Decoding process evaluation frameworks

Lessons for the public sector in South Africa

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ABSTRACT

The widespread service delivery protests in South Africa call for the effectiveness of the public sector in service delivery. Monitoring and evaluation are essential in ensuring such effectiveness is achieved. Process evaluation in the public sector could be an indispensable intervention for the attainment of service delivery goals. This article is an explication of process evaluation methods from studies involving several frameworks for process evaluations. The article reviews the methodologies and frameworks of several studies on process evaluation. These frameworks include the systematic structured observation technique, intervention driven framework, logic model and the key components profile. It is important to note that these frameworks are pivotal in the implementation of process evaluations. These frameworks depict process evaluation as a *vital adjunct* ***to outcome evaluation and it is argued that process evaluation is the prerequisite and a necessary ingredient for effective and efficient programming. A key lesson learnt is the adoption of a*** *comprehensive evaluation methodology* ***which is useful in process evaluation for cross validation purposes and also for ensuring the validity and reliability of process evaluation techniques, procedures and results. While several methodological challenges confront process evaluation these may be overcome by the employment of a comprehensive evaluation methodology.***

INTRODUCTION

The widespread service delivery protests in South Africa call for the effectiveness of the government in service delivery. Process evaluation in the public sector could be a fundamental intervention for the attainment of service delivery goals. This article is an explication of process evaluation methods. Process evaluation entails documenting and analysing programme operations and an assessment of the extent to which programme activities are furthering short-term objectives as well as supplying data which is useful in the

interpretation of programme outcomes while informing efforts for future planning (Corbett *et al*. 1990-1, Dehar *et al.* 1993 in Viadro *et al.* 1997). Process evaluation guides and improves *programme development and implementation* and explicates the concept of *outcome results* (Odenndal *et al.* 2008). Process evaluation is also a "vital adjunct to outcome evaluation" (Viadro *et al*. 1997:1).

Moreover, process evaluation is vital for large scale complex programmes with a multiplicity of levels warranting strategies for evaluation which are multifaceted (*ibid*). Viadro *et al*. (1997) refer to several community interventions on a large scale, emphasising process evaluations (McGraw *et al.* 1994; Corbett, Thompson, White & Taylor 1990-91; Whikizer, Von Koff, Cheadle, Maeser, Wagner and Pearson *et al*.1993, Mattinson, Cummings, Lynn, Giffen, Colle & Pechacek: 1990-1). This article reflects on process evaluation studies by Boufford *et al.* (2003); Viadro *et al.* (1997); Cousins *et al*. (2004) and Heinz & Gant (2003).

MAIN OBJECTIVES AND METHODOLOGIES OF THE STUDIES

The main objective of the study by Bouffard *et al.* (2003) was to examine the efficacy of the use of qualitative and quantitative techniques in process evaluations for the improvement of process evaluation by conducting process evaluations of about seven therapeutic communities for drug offenders. Their methodology for the study entailed the use of a com*prehensive evaluation methodology* by employing traditional stakeholder interviews (targeting administrators, clinicians and correctional officers); *fidelity measures* (data recorded officially on programme implementation including drug tests and graduated sanction administration) and a structured observation technique.The methodology employed by this study underscores the need for employing a comprehensive evaluation methodology in process evaluation for effective and efficient programme implementation.

The study by Viadro *et al.* (1997) was aimed at illustrating the theoretical application of process evaluation to community health interventions which are multifaceted. The study's specific objectives entailed setting forth the scope and aim of process evaluation; explaining why and how methods and approaches were selected; describing challenges in the data collection process; sharing early lessons on resources needed for the development of effective process evaluation and illustrating merits of gathering process data.

Their study adopted a multimethod approach, employing a number of instruments for data collection purposes. Two evaluation strategies were employed for data collection to accomplish stated evaluation objectives. The first strategy employed instruments which included structured interviews (for medical histories and health care practices and satisfaction with the health service providers). Unstructured interviews were also used for variables which were subjective. The second evaluation strategy used, focused on using sources of data already existing which included annual service statistics and internal project documents. These sources of data did not only correspond to evaluation objectives but they also corresponded to the specific components of the intervention.

The major objective of the study by Cousins *et al.* (2004) was the introduction of *key component profiles (KCP) as an alternative methodological approach* to process evaluation which was the major contribution of the study. This study adopted the "Key Components

Profile development and validation methodology" (Cousins *et al.* 2004).The methodological approach of the study was based on the use of the key component profiles which was the major contribution of the study. The authors reflect on this when they write that "to the best of our knowledge the present study is the first use of a methodology based on KCP in the field of mental health" (Cousins *et al.* 2004:13). The KCP instrument is suitable for the assessment of the implementation of the programme (*treatment fidelity* in this case) for case managers working within the treatment group (*ibid*)

The study by Heinz & Gant (2003) conducted a process evaluation of parenting programmes for parents who are intellectually disabled. This process evaluation employed a *qualitative participant observation methodology* (Heinz & Gant 2003:1). This methodological approach entailed data collection from debriefing forms by the facilitator, observation notes by the evaluator over a period spanning eleven weeks and a group interview with the parents.

STUDY FRAMEWORKS AND PROCESS EVALUATION

Systematic structured observation framework

The systematic structured observation technique (SSO) was one of the process evaluation methods employed in a comprehensive evaluation methodology by Bouffard *et al.* in their study. The development of the SSO from traditional ethnographic methods distinguishes it from traditional ethnography in that it requires the observation and gathering of data to be done in a *structured format* (Bouffard *et al.* 2003:152). The systematic structured observation technique employed by Bouffard *et al.* (2003) influenced their process evaluation of several therapeutic communities. The influence of the SSO determined the instruments to be used for data collection and the ultimate analysis of the results of the study.

The adoption of the systematic structured observation technique in this study obviously influenced the choice of the instrument to be used in this study which was the structured observational instrument. This instrument helps the process evaluator to understand the programme and the operation of its components. In the context of this study the SSO was instrumental in identifying the nature of treatment delivered to drug involved offenders by directly observing the activities involved in the treatment process. The use of the SSO requires the observation and gathering of data in a structured format, thereby allowing the collection of data independently. Moreover, this allows the systematisation and replication of the procedures which are involved.

The development of the structured observational instrument in this case was meant for the measurement of a number of programmatic areas including the treatment philosophy of the programme; topics of treatment covered in meetings; treatment delivery styles and the utilisation of the peer group as an *agent of change*. Each of these five categories contained at least ten items which represented specified components of treatment.

These five categories with their several items inevitably influenced the data to be collected during the observational process. The systematic structured observation technique was instrumental in capturing the nature of the treatment being delivered through direct observation of treatment activities. This study proves that the employment of a

comprehensive methodology in process evaluation is vital since it does not only provide detailed but accurate information as well, thereby, ensuring the validity and reliability of the process evaluation.

The systematic structured observation technique is vital in correctional process evaluation in that it addresses two key issues which are unlikely to be addressed by other methods. The first one is that it provides for the description and quantification of programme services delivered by the staff and the second one is that it provides room for programme consistency assessment, either external or *internal consistency of specific programme components with one another* (Bouffard: 2003).

The SSO in the context of this study proved vital in the measurement of therapeutic communities' (TC) therapeutic integrity. This is a clear demonstration of how the SSO framework gave direction to this process evaluation. The authors confirm this observation when they write that the "SSO instrument was useful in measuring the therapeutic integrity of the TC as implemented in each of the sites".

In a way that shows how the SSO gave direction to the analysis of process evaluation data the authors also write that "the programs generally did not seem to employ philosophical approaches consistent with those included on the observational instrument". Having observed that they conclude that "these treatment philosophy results suggest that the programs were not successful in implementing the core elements of the TC, for example program philosophies represented by contemplation of change and the need for the client to engage in self work". However the observational results also show that to some extent the programmes succeeded in the implementation of strategies for cognitive behavioral change.

Types of Interventions Framework

The process evaluation by Viadro *et al.* (1997) was intervention driven, focusing mainly on three complementary interventions components which are *InReach, Outreach* and *Access*. The *InReach* intervention was meant for the improvement of screening services for breast cancer by local departments of health and community health centres in the United States of America.

This intervention was meant for streamlining policies for clinic prevention; procedures for screening; tune services for prevention of a client's specific risk status; offering current provider education on screening and detection of breast cancer; development of mechanisms to keep the clients in the system of health care and identification of health care providers interested in championing "a community wide plan to close the racial gap in breast cancer screening, referral and follow up" (Viadro *et al.* 1997).

The *access intervention* focused on the reduction of practical barriers including cost and inadequacy of transport preventing women from low income groups from accessing mammograms. The intervention intended to achieve this through the improvement of inefficient mammography referral patterns; decreasing the cost of mammograms and/or facilitating easy payment of mammograms by women from low income groups; development of networks with community groups provide transport services to mammography facilities and agreeing with local providers to follow women not having their own physicians.

The *Outreach* intervention focused on increasing awareness of breast cancer.

Moreover, it also focused on the use of screening services by older African American women in their community by raising networks of women (trained by community outreach specialists) talking to others about breast cancer while supporting them in the process of acquiring mammograms.

These three intervention components informed the several process evaluation objectives for which various instruments were designed for the collection of process evaluation data. Evaluation objectives for the *Inreach* intervention included identification of breast cancer screening services provided by public health agencies from clients' perspectives; identification of mammography referral patterns of local health agencies; assessment of public health nurse's baseline breast cancer screening knowledge, beliefs, attitudes, clinical behaviours and training needs; documentation of cancer screening practices provided by primary care physicians and identification of agency referral source for women getting mammograms from local radiology facilities.

Evaluation objectives for the *Access* intervention were exploration of procedures for scheduling appointments for mammogram referrals and breast examinations; description of women's mammogram histories; exploration of women' mammogram referral trends; documentation of costs and transport barriers identified by women in getting mammograms and documentation of poor women screened for breast cancer by county, race and age.

The Outreach intervention evaluation objectives included a determination of whether women using the health care system have contacted local health advisors (LHAs); characterising activities and support provided by LHAs, an exploration of LHAs perceptions of the LHA role and helping process and an assessment of the LHA influence on decision by women to get mammograms.

Against this background two principal strategies were used for the collection of process evaluation data. These principal strategies were influenced by the framework of interventions highlighted above. The first strategy entailed employing a number of instruments (including close-ended, structured instruments which are brief face to face interviews, short self administered questionnaires) for the exploration of perspectives by clients, providers, agencies and LHA over time. It is clear that the development of these instruments was influenced by the intervention evaluation objectives, for example question on medical histories, health care practices, satisfaction with providers were meant to meet intervention specific evaluation objectives.

The second strategy focused on using sources of data already existing such as project documents and annual service statistics. In a clear demonstration of how the study's framework influenced instruments to be used and data to be collected the sources of data corresponded to at least one evaluation objective and to at least one intervention component as reflected in figure 1 adapted from Viadro *et al.* (1997). In some cases sources of data actually furnished information for more than one objective and intervention, for example for both *Inreach* and *Outreach* interventions the process evaluation objectives were identifying breast cancer screening services provided by public health agencies from clients' point of view; identifying local health agencies' mammography referral patterns and determining whether women using the health care system had contact with LHAs. Process evaluation data for all these was to be obtained obviously by client exit interviews and also telephone follow up.

Table 1: NC-BCSP process evaluation methods and objectives, by intervention component assessed

Instrument or data source	Evaluation objective(s)	Intervention(s) assessed
Client exit interviews (and telephone l oHow-up)	1. Identify public health agency providers' breast cancer screening practices, from the client's point of view. 2. Identify local health agencies' mammography referral patterns. 12. Determine whether women who use the health care system have had contact with LHAs.	InReach, OutReach
Provider surveys	3. Assess public health nurses' baseline breast cancer screening-related knowledge, attitudes, beliefs, Clinical behaviors, and training needs. 4. Document primary care physicians' cancer screening practices.	InReach
" Simulated client" calls	6. Explore the procedure for scheduling appointments for clinical breast exams and mammogram referrals al local public health agencies.	Access
Survey of radiology center clients	5. Identify agency referral source for women getting mammograms at local radiOlogy facilities. 7. Describe the mammogram histories 01 women getting mammograms at local radiOlogy facilities. 8. Explore women's self-referral trends lor mammography over lime. 9. Document cost and transportation barriers identified by women getting mammograms at local radiology facilities. 15. Assess LHAs' influence on women's decisions to gel mammograms.	InReach, Access, OutReach
Service statistics	10. Develop a baseline profile of local health agency clients and assess older African American women's service utilization patterns. 11. Document the number 01 poor women who are screened for breast cancer. by age, race, and county.	Access
LHA activity reports and interviews	13. Characterize the types of activities carried out and the social support provided by LHAs, over time and across counties. 14. Explore LHA perceptions of the helping process and the LHA role.	OutReach
Project documents	16. Document " critical incidents" and changes in the project' s organizational and community context.	InReach, Access, OutReach

Source Viadro *et al.* 1997

Key components profile framework

The process evaluation by Cousins *et al.* (2004) employed a key component profile (KCP) framework. The development of the KCP is based on Leithwood & Montgomery's (1997) innovation profiles which were originally developed in the curriculum development and implementation context. These innovation profiles are "multidimensional profiles of growth in performance relevant to the development and implementation of a given innovation" Cousins *et al.* (2004).

The adaptation of the innovation profile methodology profile to the evaluation of program implementation yielded the KCP. The KCP framework focuses on the *key components of*

programme logic. This adapted methodological framework yields an instrument useful to programme staff and other programme implementation contexts.

The KCP instrument developed contained five key dimensions which were related to the key components of the ICM programme which are: assisting clients in meeting their basic needs; facilitating development and coordination of formal supports network; helping clients with their informal network; facilitation of access to service and facilitation of achievement of personal goal. In each of these dimensions of case manger responsibility, are contained sub-dimensions which range from 2 to 8 with a set of activities rated on a continuum describing each sub-dimension

The development on this KCP instrument was a process involving six steps which entailed: reviewing the programme logic; profile instrument drafting; reviewing the draft; focus group discussion with case managers; conducting a pilot study and lastly focus group with case managers for informal debriefing. This KCP instrument inevitably determines the data to be collected. In this case it contained development of the key components profile in relation to the key components of the ICM programme. The data to be collected and analysed were in the context of the key components of the programme. In this case, therefore the development of the KCPs is a prerequisite for the collection of the process evaluation data. Even the analysis of the data has to be done in the context of the KCP. This implies that the KCP becomes an integral part of the process evaluation.

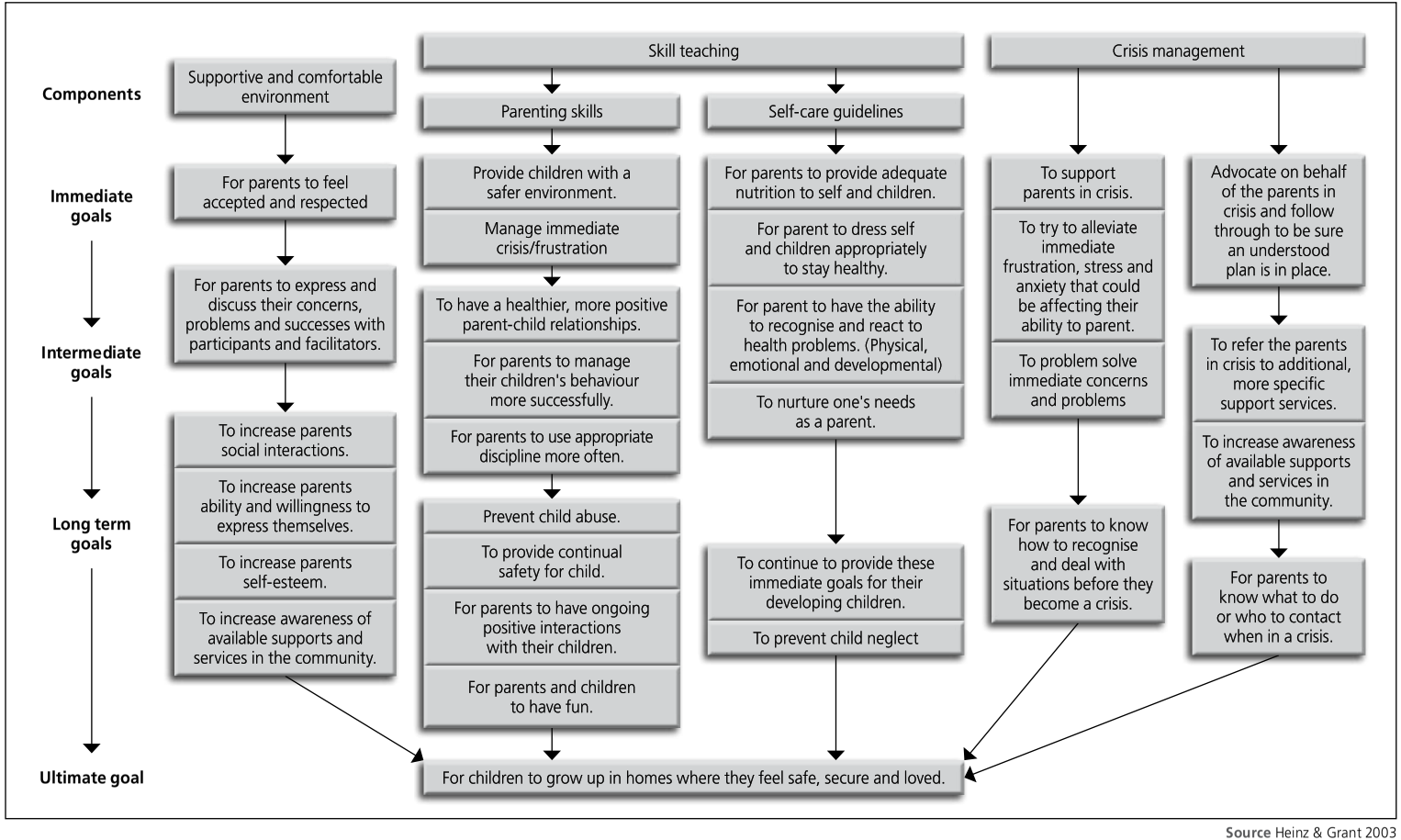
Logic model framework

Heinz and Grant (2003) developed a logic model for their process evaluation which in their view not only provides a key framework for the design and execution of the evaluation but even the interpretation of the resulting information (Fisher & Peters: 1985, Johncox: 2000, Meeres, Fisher & Gerrard: 1995, Ruttman: 1980 cited in Heinz & Grant). This was a process evaluation of *Parents Forever* (PF) which is a parenting group for parents who are intellectually disabled. This to a greater extent illustrates how their framework gave direction to the whole process of process evaluation.

For this study, an evaluability assessment consisting of an analysis of programme documents (existing) and in-depth interviews with key programme staff resulted in the development of the programme logic model shown in Figure 1. The development of the logic model showed that the *Parents Forever* programme had three main components which were crucial for the attainment of the ultimate goal of the programme. The main components are a supportive and comfortable environment; skill teaching, containing consisting guidelines for self-care and skills for parenting and the last one was crisis management. The development of the programme components in the logical model provided an indispensible framework for the conduct of the process evaluation. In the development of the logic model a key component which was not included in the programme documents which unintentionally became an integral part of the program in responding to the fundamental needs of the program participants.

To show that the logic model even provided framework for the analysis of the results the authors write that "the main results of this process evaluation found that the facilitators had successfully implemented three main programme components (which had been identified through the development of the logic model)". The authors also analysed within the

Figure 1 Parents forever logic model.



Source Heinz & Grant 2003

framework of the logic model when they write that " within a supportive and comfortable environment they (facilitators) taught parenting skills and self-care skills and they helped programme participants with their many, and often recurrent crisis".

PROCESS EVALUATIONS AND PROGRAMME MONITORING: LESSONS TO BE LEARNT

A key lesson learnt is the adoption of a multi method which is useful for process evaluation for cross validation purposes and also for ensuring the validity and reliability of process evaluation techniques, procedures and results. In the case study of Bouffard *et al*. (2003), the use of the SSO was complemented by stakeholder interviews and fidelity measures. The study by Bouffard *et al*. (2003) suggest that had one technique of evaluation been employed the conclusions to be drawn regarding the implementation of the programme would not only be *vastly different* but *largely inaccurate* as well. This is evidenced by discrepancies in observational data and the data collected from staff interviews. There were also similar discrepancies in data from interviews and the data collected from sites themselves. This represents a major challenge in process evaluation which can be overcome by employing a comprehensive methodology or the use of a mixed method.

One of the critical lessons to be learnt is that process evaluation presents an opportunity for comparisons to be made. While broadening the range of comparisons to be made, process evaluation also employs a comprehensive or multimethod approach which by relying on various methods and sources of data, a multiplicity of perspectives, some of which could be conflicting, can be exposed. This allows cross-validation which enhances the trustworthiness and authenticity of data (Brewer & Hunter: 1989, Lincoln: 1992 in Viadro *et al.* 1997).

The study by Vidaro *et al.* (1997) exposes several challenges when conducting process evaluations and programme monitoring. *Firstly, financial resources,* funders are reluctant to fund process evaluations, thus financial resources for process evaluation activities such as *frontier planning*, collection, management and analysis of data are not always readily available. *Secondly, human resources* – in light of the debate on internal versus external evaluation this process evaluation referred by Viadro *et al*. (1997) could have also been supported by external evaluators, the lack of financial resources implied that such human resources could not be hired. Since this was a university based project reliance on internal staff, students and postdoctoral fellows proved to be very useful.

Thirdly, breadth *versus depth,* the NS- BSCP' large scale interventions "spawned a process evaluation that necessarily trades some breadth for depth" (Viadro *et al.* 1997). The involvement of students who selected certain aspects of the *Inreach* and *Outreach* intervention was invaluable since it significantly gave the necessary depth to the process evaluation.

Cousins *et al*. (2004) highlight another key challenge in process evaluation. They caution that in spite of the surge of interest in process evaluation, a number of challenges remain which are methodological in nature. They continue to specify that not only does developing means to sufficiently judge the implementation of the programme as intended remain problematic, but also providing effective ways of using that information to explicate the variation in the outcomes of the programme. Their development of a KCP somewhat addresses this challenge.

A critical reflection on the development of the KCP as a methodology for process evaluation by Cousins *et al.* (1994) reveals a number of challenges. *Firstly*, the authors observe that "while the sample was small, resource limitations on time and staff precluded a more expanded sample". While a small sample raises reliability and validity concerns large scale process evaluations are time and resource consuming. *Secondly, power differentials* among programme staff may result in biased responses, this again, compromises the validity and reliability of the process evaluation data.

Cousins *et al.* (1994) observe that another limitation arising from the KCP methodology is the use of the KCP itself since it "formalizes matters and inappropriately renders them static". They further argue that it is an "added burden", while the retrospective rating involved may suffer from inaccurate memory of the rater, and the extent to which data collected is flexible and comprehensive is of concern also. Added to these is the issue of reliability across rater, which is of serious concern also.

CONCLUSION

This article has reviewed the methodologies and frameworks of several studies on process evaluation. The frameworks of these studies are fundamental in designing process evaluation in the public sector for effective service delivery. Moreover, it is also important to note that these frameworks are pivotal in the implementation of process evaluations. Process evaluation has been demonstrated as a *vital adjunct* to outcome evaluation and it must be emphatically stated that process evaluation is the prerequisite and a necessary ingredient for effective and efficient programming. However, several methodological challenges confront process evaluation and these may be overcome by the employment of a comprehensive evaluation methodology. These challenges highlight key lessons which are crucial in the design and implementation of process evaluation methodologies. One nagging challenge remains that of funding for process evaluations. This challenge may be overcome by the demystification and explication of process evaluations to prospective funders.

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