

The Multi-Dimensional Core Component Dynamic Model of Evaluation

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Abstract

The “Multi-Dimensional Core Component Dynamic Model” of evaluation was devised in a quest for an approach which could maximize the outcomes of an evaluation of an English language programme. This approach was employed in an evaluation of an adult English language programme in a training establishment in Malaysia. This evaluation was based on a mixed method design which focused on the three core programme components: the teachers, the students and the teaching material, and looked at the teaching and learning as the central process to which the evaluation contributed to. This was done by the use of multiple instruments which included interviews with teachers and students, students’ questionnaires, classroom observations, use of pre-test and post-test results and a teaching material evaluation checklist. The use of these instruments facilitated the combination the summative-formative, product-process and quantitative-qualitative dimensions of this evaluation. This type of approach was devised based on recent developments in language programme evaluation approaches, as suggested by leading experts in the field. By using such an approach, the outcomes of the evaluation were maximised by incorporating and capitalising on the advantages of the different dimensions, which made the evaluative outcomes more holistic, accurate and meaningful by bringing together a broad range of different perspectives in giving a deep understanding of the complex, dynamic and diverse nature of a language programme in addition, the application of the principle of triangulation further enhanced the validity and reliability of this evaluation. The development of this model signified new directions and frontiers in the field of language programme evaluation by providing yet another evaluation model to the existing ones.

Keywords *evaluation, language programme, dimension, mixed-method, approach*

INTRODUCTION

This paper presents the theoretical foundations of a multi-dimensional evaluation model which was devised for an evaluation of an adult English language programme in a training establishment in Malaysia. It is conceptual in nature and will not include the details of the conduct and findings of the study. It attempts to create a better

understanding and sharing of knowledge in the language programme evaluators' quest of developing evaluation approaches. In this study, the multi-dimensional approach was found to be particularly useful in evaluative studies in which the number of respondents are relatively small (in this case the number of respondents were 23; 21 students and 2 teachers). The use of multiple data gathering procedures yielded rich and varied data which not only served to enhance validity and reliability, but also uncovered underlying reasons and strengthened conclusions. In all, it was able to provide a comprehensive, holistic and multi-perspective understanding of what happens in a language programme. Subsequently, accurate informed judgements were made with regards to the programme effectiveness and recommendations for programme improvement were made. The development and successful utilisation of this approach reflects the increased level of understanding and progress made in the field of language programme evaluation over the last few decades. This paper is also an effort to add to the scarcity of literature and reports in the field, particularly on how evaluation happens (Norris, 2009).

Looking back at the development in the field of evaluation, its definition has traditionally been concerned with the end results of a programme, or its effectiveness, which usually involved the comparison of objectives and outcomes (Stufflebeam & Shinkfield, 1985). This definition, which reflects only accountability or effectiveness, was looked at as a "narrow" approach (Murphy, 1985). Over the years, experts have called for a much broader conceptualisation of evaluation which they said needed to involve a combined study of performance and values as well as more inclusive, multi-perspective approaches (Kiely & Rea-Dickins, 2005; Stufflebeam & Shinkfield, 1985). Weir and Roberts (1994) talked about the need to embrace both the accountability and development dimensions where by doing so, it would not only measure the educational products, but also help us throw light on the reasons why things turn out the way they do.

In line with these developments, Brown (1989, p. 222) defined evaluation more broadly by including the improvement element. He said that evaluation is "the systematic collection and analysis of all relevant information necessary to promote the improvement of the curriculum, and assess its effectiveness and efficiency, as well as the participants' attitudes within a context of particular institutions concerned". Norris (2006, p. 579) talked about improving programme value by saying that evaluation is "the gathering of information about any of the variety of elements that constitute educational programs, for a variety of purposes that primarily include understanding, demonstrating, improving, and judging program value". Therefore, evaluations need to be broad-ranging and multi-perspective to reflect not only accountability, but also improvement. It is important, therefore, to design evaluations which can help the English Language Teaching profession to better understand the true nature of language programmes and what makes them work or fail, and how.

In light of these developments, a multi-dimensional evaluation model was devised (Muhammad Salim, 2010), based on a current paradigm in language programme evaluation methodology. This approach combined the application of the summative-formative, product-process and quantitative-qualitative dimensions. The focal points of the evaluation were the teachers, the students and the teaching material, which were viewed as the central process of the programme. Data was collected through structured

classroom observations, students' questionnaires, semi-structured interviews with teachers and students, and a teaching material evaluation checklist for teachers.

REVIEW OF RELATED LITERATURE

The dynamic and progressive development in the field of evaluation has given an evaluator a variety of approaches and designs to select from or even devise one, based on the nature of the program to be evaluated, the purpose of the evaluation and the type of informed judgements required (Brown, 1989; Richards, 2001; Weir & Roberts, 1994). As such, "there is no one way of doing an evaluation". Each method or approach has its own strengths and weaknesses. However, one must bear in mind that one of the benefits of language programme evaluation is that it contributes to the advancement of language teaching and learning, and this must be maximised by exploring further the available approaches and methodologies.

When considering approaches in language programme evaluation, it is inevitable that the opposing elements of the following dimensions come into play (Brown, 1989):

1. The summative-formative dimensions.
2. The product-process dimensions.
3. The quantitative-qualitative dimensions.

According to Brown (1989), the opposing elements of the dimensions (summative-formative, product-process, and quantitative-qualitative) have often been considered dichotomies, i.e. separate entities that are mutually exclusive. In the practical sense, this would mean that in formulating an evaluation, one has to be selected over the other. However, he also said that recent experiences have shown that in addition to understanding the differences and similarities between them, they can be tailored to complement each other to suit a particular evaluation. An evaluation should utilise both points of view, where all available perspectives may prove valuable in terms of enhancing the value of the measurable outcomes of an evaluation, eliminating bias and strengthening conclusions (Alderson, 1992; Brown, 1989; Kiely & Rea Dickins, 2005; Richards, 2001; Weir & Roberts, 1994).

Recent developments have also suggested that approaches in language programme evaluations should incorporate multiple dimensions (Kiely & Rea-Dickins, 2005; Norris 2009). The preoccupation to distinguish the different methodologies and approaches are no longer real concerns and they should be combined where possible and adapted accordingly to capitalise on the strengths of each to maximise. By doing this, different types of information can be yielded, which provide for a wider spectrum of information in understanding what are the factors and how they influence programme effectiveness and its development (Kiely, 2009; Norris, 2009). This is in line with the call for a greater degree of awareness of the benefits of the mixed-method mode of research in education (Johnson & Onwegbuzie, 2004; Krish, 2008).

This argument demonstrates the importance of and relationship between the following dimensions of evaluation; the "summative-formative" dimensions, the

“product-process” dimensions, and the “quantitative-quantitative” dimensions. The summative, product and quantitative dimensions tend to be closely linked as they are mainly concerned with the end results of a programme. Meanwhile the formative, process and qualitative dimensions are closely related in the sense that they evaluate what goes on during the programme. These relationships are illustrated in Table 1.1.

Table 1 The dimensions of evaluation, their conduct and the implications of their outcomes

Dimensions of evaluation	What does it do?	What does it help us to arrive at?
Summative	Occurs at the end of the programme to determine whether the programme was successful and effective.	Judgements about the worth of the programme or whether it was effective or not.
Product	Informs whether the goals of the programme were achieved.	
Quantitative	Provides objectivity in terms of numerical data/measurable outcomes of language teaching and learning	
Formative	Occurs during the programme and informs what is working well, and what is not, and what problems need to be addressed.	Programme improvement.
Process	Provides an understanding with what is going on in a programme and how goals are arrived at.	
Qualitative	Provides rich and descriptive data in natural settings to give deeper insights of what happened in the programme	

Source: Brown (1989), Jarvis & Adams (1979), Lynch (2003) and Richards (2001).

The following further explains how these dimensions are closely linked.

The “summative-product-quantitative” link

A summative evaluation occurs at the end when a program has been completed to determine whether the programme was successful and effective (Brown, 1989). Therefore, it concerns the product, whether it has met the requirements or not, regardless of what happened in the programme. This measurement usually involves quantitative data, such as student course achievements, their pre-test and post-test results and their (and other programme participants’) perceptions on whether the programme met its objectives or not. As such summative evaluations tend to make use of quantitative data to reflect effectiveness and accountability.

The “formative-process-qualitative” link

A formative evaluation takes place during the development, implementation and operation of the programme, or its processes, in order to find out what is working well, and what is not, and what problems need to be addressed (Jarvis & Adams, 1979; Richards, 2001). It focuses on ongoing development and improvement of the program. It is concerned with gathering information regarding the processes in a programme to gain an understanding of what happens in a programme and why things turned out in certain ways. Information of this kind is usually obtained through qualitative methods. As such, formative evaluations are usually carried out for the purpose of programme improvement.

This study focused on the evaluation of the three core components of a language programme, which are; (1) the teachers, (2) the learners, and (3) teaching materials. These three aspects are not only fundamental issues in ELT (Hedge 2000), but also the most essential components in a language programme. Nunan (1989) and Richards (2001) listed teachers, learners and materials as the top three curriculum components. Teachers and learners also play important roles in an evaluation, as stakeholders as well as key participants in an evaluation (Alderson, 1992; Alderson & Scott, 1992; Hargreaves, 1992; Lynch, 2003; Weir & Roberts, 1994). Teaching materials, meanwhile, are also important in a language programme as they provide the corpus of the curriculum (Johnson, 1989). Low (1989) said that teaching materials are one of the major determining factors of what gets taught in a language programme.

These three core components of a language programme are also directly linked. The teachers are the practitioners on the ground that facilitate the teaching and learning process as well as guide and motivate the learners. The learners are those who learn the language and how well they learn is the primary indicator of the success of a language programme. Teaching materials, meanwhile, act as an intermediary that assist the facilitation of the teaching and learning process for the benefit of both teachers and learners. Hence, teachers, learners and teaching materials create learning opportunities in language education (Johnson, 1989). The positive contribution of the dynamic combination of these three interdependent aspects is not only immense but also crucial in the success or failure of a language programme.

As such, it is important that evaluations shed light on the relationships of different program components, the procedures and epistemologies developed by the people involved in programs, and the processes and outcomes which are used to show the values of a program, which reflect accountability, and subsequently enhance this value, which in turn contributes to development (Kiely & Rea-Dickins, 2005).

EVALUATION DESIGN AND METHODOLOGY

The design of this study was a mixed-method programme group only evaluation (Lynch, 2003). This design was selected because only the programme group was available for evaluation. There was neither a comparison nor a rival group within practical means for the programme group to be evaluated against. This design is similar to the classic quasi-experimental design except that in this case; (1) there was no comparison group,

and (2) it incorporated the gathering of both quantitative and qualitative data as the number of subjects was insufficient for sole reliance on a quantitative method. The use of multiple measures which gathered different kinds of information from different types of sources (teachers and students) was found to greatly enhance the validity and reliability as well as strengthen the qualified conclusions that were made in this design (Fraenkel & Wallen, 2006; Weir & Roberts, 1994). Kiely and Rea-Dickins (2005) said that the inclusive approach (mixed-method) to data gathering “provides different stakeholders with valid, credible and usable accounts”. According to Lynch (2003), this design allows the possibility of arriving at information that describes both measured effects of the objective view as well as a multi-perspective view of the programme. He listed the numerous advantages which this design offers, which are as follows:

1. It can offer a richer set of information for decision making.
2. It allows the evaluators, even briefly, to “step outside” and view the programme and its setting from a different perspective.
3. Even in the case of one of the designs holding sway, the resulting information can be more revealing than if only a single method is used.
4. Evidence from one method can help clarify findings from the other method.

As language programmes are complex and contain a diversity of features, its evaluation must be able to yield different types of information from different sources where a particular item of interest or phenomenon needs to be explored in different ways. As such, the mixed-method design enables the researcher to select data gathering procedures with respect to their underlying research questions by capitalising on the strengths of each (Johnson & Onwegbuzie, 2004; Lynch, 2003). By doing so, this will facilitate “a three dimensional view” of the programme experience. In addition, the principle of “triangulation” was applied, where findings can be cross-checked across methods and sources for enhanced accuracy and validity (Kiely & Rea-Dickins, 2005; Lynch, 2003; Richards, 2001; Weir & Roberts, 1994).

This evaluation involved the summative-formative, product-process and quantitative-qualitative dimensions to arrive at the following two eventualities:

1. The making of judgements about the worth of the programme or whether it was effective or not.
2. Suggestions for programme improvement.

This study combined the dimensions wherever possible and was able to arrive at strong and accurate conclusions in providing a rich, detailed and comprehensive understanding of the programme.

The teachers, students and the teaching material were the focal points of this evaluation. Five instruments were used as the data gathering procedures for this study; (1) a classroom observation checklist for evaluating teachers’ lessons, (2) a course evaluation questionnaire for students, (3) interview with teachers, (4) interview with students, (5) the use of pre-test and post-test results, and (6) a checklist for coursebook evaluation by teachers. The selection of these procedures was done with judicious

consideration and scrutiny to complement the evaluation approach and design as well as to obtain the relevant information required in this study. Table 1.2 illustrates how these procedures incorporated the different dimensions of evaluations in this study.

Table 2 The multi-dimensional data gathering procedures

Data Gathering Procedures	Dimensions of the Evaluation		
	Summative/ Formative	Product/ Process	Quantitative/ Qualitative
1. Classroom observations of teachers using a checklist at different stages of the programme.	Formative	Process	Qualitative
2. Questionnaires which included both closed-ended and open-ended questions at the end of the programme.	Summative	Product	Quantitative/ qualitative
3. Interviews with teachers at the end of the programme.	Summative	Process/ product	Qualitative
4. Interviews students at the end of the programme.	Summative	Process/ product	Qualitative
5. Pre-test and post-test at the beginning and at the end of the programme respectively	Summative	Product	Quantitative
6. Teaching material evaluation checklist which was completed by the teachers at the end of the programme.	Summative	Product	Qualitative

The evaluation of teachers covered their teaching and their perceptions of themselves, the students, the teaching material and the programme. The teaching aspects involved the preparation, presentation, execution/methods, personal characteristics, and teacher/student interaction. The teachers’ perceptions of themselves, the students, the teaching material and the programme provided insights about how they participated in the programme and how they felt about the students, the teaching material and the programme.

The evaluation of students involved their course achievements and their proficiency gains reflected by the results of the pre-test and post-test. This provided information about how they performed in the programme and whether they made any gains in proficiency. The evaluation of students also involved their perceptions of the teachers, themselves, the teaching material and the programme. This provided insights on how they felt about the teachers, their own participation in the programme, the teaching material and the programme.

As for the teaching material, the evaluation covered the following areas; compatibility with the programme syllabus, skills, exercises, activities and practical concerns in terms of availability and costs.

The evaluation approach (see Figure 1.1), is called the Multi-Dimensional Core Component Dynamic Model of Evaluation (Muhammad Salim, 2010). It looked at the

teaching and learning as the central process to which evaluation contributes (Graves, 2008). It also took into account the following considerations:

1. An evaluation must involve both the product and process dimensions as well as both the summative and formative dimensions for the following two eventualities to occur:
 - a. The making of judgements about the programme effectiveness.
 - b. The improvement of the programme.
2. Teachers, learners and teaching materials are the most essential as well as the core components in a language programme.
3. Teachers, learners and teaching materials are directly involved in the teaching and learning process.
4. Teachers, learners and teaching materials are directly linked to each other in a two-way relationship.
5. An effective combination of the dynamic interaction of teachers, learners and teaching materials is required in a successful language programme.
6. Teachers and learners are insiders as well as participants for an evaluation. As insiders they have direct experience of the programme and thus can provide detailed and valuable insights of what happens in a language programme.
7. Teaching materials are one of the major determining factors of what gets taught in a language programme.
8. The feedback loop of the evaluation process facilitates the flow of valuable information or feedback to inform accordingly for the necessary decisions to be made regarding the programme.

DISCUSSION

This evaluation approach signified the development and utilisation of yet another multi-dimensional approach in language programme evaluation. This approach viewed teaching and learning as the central process to which evaluation contributes to (Graves, 2008). This was done by focusing on the three fundamental issues and core components of a language programme; the teachers, the learners and the teaching material (Hedge, 2000; Nunan, 1989; Richards, 2001). The relationship between the three components is crucial in the success or failure of a language programme. In addition, to address the diversity of features found in language programmes, this evaluation approach combined the dimensions of evaluations, i.e. summative-formative, product-process and quantitative-qualitative dimensions to provide a broad deep understanding of the programme (Alderson, 1992; Brown, 1989; 2003; Murphy 1985). It is suggested that this approach or model be called the “multi-dimensional core component dynamic model”.

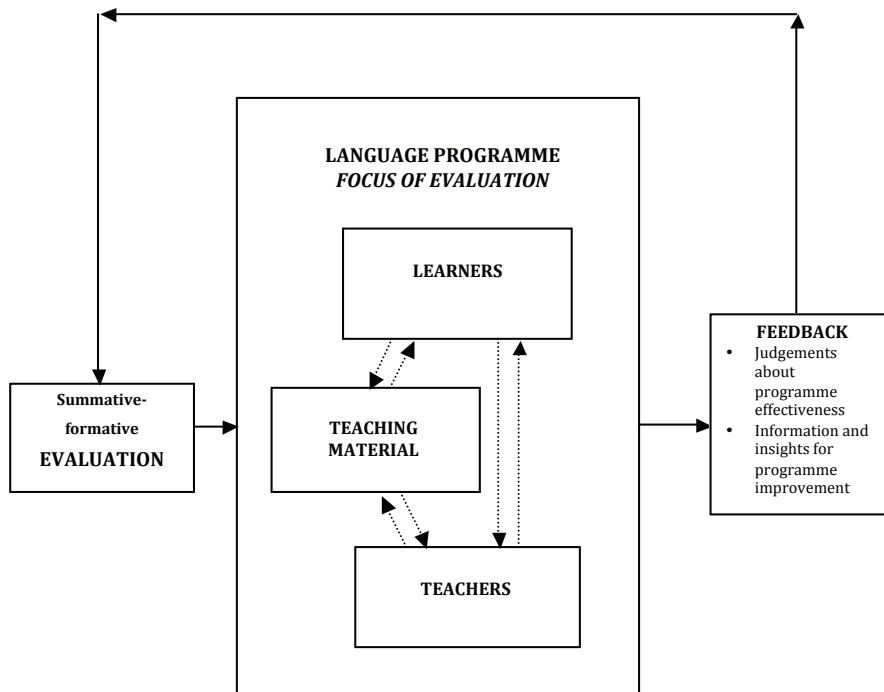


Figure 1 The Multi-Dimensional Core Component Dynamic Model of Evaluation

The combination of the different dimensions of evaluation did not merely provide information on how effective the outcome of the programme was, but the formative-process-qualitative link proved critical in revealing insights and underlying reasons which combined to generate an understanding of the complexities of language programmes to explain what happened during the course of it (Brown, 1989; Richards, 2001; Weir & Roberts, 1994). Therefore, consistent with this study, many experts suggest that evaluations offer more by employing an approach which involve the collection of different types of data from different sources for the following reasons:

1. No one source can describe adequately the diversity of features found in educational settings (Weir & Roberts, 1994).
2. To allow the evaluator to confirm findings across methods and sources (Alderson, 1992; Weir & Roberts, 1994).
3. The accuracy or consistency of data can be cross-referenced across methods and sources (Gall et al., 2003).
4. It can help to eliminate bias which might result in relying exclusively on one method or one type of source (Gall et al., 2003).
5. The principle of triangulation can be applied, which involves the corroboration of data across methods and sources. This measure increases validity and reliability, enhances the accuracy of the study, the quality of data and the researcher's interpretations as well as reduces bias (Fraenkel & Wallen, 2006; Gall et al., 2003; Weir & Roberts, 1994).

As such, the multi-dimensional evaluation approach proved decisive in making findings richer, more accurate and arriving at stronger conclusions. The triangulation of information from different sources and methods increased the validity, reliability and veracity of findings in describing the true nature of the programme, provided value to the measurable outcomes of language teaching and helped to stave off inaccuracies, politically motivated interpretations or bias (Alderson, 1992; Brown, 1989; Jarvis & Adams, 1979; Murphy, 1985; Norris, 2009; Richards, 2001; Weir & Roberts, 1994). The focus on the teachers, students and the teaching material yielded much valuable information to provide a holistic understanding to shed light on the intricate and dynamic interaction of these three intricately linked crucial programme components within the programme context. This is where multi-perspective insights into a broad range of issues greatly maximise an evaluation's utility for the promotion of more effective language teaching and learning. As such, an evaluative practice becomes responsive to the realities, challenges, and interests of language educators and language education (Norris, 2009).

CONCLUSION

The approach used in this evaluation was based on a mixed-method programme only design. It looked at teaching and learning as the central process and focussed on the teachers, students and teaching material. As it is a mixed-method evaluation, its approach involved the combination of the dimensions of evaluation. The evaluation was successful in determining the effectiveness as well as the strengths and weaknesses of the programme. It was also successful in recommending appropriate and justified actions for programme improvement. The rich contextualisation of findings from the triangulation of quantitative and qualitative information obtained from different sources and procedures managed to link theory to practice in providing a deep understanding of the happenings in the programme as well as shed light on the intricate and complex relationships between the core programme components (Norris, 2009). It is suggested that evaluative studies of the future will continue to explore the approaches which involve a mixed-method and multi-dimensional approach to promote the development of language programme evaluation methodologies for the betterment of language teaching and learning. In line with this aspiration, the "Multi-Dimensional Core Component Dynamic Model" of evaluation approach which was developed for this study also signified new directions and frontiers in the field of language programme evaluation by providing yet another evaluation model to the existing ones.

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