of the importance of conservation and the use of natural resources in a sustainable manner', or 'improve the teaching of Life Science' Assessment from the perspective of measurement can no doubt be applied, but normative indicators applied to aspects of change related to skill development, attitudes and competencies, I would suggest are contrived and unable to capture the notions of 'change' or 'better'.

At issue in assessing change is that the traditional normative indicators may provide evidence of 'how many' but give little indication of 'how well'. Norm referencing may also provide answers to the question of 'better'. The problem here is on what and whom the implicit comparison is based. Studying evaluation and assessment reports in education that have been based on 'classroom observation' reveals that all too often these are based on brief visits by outside evaluators who either compare the teachers or the learners with teaching and learning located in very different contexts from that being observed. Attempts to measure change are also often based on the assessor's interpretation of the particular skill or competency that ignores 'how far' the teacher or learner has travelled in the course of the intervention.

Indicators based on criterion referencing or performance based indicators are currently employed in some educational assessment as an alternative to norm referencing. In this regard teachers and learners are required to 'demonstrate' or to provide evidence of the identified skill or competency. Performance indicators are further refined by the development of rubrics that attempt to assess the notion of 'how well' (Gipps 1994, Gipps & Murphy, 1994). These are certainly a vast improvement in educational assessment and provide a broader view of achievement, while avoiding unfair comparisons. However, even the best indicators and rubrics are unable to identify change and development, this can only be achieved if there is a thorough understanding of each **individual** teacher's or learner's starting point at the beginning of the intervention. In addition this sort of assessment ought also be based on longitudinal profiles of the participating teachers and learners.

A final issue that bedevils evaluation in terms of development is that development is not linear, but recursive (Cornbleth 1987). Summative evaluations or impact assessment, therefore are dependent on internal assessments, midterm reviews and the regular project reports, as well as the project's base line data. These sources of data, in my experience, do not provide information that that is based on reflective analysis located in performance indicators. Logframes currently provide the focus for reporting in projects and project evaluations. These may provide useful guidelines, but they generally do not provide performance indicators or rubrics. This has to be part of the project management and staff's responsibility, and ought to be developed and monitored as close to the start of the project as possible.

Selecting an approach and designing, developing and refining data collection in educational contexts with a focus on development and therefore change is complex. Evaluators need to be aware of Popkewits' (1987) suggestion that we approach our task with humility and recognise the limitations placed on us by our fallibility.

Towards selecting an appropriate approach for evaluation

The issues discussed above were at the forefront of our struggle to select an appropriate methodology and approach for the Life Science evaluation/impact assessment. The experience of the Life Science evaluation, and now in relation to the SEEN project, reveals that there are three key factors that have a major influence on the selection of the evaluation approach and thence on the eventual evaluation outcomes in an educational development context. The methodological approach is recognised as the most important determining factor in such evaluations. First, the orientation that is selected shapes the evaluation by providing the set of lenses through which the project objectives, outputs and indicators are viewed. Popkewitz (1987) suggested that the nature and context of any investigation ought to determine and shape the methodology. He placed particular emphasis on this in terms of investigations in educational contexts. This is seemingly obvious but the reverse of this is more usual in my experience of working in educational evaluation.

In the field of evaluation and impact assessment evaluators, donors, implementing agencies, as well as project management and staff all have their own preferred theoretical orientations, often in conflict with each other, and the evaluation process becomes an arena of contestation that is destructive rather than constructive. The experiences of the Life Science evaluation/impact assessment highlighted the importance of situating the evaluation approach within the context of the project's ethos and that of Namibian educational reform. By being guided by the epistemology of the reform process in selecting and developing the methodology, rather than having a preconceived 'recipe', the evaluation strove for a theoretical consistency in line with the project's goals which was essential for realising the brief we were given. Without theoretical consistency between the project orientation and the evaluation methodology, evaluation processes become an exercise in comparing apples and pears (Guba & Lincoln 1989, Garbers 1996, Bhana 1999).

The above places methodology within the ambit of the nature and purpose of evaluation/impact assessment. Again this would appear to be obvious, for after all evaluation is assessing the achievement of project objectives. Critiques which suggest that much of the research undertaken in education has little impact on solutions to educational problems, is worth noting in relation to educational evaluation. The contention is that much educational research fails in that it does not adequately identify and analyse the research question. The issue here is whether research focuses on the actual real problems, or simply addresses symptoms. In evaluation the question about what is being evaluated and why is less obvious than it seems, and research suggests that this needs to be interrogated before selecting an evaluation approach. In education projects, however, the additional question arises as to whether the evaluation focus is on 'how many' or 'how well' objectives have been achieved. The first focus is easy to evaluate, the second less so. It is sufficient at this stage to note that the overarching role of this sort of evaluation ought to be fairness and justice (Guba & Lincoln 1989, Schon 1991, McKernan 1996). The evaluator needs constantly to be asking whether the evaluation provides a fair reflection of the project's achievements and whether it does justice to the actual changes and developments that **have** taken place as a result of the intervention. In the context of the Life Science Project evaluation, adopting an approach that included performance referenced indicators as well as the more usual norm referenced ones

was valuable. Performance referenced indicators, along with an understanding of the context, provided possibilities for assessing the project's impact in terms of the developmental objective that otherwise would not have been available to us.

A third aspect related to the selection of methodology in evaluation is particularly contentious. Here I refer to the relationship between the evaluation process and the project proposal. Traditionally, donor organisations structure or select the proposal to suit their particular ethos, and there is little or no contact between the evaluation team and the proposal developer. My experience is that in assessing education projects from the perspective of fairness and justice, it is all too often the proposal document that has to be evaluated within the context of the project. An educationally inappropriate project proposal or one that is over-ambitious, not only is often at the heart of why so many projects appear to have little impact, but also may skew the selection of the evaluation methodology. Added to this is the question of the extent to which proposal developers take cognisance of relevant evaluation reports. Meaningful evaluation that informs change and development ought to begin at the stage of proposal writing. Only in this way can we hope to have theoretical consistency permeating the proposal, the project, and the evaluation.

The evaluation of the Life Science Project provided the following lessons that have informed the approach developed for the monitoring and evaluation of the SEEN project:

- The selection of the evaluator/ evaluation organisation is the first determining factor for the selection of the methodology. The evaluators should have a detailed knowledge of and fully understand the context in which the project is located. Second, they must either be open to adapting their own preferred approach to evaluation to fit the ethos and theoretical underpinning of the project or they need to ascribe to the particular philosophical/ epistemological orientation in which the project is situated. The experience of the Life Science Project further stressed the value of having an evaluation team rather than a single evaluator. Not only was the evaluation brief too broad for a single person to undertake, the complexity of this project benefited from the range of expertise of the various members of the evaluation team.
- The development of the evaluation proposal and the selected methodology as a negotiated process involving the 'client', the key stakeholders and the evaluation team benefited the Life Science evaluation enormously and is having a positive impact on the M&E for the SEEN project. Negotiation and participation at this level creates a shared understanding of the nature and role of the evaluation, it makes the theoretical orientation explicit, it provides all stakeholders with a sense of ownership of the process and it enhances the capacity of both the evaluation team and the project staff in terms of better understanding the processes related to reflective practice in education as subscribed to by Namibian education policy (Schon 1991).
- The evaluation approach, the rationale for the evaluation and the time allocated for the evaluation process are integrally linked. Those concerned in the Life Science evaluation recognised that, in order to do justice to the project in relation to the evaluation brief, an appropriate time frame had to be negotiated and planned for. The evaluation team and Ibis realised that it would not be possible to meet the evaluation brief without the development of a model that allowed for a cyclical approach, much as is applied to action

research (McKernan 1996), involving a series of phases, each including planning, reflection and evaluation. Negotiating the methodology and evaluation approach, within the given time frame of a year, had a further spinoff in terms of allowing for time to interrogate various evaluation models in the context of the project's needs. This highlighted the fact that no single model could be applied in its totality, given the context of the project and the evaluation brief. The advantage of a formative monitoring process, adopted for the SEEN project, is the increased time allocation. This, along with a cyclical action research model, provides a management tool for the evaluation process.

The Life Science evaluation/impact assessment provided evidence of the value of focusing on theoretical consistency, performance referencing as well as on norm referencing, and on applying a participatory approach from the point at which the evaluation proposal was developed. Selecting a methodology within these initial principles was made possible because:

- Ibis (Windhoek) as the commissioning agency for the evaluation was prepared to provide (and fund) the time needed to discuss and negotiate the evaluation team and to explore options for the evaluation approach with the team.
- Ibis being both the commissioning agency and the project implementer further facilitated positioning the selected approach within a context that was appropriate to the project's aims and its situation in Namibian education.
- The team was sufficiently diverse to provide a range of relevant experiences, but were open to accepting the need for a theoretical approach that fit the project and its needs, rather than meeting their preconceived ideas about evaluation methods and models.

Relationships in participatory education evaluation

The focus on relationships in participatory approaches to evaluation is viewed as a key element influencing the evaluation outcomes. Participatory approaches to research and evaluation have come under considerable criticism, particularly those linked to constructivist theories. Guba and Lincoln (1989) placed emphasis on the disparate power relationships that are an inevitable feature of evaluation. Further, much that purports to be participatory in both research and evaluation simply pays lip service to this notion (Folke, 2001). While I accept that the power relationships in evaluation are not equal, I also believe that much can be done to reduce the potentially destructive effects of such situations. Making a case for participatory approaches to evaluation is beyond the scope of this paper. However, a number of our experiences from the Life Science evaluation/ impact assessment are playing an important role in the M&E of the SEEN Project.

Education, and therefore educational evaluation, is about people and personalities rather than about things. Educational development projects such as the Life Science and SEEN projects involve a complex network of partnerships and relationships. These include the relationships between project and donors, Management and Technical Assistants, counterparts, Ministry personnel, teachers, principals, regional educational officers and, last but not least, learners and their communities. Evaluation and /or formative monitoring further complicates these by introducing yet another part to the web. In terms of evaluation one of the first problems the evaluators face is getting their heads around who is who, and how (and if!) they fit together. The next set of problems is developing a working relationship with the participants,

stakeholders and various role players, and creating an environment that is conducive to achieving the aims of the evaluation within the selected guiding principles and terms of reference.

The following strategies proved to be particularly effective in the Life Science evaluation process and, we believe, enhanced both the level and quality of participation while also reducing the spectre of power:

- Making the evaluation process as inclusive as possible was a requirement of the selected methodology. We, however, elected to interpret inclusivity not only from the perspective of who would be involved in the evaluation process, but included considerations and negotiation regarding the part each individual and/ or group would play in the evaluation. This meant that not only was it necessary for the evaluation team to gain clarity about what sorts of roles we wanted people to play in the process, we also had to gain some impression of the participants' interests and strengths and weaknesses. This we did through a series of meetings with the project management and interactive workshops with the key role players we identified with management. The use of PRA techniques such as mapping and time lines were especially successful in breaking the ice and getting to know each other. These initial interactions facilitated the second part involved in terms of the sort of participation we needed, that of obtaining the co-operation and willing support of the participants.
- Having initiated a working relationship with our key participants we needed to convince them of the worth of their involvement and to develop a shared understanding of what was needed and why. Then we needed to involve them in the planning and development of the process and the data gathering procedures. Again, this was done through interactive workshops. The two key factors in these workshops were the explicit articulation of the theoretical orientation underpinning the process, and the exploration of the relationship between theory and practice in terms of the data gathering, processing and analysis.
- Participation with and from the key role players identified within the project was also strengthened through the adoption of the action research model. This model allowed for two periods of reflection in the course of the year. The workshops developed for these two occasions allowed the various groups of participants to come together and critically assess the data and the progress made at that particular point. These two review processes generated new perspectives that added immensely to the richness of the data, while further enhancing the working relationships between the evaluation team and the project and its partners. A further strategy that enhanced participation was that all documents produced in the course of the evaluation, either by the team or by participants, were disseminated for critical comment before submitting them. This included dissemination of the final report.
- Sustaining participation over a period of a year was perhaps the most difficult dimension of this evaluation. Our participants needed to be fully involved in the various data gathering processes and were expected to play an active part in collaborating with our work with teachers, learners and other members of

the education community who had been part of the Life Science process. Two factors contributed to the sustainability of the process. First, the action research approach allows for evaluation to be planned as a series of events. This not only provides variety in the activities, but also means that not everyone is involved all the time. Second, the structure and composition of the evaluation team further enabled the level of participation we sought and helped to sustain the relationships. The main team consisted of four members, while additional members were co-opted for specific tasks. Equally each member of the team had a particular area of the evaluation for which s/he was predominantly responsible. In this way we were able to make the best use of our special areas of expertise, create variety and maintain the impetus, while at the same time fitting the evaluation into our own and the project staffs' work schedules. The most problematic dimension of this was the difficulty of bringing the team together often enough to reflect and consult among ourselves. Although we maintained e-mail contact we did feel that this was something that needed to be given more consideration at the outset of our planning.

- Participatory approaches of necessity are based on a relationship involving trust. The better the trust the better the participation will be. Equally, the more contact between people the greater the chances are of the trust dimension being put to the test. Over the period of a year our roles as evaluators subtly shifted from being outsiders and 'others' to that of critical friends. I am aware that this is likely to be a hotly debated issue, but I believe that the positive aspects gained from this shift far outweigh any downsides. On the one hand, being an 'inside-outsider' provides evaluators with insights that otherwise would be impossible. On the other hand it does mean that evaluators have to be especially sensitive and able to make judgement calls, not only on what should and what should not be included, but also how to include and structure information to which they are privy.

Formative monitoring and evaluation in the context of the SEEN project has underscored the issues relating to relationships, partnerships and participation that emerged in the course of the Life Science evaluation process. Evaluators involved in this sort of process, I find, have to be as sensitive as the most delicate violet and at the same time have to have the skin of a rhino.

Evaluation, learning and institutional knowledge

The final aspect considered in the context of the Life Science evaluation and its influence on the M&E developed thus far for the SEEN project is related to capacity building that enables the assessment and analysis of change. In the absence of evidence and documentation pertaining to performance referencing, rubrics and reflective process analysis, the Life Science evaluation team developed and implemented a number of strategies to help us make sense of change in the context of this project. The professional development of project staff in the course of the evaluation is relevant to this discussion. The following in particular have been of assistance in the ongoing development of the M&E for the SEEN project:

- *The development of contextual profiles:* Each member of the Life Science Project team was invited to construct a contextual profile of their region, which analysed the situation over the period of the intervention. Focusing on the socio-historical dimensions that influenced learning and teaching in the

context of their work as well as on their perspectives and analysis of the project's impact provided rich data that, although retrospective, provided opportunities for reflection. Longitudinal contextual profiles have consequently been built into the SEEN Project.

- *Case Studies:* Inviting project staff to develop and write up case studies with their counterparts and involving selected teachers with whom they had worked, was another rich source of data providing insights into the projects achievements in terms of development. The value of these case studies has led to their incorporation into the data collecting process of the SEEN project.
- *Making theory explicit:* The theory underpinning the project and the evaluation process was constantly interrogated and critically scrutinised with project staff during the evaluation process. Making theory explicit provided a shared understanding of the processes and the practices involved in the project as well as helping us to understand how far and how well teachers and learners had progressed in terms of their development. A key element in the SEEN project is helping people to reflect not only on their practice, but also to understand the theory driving and informing practice.
- *Modelling, and critical reflection:* The involvement of the project staff in the development and implementation, as well as in the analysis of the interactive workshops with groups of learners and teachers was a capacity building process. This involvement modelled the structuring of workshops for the purpose of collecting data and analysis of data related to performance based criteria; modelled learner centred education within the context of social constructivism and developed an understanding of reflective practice through the application of meta-cognition in the analysis and evaluation of the information generated by the workshops. Critical reflective practice, (following Schon 1991, and McKernan 1996) have been incorporated in the research based practice suggested for the SEEN project.

The above factors all gave rise to questions relating to traditional baseline data on which projects depend. While this sort of baseline data remains enormously valuable in evaluations and impact assessments, the Life Science evaluation /impact assessment highlighted the deficiencies of data that focuses only on how many and how much. An aspect given emphasis in the SEEN project is how to generate data from within the project to provide material that has value in terms of assessing change and development. In conjunction with the action research based approach adopted, project staff have been asked to keep journals reflecting on their own practice and have been encouraged to have their participants do the same. Performance based indicators are in the process of being developed and refined, and periods have been set aside for critical reviews in the course of each year involving project management and staff and the evaluation team.

Conclusion

Lessons learned from the evaluation/impact assessment of the Life Science Project in the context of designing, developing and implementing an approach and methodology for the process, continue to be of value to the ongoing development of the M&E for the SEEN project in Namibia. The range discussed here within the framework of the selection of appropriate approaches, the development and sustaining of relationships within participatory

theory and the focus on capacity building as part of the evaluation process, have emphasised the importance of:

- Interrogating the rationale for the evaluation in the context of the project's aims and in particular the developmental objectives.
- Theoretical consistency between the evaluation and the project ethos and epistemology, as well as the need to locate evaluation and assessment in the context of the project and its site of implementation.
- Working towards making closer and more explicit links between proposal developers and the evaluators, as well as developing more explicit links between the project and evaluators in developing the evaluation proposal.
- A participatory approach that gives opportunities for critical reflection and review to all who are involved in the evaluation process, that actively involves key role players and stakeholders in the process and is based on sound working relationships in an environment that facilitates meaningful participation.
- Making theory explicit and working towards theoretical consistency through the principles of procedures, the evaluation model, as well as the design, development and implementation of the data gathering tools.
- Expanding the concept of base-line data to include longitudinal contextual profiles and in the context of educational evaluation and assessment to include a focus on reflective practice through adopting principles related to action research.
- Recognising the role and value opportunities afforded by the evaluation process for capacity building and professional development.

Educational development and change is a notoriously slow process and its very nature means that if evaluations and impact assessments are to provide a fair reflection of the project's achievement one of the most crucial aspects is the allocation of time appropriate to the rationale and the terms of reference selected for the evaluation.

References

- Bhana, A. 1999. Participatory action research: A practical guide for realistic radicals, In Terre Blanche, M. & Durrheim, K (eds). *Research in practice*. Cape Town: University of Cape Town Press.
- Cornbleth, C. 1987. The persistence of myth in teacher education. In Popkewitz, T (ed), *Critical studies in teacher education: its folklore, theory and practice*. New York: Falmer Press.
- Folker, S. 2001. Aid impact: Development interventions and societal processes. Research Programme 2001-2004. Copenhagen: Centre for Development Research.
- Garbers, J. 1996. *Effective research in the Human Sciences*. Cape Town: Van Schaik.
- Gipps, C. 1994. *Beyond testing: Towards a theory of educational assessment*. London: Falmer.
- Gipps, C. & Murphy, P. 1994. *A fair test? Assessment, achievement and equity*. Buckingham: Open University press.
- Giroux, H. 1992. *Border Crossings: Cultural workers and the politics of education*. London: Routledge.
- Guba, E. & Lincoln, Y. 1989. *Fourth generation evaluation*. London: Sage.
- Mckernan, J. 1996. *Curriculum action research (2nd ed)*. London: Kogan Page.
- Popkewitz, T. (ed). 1987. *Critical studies in teacher education: Its folklore, theory and practice*. New York: Falmer.
- Schon, D. 1991. *The reflexive turn: Case studies in and on educational practice*.

Massachusetts.

Van Harmelen, U. with Adams J., Avenstrup, R., Murray, S., van Graan, M. & Wilmot, D. (2001). *Evaluating change: Life Science Project 1991-2000*. Windhoek:Ibis