Early Challenges in Evaluating the KidsMatter National Mental Health Promotion Initiative in Australian Primary Schools

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Introduction

The KidsMatter Initiative (KMI)¹ in Australian primary schools is a mental health promotion, prevention and early intervention initiative which aims:

- to improve the mental health and well-being of primary school students
- to reduce mental health difficulties among students
- to achieve greater support and assistance for students experiencing mental health difficulties.

Our team tendered for and was contracted to undertake an evaluation of the implementation and outcomes of the two-year pilot phase of the KMI. In this paper we set the scene by outlining some of the initial issues and questions generated as we first examined the request to tender for the evaluation. The national initiative, involving 101 schools, is an ambitious project, requiring an equally ambitious school-based evaluation. In considering whether or not to commit to a competitive tendering process, the evaluation team first needed to consider whether they could commit to a large-scale two-year evaluation. In particular, we contemplated

Abstract

This article describes, analyses and reflects on the challenges of planning and conducting the evaluation of the KidsMatter Initiative (KMI) in Australian primary schools during the first year of the two-year initiative. The purpose of the evaluation is to inform the Australia-wide rollout of the KMI. The discussion is arranged under four headings: conceptual challenges, design challenges, practical implementation challenges and managing collaborative complexity. Emphasis is placed on how the challenges were theorised as a basis for responding to the requirements of the evaluation. Conclusions include recognising and enabling contributions from diverse stakeholders, using the domain expertise of the evaluation team, operating flexibly to meet the needs and exigencies of the KMI, the clients and the diverse participant groups, maintaining focus on the core conceptual frameworks underlying the KMI and the evaluation, and the implications of the evaluation for developing wider knowledge relating to schools and their effects, as well as about factors contributing to educational change.
the size and scope of the task, our expertise and the expectations the client would have. In relation to the complex evaluation skills required, consideration was given to the organisational, design and statistical expertise possessed by team members.

Following the decision to respond to the request for tender, additional challenges presented themselves. Because of the national scope and complexity of the KMI and the dynamic nature of the initiative’s implementation and its two-year timeframe, we recognised potential complications, such as geographical separation between us and participants and consequent difficulties with communications for data collection. We reasoned that a cross-disciplinary and cross-sectoral partnership would offer a number of advantages. A cross-disciplinary approach would facilitate a tender application that blended both qualitative and quantitative research designs. A cross-sectoral approach would strengthen the application by providing direct access to education authorities and to each school sector. As a consequence we formed a partnership with the South Australian Department of Education and Children’s Services. This added to the number of interested stakeholders, and increased the demands of managing complex interpersonal relationships involved in conducting the evaluation.

Our expertise in student mental health alerted us to potential issues in the definition and measurement of mental health. We also acknowledged that, for reasons of economy, the evaluation could not survey every student, teacher and parent participating in the KMI. This raised questions about an appropriate sample for the evaluation. We resolved to gather data from a variety of sources, including a sample of teachers and parents in each school, using questionnaires, case studies of individual schools and a ‘student voice’ component that would provide insight into students’ perceptions of mental health. From the outset, the evaluation plan needed to take account of the statistical analyses so that the results would yield findings that satisfied the clients’ requirements.

As we now approach the end of the first year of the two-year KMI, we have confronted and responded to many of the initial challenges. In this paper we describe and comment on the main difficulties and issues in conceiving, designing and conducting the evaluation. The main purpose here is to document how knowledge and expertise in areas such as evaluation design, schools (their culture, teaching and learning, student development), educational change, student mental health, intervention programs in schools, and research design and data analysis have helped us to interpret the challenges and develop response strategies. The following discussion is grouped under four headings: conceptual challenges, design challenges, practical implementation challenges and managing collaborative complexity. Although the issues have been organised in this way for purposes of clarity, they are nevertheless dynamically interrelated.

Conceptual challenges

Many of the challenges we faced in conceiving and designing the evaluation, especially in the early stages, were of a broad theoretical or conceptual kind. This section outlines some of those challenges and reflects on how we theorised them. For example, the KMI is an intervention program designed to engender change in schools. Our task was to measure and explain that change. The current literature on educational reform helped us to frame this task.

From the literature it is apparent that school leaders are at the heart of school reform and improvement (Devaney et al., 2006; Fullan, 2001, 2007). The evaluation therefore needed to pay attention to the role of school leaders. It was also evident that school change is multidimensional and involves all aspects of the school, including materials, strategies, beliefs, developing capacity, and organisational and institutional structures (Senge, 1990; Waks, 2007). The evaluation design needed to take account of all these dimensions.

Using a systemic perspective, the organisational and institutional change literature (Cuban, 1988, 1992; Senge, 1990; Waks, 2007) contains a distinction between first-order and second-order change. Cuban argued that first-order change aims to improve the efficiency and success of what currently exists in schools, whereas the more difficult (Hargreaves, 1997) second-order change endeavours to transform the structure of the school, the roles of those involved, beliefs systems and the curriculum. Second-order change requires engagement by teachers and support from school leaders. Whether second-order change is likely over relatively short periods of time can be questioned (Waks, 2007), but it seemed that, for the continuity and sustainability of the KMI, some second-order change would need to occur. The first- and second-order change distinction influenced the way we conceptualised and then designed the evaluation (for example how and what we measured).

The pilot nature of the KMI also draws in Fullan’s (1982) third aspect of educational change: the continuation or sustainability of the initiative. This meant that the evaluation should measure factors associated with sustainability. In particular, higher leverage for change is more likely if attention is turned to developing schools’ capabilities in promoting positive student mental health (Senge, 1990),
Another imperative was to use current best practice in designing and conducting the evaluation. This was helped by recent literature suggesting guidelines for evaluation of clinical, social and educational innovations. For example, Ellis and Hogard (2006) outlined a three-pronged method of evaluation called 'the trident'. Consistent with the literature on types of evaluation (Devaney et al., 2006), Ellis and Hogard argued that three prongs of an evaluation structure need to be considered:

- the measurement of outcomes
- the description and analysis of process
- the sampling of multiple stakeholder perspectives.

Taking account of evaluation approaches and frameworks such as the trident, the immediate challenge was to incorporate the KMI goals, purpose and strategies, together with its underlying theoretical model, into an evaluation design.

The KMI uses a mediation approach as its underlying theoretical model. That is, the effects of the implementation strategies (such as providing social emotional learning for students and increasing information and support for parents) on student mental health outcomes are conceived to be mediated by a number of processes. These processes involve changes to protective factors strengthened by the initiative. The protective factors were conceived, by the designers of the KMI, as residing in the family context (for example effective parenting), the child (for example social, emotional and behavioural competencies) and the school (for example teachers’ knowledge and competence). These protective factors were prominent among the eight areas that our clients indicated should be measured by the evaluation.

It was possible to map the KidsMatter theoretical model and requirements on to the Ellis and Hogard trident through the common foci on process and outcome. The main element of the KMI was student mental health outcomes, paralleling the first prong in the Ellis and Hogard trident. Accordingly, our first priority was to conceptualise and then measure the three elements of this outcome (improved student mental health and well-being, reduced mental health problems among students, and greater support for students experiencing mental health difficulties). The second prong in the Ellis and Hogard trident concerns the description and analysis of process. There seemed to be two types of process in the KMI, the first type pertaining to the implementation per se, leading, for example, to the need to investigate whether teachers, schools and students are engaged with each of the four components of the initiative.

The second type of process arises from the mediation model and its suggested changes to protective factors. Individuals who participate in the KMI are expected to learn new ways of thinking, new ideas and practices, and ultimately to adopt new beliefs. For example, Fullan and Stiegelbauer (1991) claimed that successful change at the individual teacher level reflects three components: provision of materials, strategies (student, class, whole school, community) and beliefs, with teacher beliefs driving the actual change or initiative. Development of capabilities in these three components became focus areas in the evaluation. Comparable measures of change in students and parents/caregivers also needed to be developed.

Finally, the third prong in the trident pertains to stakeholders. Our task was to identify those stakeholders and incorporate their perspectives into the evaluation.

An important ongoing challenge for the evaluation has been to maintain our focus on core conceptual frameworks (the KMI, quality evaluation, educational change, our evaluation design and purpose) throughout the stages of the evaluation, described below. These stages, and the challenges faced in them, include designing sampling processes and evaluation instruments, practical implementation of the evaluation, and managing the complexity of co-ordinating the valued inputs of diverse stakeholders.

**Design challenges**

The theoretical framework and implementation strategy of the KMI provoked questions about the design of the evaluation, such as creating a sampling design that could accommodate phased implementation in multiple sites, deciding what types of data to collect with what instruments and identifying potential sources of data. In addition, all these design components required ethics approval. Our approach to these issues is addressed in the following subsections.

**Longitudinal design**

The phased implementation of the KMI provided the opportunity to evaluate changes in protective factors and student mental health outcomes as the initiative progressed. We proposed a longitudinal design incorporating the administration of a structured questionnaire to teachers and parents in KidsMatter Round 1 schools (starting the KMI in 2007) and Round 2 schools (control group, starting the KMI in 2008) on four occasions: early 2007, late 2007, early 2008 and late 2008.

Although the tender specifications required only a large-scale survey, we doubted that this alone would provide data.
that would satisfy the requirements of a comprehensive evaluation, in particular with respect to gaining in-depth perspectives on the KMI. We proposed, therefore, a second study employing focus groups and interviews in a small number of representative schools, in order to solicit information from school leaders, teachers, support staff, associated professionals and parents. In addition, we proposed a ‘student voice’ study, to assess changes in students’ knowledge, attitudes and behavioural intentions. These proposals for qualitative studies, that extended the original request for tender, were recognised by the clients as enhancing the evaluation.

**Sampling design**

An early test for the evaluation was to design a sampling procedure to select participants. KidsMatter schools were drawn from government, Catholic and private systems, enrolments varying from 23 to 1060 students in schools spread across all Australian States in urban, rural and remote locations. To enable causal connections to be made between the KMI and student mental health outcomes, random selection from school populations was needed, with sufficient sample sizes from sub-populations of interest to enable the multi-level data analysis techniques required for nested populations (Luke, 2004). Expected non-response and attrition rates were taken into account in the selection of the initial sample.

We planned the sampling design from recommendations in the literature (Krosnick, 1999), our knowledge of statistical design and the characteristics of school populations. Extensive discussions with the clients were also held to ascertain their evaluation priorities. We recommended a stratified (age, gender) random sample of the parents/caregivers and teachers of 50 mainstream students in each school. In addition, we proposed over-sampling of the parents/caregivers and teachers of 26 students nominated as being at risk of social, emotional or behavioural difficulties in each school. This was done in case the stratified random sampling procedure did not, by chance, generate sufficient participants to report on this subgroup of at-risk students. The contribution of each participant will be weighted according to school size in the subsequent statistical analyses.

**Questionnaire development**

The mediation model of the KMI meant that we needed to evaluate not only student outcomes, but also the protective factors hypothesised to influence student mental health. These protective factors include teacher and parent engagement, knowledge, competence and confidence related to supporting the mental health needs of children.

Two parallel questionnaires, one each for parents and teachers, were developed. The original intention was to deliver the questionnaires electronically. However, we surveyed KMI schools, to find that 77% of teachers would prefer paper to electronic format. This preference resulted in a revised decision to deliver paper questionnaires.

Designing the questionnaires required finding a balance between incorporating validated instruments such as the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 2000) against questionnaire items specifically designed for this evaluation. Difficulties arose from the stated purpose of existing instruments (Youth in Mind, 2004), the recognised capabilities of the instruments (Levitt et al., 2007), copyright and client preferences. Aspects of validated instruments did not entirely fit the Australian school context and/or the needs of the evaluation. However, relying only on questionnaire items designed for this evaluation would inhibit opportunities to make comparisons between the evaluation and other studies.

The questionnaire design challenge was addressed using two strategies. First, we drew from our experience in student mental health to identify key literature and previous research that could inform questionnaire item design. Second, we tapped into our clients’ experience in the design of similar questionnaire items. A multifaceted questionnaire was designed that included:

- items designed specifically to canvass measures of implementation processes and protective factors
- the SDQ (Goodman, 2000)
- items designed specifically to measure students’ mental health.

The questionnaire items were submitted for feedback to the clients on numerous occasions. Issues that required negotiation included differing perceptions of acceptable language and item validity. The questionnaires were trialled with teachers and parents at local schools to check completion times and, through immediate post-questionnaire focus group discussions with respondents, to gauge user-friendliness (Krosnick, 1999). The iterative process of questionnaire feedback and modification took many weeks, but was essential to ensure that clients’ needs, and the evaluation quality, were addressed robustly.

**Project officer survey**

It became apparent in the early stages of the evaluation that
KMI project officers were at the heart of the initiative, with unique knowledge from each school about implementation, engagement and attitudes. As an extension to the original tender, therefore, an on-line survey was designed to access the knowledge and perceptions of project officers about the implementation of the KMI. This survey is to be administered at the end of each school semester in order to provide the evaluation with an external perspective of the KMI in schools (Ellis & Hogard, 2006; Levitt et al, 2007).

**Ethics**

This national evaluation required ethics approvals from the host university, Departments of Education and Divisions of Catholic and Independent Education in each Australian state: 30 in total. The need to respond to the specific requirements of 30 jurisdictions was an anticipated, but nevertheless complex and extended, task.

Drawing from our perspective of valuing the mandate of trustworthiness of design and participant care that ethics approvals provide to research projects, and our experience in preparing, reading and approving ethics applications, we implemented a two-stage ethics approval process. In Stage One we wrote to each ethics jurisdiction advising them about the broad parameters of the KMI and its upcoming evaluation. This approach was intended to prime each jurisdiction, preparing them for the extensive documentation to follow. In Stage Two, building on the goodwill and provisional approvals established in Stage One, each ethics jurisdiction was provided with all required documentary requirements.

This two-stage strategy worked well. Nevertheless, the time required to complete the ethics approval process was substantial. We were able to use this time to prepare for the delivery of the questionnaires to schools, which, as detailed below, has also proved to be a major undertaking.

**Practical implementation challenges**

Clearly, the conceptual and design stages of the evaluation required intensive work to establish properly the processes that followed. The main implementation issues of the evaluation that we confronted are broadly described as:

- resource requirements
- administration
- data management
- communications with schools

and are discussed below.

**Resource requirements**

With approximately 9000 questionnaires and associated documents to process in Phase One of the evaluation, there were issues about space requirements, document processing technology and flexible personnel requirements. Aspects to consider included storage space for numerous boxes of questionnaires and table space for employees to process the questionnaires. A high-speed scanner and document-reading software were tested and selected early in the project in order to inform the optimum lay-out of the questionnaires to facilitate error-free scanning. We prepared all documents to camera-ready stage, and linked all documents to mail-merge databases for printing. The contracted printer provided an error-free delivery of 9000 uniquely identifiable questionnaires and associated documents, making for fast and problem-free packing and postage.

**Administration of the questionnaires in schools by schools**

Substantial time was allocated to the development of procedures for administering the questionnaires in schools. Considerations included:

- the system of de-identifying and confidentially coding questionnaires to enable longitudinal tracking of respondents
- the methods of ‘selling’ the questionnaire to respondents and for supporting schools to maximise questionnaire returns
- procedures for obtaining parent/caregiver consent and for replacement of non-consenting parents/caregivers
- the design of the questionnaire administration instruction booklet for maximum clarity
- recognition of the considerable administrative workload by school staff who were required to allocate, track, match and collect the parent and teacher questionnaires.

Two documents were developed that played a pivotal role in the smooth running of questionnaire administration in schools, namely: the student sample list, shown in Figure 1, overleaf, and the instruction booklet to schools, which provided a step-by-step guide to undertaking the complex evaluation process. Figure 2, page 41, presents an extract from the instruction booklet, illustrating the step-by-step flowchart for questionnaire administration.
Data management

Collection of multiple sources of data through qualitative methods and repeated use of quantitative instruments, in multiple settings and on several occasions, enables triangulation of data and contributes to objectivity, reliability and validity (McCartney et al., 2006; Thorkildsen, 2005). Managing this large volume of diverse data is challenging in its own right. Clear decisions have to be made about how best to manage the data in a flexible framework that accommodates the changing requirements as the project progresses and as unanticipated opportunities arise. Poorly designed systems that only respond to the latest demand for data, without an appreciation of where data fit in the ‘bigger picture’, can result in wasted time, risk loss of data or create irreconcilable discrepancies across data collection occasions. This may limit or negate future choices for data analysis (Creswell, 2005). Data management processes were optimised by establishing a centrally accessible, doubly-backed-up database framework and bar-coded document tracking system.

Communications with schools

A source of potential difficulty for the evaluation was that delivery of questionnaires to parents/caregivers and teachers was not conducted directly by us, but was done at arm’s length via the schools. The KidsMatter schools are located across the Australian continent, separated by thousands of kilometres. Complications caused by this tyranny of distance are a recurring difficulty for nation-wide studies, and we knew that we could not expect the process of questionnaire delivery and return to run smoothly without providing substantial support to schools. Accordingly, we created an Evaluation website (http://caef.flinders.edu.au/kidsmatter) and initiated and invited regular telephone and email contact with schools.

The Evaluation website evolved to promote the evaluation, provide contact details, report latest events, enable downloading of replacement documents, provide access to progress monitors and provide a gateway to the Project Officer survey.

In order to maximise the return of questionnaires, we used telephone contact to bridge distance and to encourage personal contact between the evaluators and schools. The establishment of a ‘telephone hotline’, teleconferences to provide detailed explanation of the complex questionnaire administration procedure, and numerous courtesy calls to all schools contributed to strengthening relationships between the evaluators and KidsMatter schools.

The most widely used tool for communication between the evaluation team, schools and Project Officers is email, which has proved particularly useful for asynchronous communications with school personnel who are often committed to teaching, yard duty, parent meetings and so on. An added benefit of the email contacts is that the systematic collection of all questions and feedback from schools and Project Officers has enabled creation of a database that has the potential to further inform the evaluation.

The goodwill and dedication of school personnel and Project Officers have meant that the administration and receipt of questionnaires in the first phase of data collect-
tion have been highly successful. This success in working with schools has highlighted the importance of establishing effective communication networks between the evaluation team and representatives from all sections of the KMI. We discuss this broader communication imperative in the next section.

Managing collaborative complexity

In today’s research environment, it is recognised that there are advantages to be gained by working collaboratively across disciplinary boundaries and with cross-sectoral partners. Similarly, linking diverse stakeholders from a range of sectors in intersectoral collaboration is recognised as ‘best practice’ in contemporary health promotion literature (Rissell & Rowling, 2000).

The KidsMatter evaluation has faced the complexity of managing collaborative projects involving a diverse group of clients, an implementation team, advisory groups, our evaluation team and, of course, the large participant group. The structure of the external and internal collaborative process is represented in Figure 3, overleaf, from which it can be seen that, at the external level, we established an intersectoral schools advisory committee. This served
to enhance the evaluation team’s capacity to ensure that evaluation design and implementation were compatible with the requirements of the project and the culture and capacity of participating school communities. This committee comprises representatives from universities, government and non-government school sector agencies, principals’ associations, parent associations, key cultural groups including Aboriginal community leaders, and (mental) health professionals and services. Two important purposes of the committee are to ensure that all work undertaken by the evaluators is informed by school representatives, and to provide recommendations about ways to minimise the potential burden of the evaluation on participants.

Also at the external level, we have established strong relationships with the KMI implementation team from the Australian Principal’s Association Professional Development Council. Finally, as the evaluation enters its final phases, we will expose our preliminary analyses to an external final review reference group in order to provoke critical feedback on our methods and interpretations.

Internally, members of the evaluation team were chosen for their diverse experience in research, evaluation, external partnerships and consultancy – experience that covers a wide variety of fields in children’s learning, development and education.

Figure 3 also illustrates our relationship with our clients, with whom we have direct access via their nominated senior program manager, and with participant schools. We hold regular meetings with the clients’ representative and the KMI implementation team. Initially these meetings focused on sampling and questionnaire design, followed by the processes of data gathering. This close interaction was necessary because the evaluation design provided that the KMI implementation team and the project officers would

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**FIGURE 3 Structure of the Collaborative Process Informing the KidsMatter Evaluation**

[Diagram showing the structure of the collaborative process involving different stakeholders such as Intersectoral Schools Advisory Committee, Advisory Groups, Evaluation Team, participating school communities, and external partners like South Australian Department of Education & Children’s Services, Centre for the Analysis of Educational Futures, Flinders University, Hawke Research Institute for Sustainable Societies, University of South Australia, beyondblue: the national depression initiative, Australian Psychological Society, Australian Rotary Health Research Fund, Australian Government Department of Health and Ageing, and Australian Principals Associations Professional Development Council (APAPDC).]
play a liaison role in facilitating the return of questionnaires from schools. Our conversations with the implementation team also assisted in facilitating interactions between the evaluation team and the participating schools.

The close collaboration between the evaluation team and the various stakeholders has allowed sharing of information and improvements to the evaluation design in parallel to improvements in the design and roll-out of the in-school KMI. This working relationship has, however, led to a challenge from another direction.

**Maintaining the independence of the evaluators**

The goodwill evident between the evaluation team and the clients facilitated the progressive design of a stronger evaluation than if the evaluation team had worked in isolation. However, the associated regular consultations raised potential issues about the role and nature of suggestions or advice from the clients to the evaluation team, such as about requirements of the evaluation design. For example, decisions about sampling and data analysis were clearly our responsibility. In large part, this was also the case for the questionnaire design, though on this the feedback from clients was very important. The input of the client group was also significant when procedures for data collection in schools were being considered. For instance, we found common ground between our own experience and that of the client with school-based research and our knowledge of the pressures that it places on schools. The challenge here is to maintain the evaluation’s independence in the context of a helpful collaborative relationship with the client and other stakeholders.

Now that the design and delivery of the questionnaire and qualitative data gathering tools have been completed, and Phase One data collection has been implemented, we are about to enter the stages of data analysis, data interpretation and then reporting. This move to new stages is expected to change the nature of the collaborative relationships with the client and stakeholder. Clearly, it is a given that the evaluation team will maintain independence at the interpretation and reporting stages of the evaluation.

**Conclusion**

In this article we have set out some of the early challenges in the conceptualisation, design, conduct and management of the evaluation of the KMI. The topics discussed reflect the fact that the evaluation is currently in the early stages of the longitudinal design. The experiences of the evaluation to this point highlight the importance of interpersonal relationships, as well as the technical aspects of evaluating multidimensional and dynamic interventions in schools. Our responses to the challenges outlined in these areas are broadly consistent with others’ suggestions (Jaycox et al., 2006). Together, this literature provides practice and implementation guidelines for the evaluation of prevention or intervention programs in schools.

An important observation is that the evaluation has been facilitated by the willingness of both clients and evaluators to be flexible in response to changing circumstances or newly expressed needs. This reciprocal flexibility has been built partly on the relationships that are inherent in the collaborative nature of the evaluation. Significantly, the flexibility has not caused a lack of evaluation direction. Sustaining a focus on the underlying frameworks initially established for the KMI and for the evaluation has helped to maintain the core directions of the evaluation.

The evaluation process has other significant implications. For example, the work has been enhanced by the team’s proficiency in areas beyond evaluation per se. These areas of expertise include knowledge of schools (their culture, teaching and learning, student development), educational change, student mental health, intervention programs in schools and research design, methodology and data analysis. Knowledge in these areas helped to identify, articulate and respond to many of the issues set out in the present article. This same knowledge, we expect, will become even more relevant as the evaluation moves to the data analysis and reporting stages.

Evaluation is central to the task of improving student mental health promotion programs. However, broad-based evaluations such as that discussed here also have the potential to make contributions to fundamental knowledge about both student mental health (such as the characteristics of schools associated with better mental health outcomes for students) and processes of educational change in schools. By taking a broad perspective, the present evaluation not only is relevant to improving mental health interventions in schools, but also can make a wider contribution to knowledge about schools and their effects, and factors contributing to educational change.

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