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Educational Development Projects at IED: Towards School Improvement

Khalid Mahmood*, Nilofar Vazir*

Abstract

The M.Ed. program at The Aga Khan University –Institute for Educational Development helps to develop Course Participants (CPs) as teacher educators / educational leaders. The institute always welcomes innovations in its various programmes. The Educational Development Project (EDP) was conceived as an alternative to research to develop CPs’ knowledge and skills required for developmental work. The EDP is concerned with capacity building at classroom and school level depending on the needs of the relevant stakeholders. A contextually relevant model was adapted for EDP at the institute. The research reported in this paper discussed the question: To what extent does the course on Educational Development Project prepare M.Ed. CPs to apply their learning from the course in actual classroom / school settings as an initiative towards school improvement efforts? Both quantitative and qualitative data were collected through different instruments and strategies. Case study method was also used in this regard. The data reveal that it is appropriate to engage teachers and educational leaders in conducting small scale educational projects to bring about whole school improvement.

Key words: Education, Development, Project, Course, Evaluation

Introduction

Innovations in any system are an indication of its livelihood, improvement and progress. The Aga Khan University – Institute for Education Development (AKU-IED), for the first time among South East Asian countries, introduced developmental work at Masters Level in education through commencement of a course on educational development projects using a project management framework. The course was conceived to develop and enhance M.Ed. course participants (CPs) skills in development work at a micro level i.e. its effectiveness in real school and classroom situations, and to provide CPs an opportunity to engage themselves in educational development activities.

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At the institution CPs are given the choice of undertaking a research dissertation or a development project in their area of specialization. The research dissertation and development project have equivalence in the programme (AKU-IED M.Ed. Handbook 2003-2005). The difference between the dissertation and project options was drawn on the familiar distinction between research and development (R&D) by declaring, “Research is the discovery or generation of new knowledge and development is the application of existing knowledge in new and innovative ways” (AKU-IED M.Ed Handbook 2003-2005, p.25).

The rationale for providing the two options was two-fold. First, it provides increased flexibility in the programme in recognition of the diversity of roles that graduates would undertake in their own contexts after completing their MEd. For some graduates research skills are important, while for others management and development skills are more important, particularly in activities such as teacher development, materials development or curriculum development. Secondly, it recognizes the individual differences of CPs in terms of their interests and career aspirations.

A project is referred to as a set of investments and other planned activities aimed at achieving specific objective within a pre-determined time-frame and budget (Magnen, 1991, p.14). Baume, Martin & Yorke (2002) list the attributes of a project. A project; (a) has a clear purpose that can be achieved in a limited time (b) has a clear end when the outcome has been achieved (c) is resourced to achieve specific outcomes (d) has someone acting as a sponsor or commissioner who expects the outcomes to be delivered on time and (e) is a one-off activity and would not normally be repeated. Furthermore a project is viewed as an isolated, probably one time effort to “try to make a difference” by using an innovation. The “innovation” might relate to an alternate or new method of teaching science or mathematics through activity-based learning or an approach to improving students’ attitudes towards English language learning of the elementary students in a particular school or perhaps, bringing alternate practices in assessment. However, it is important to find out if the innovation is of value, for example has it made a positive impact on students? If it has, then it may be incorporated as a regular part of a classroom or school (Payne, 1994).

Innovations can have various outcomes, including both improvement and/or decline in the education system. The notion of improvement per se is subjective and controversial and can be influenced by the perspectives and interests of different groups or segments of the same stakeholder groups. There are some who say that even if a particular innovation does not yield replicable results, it was still worth the effort to try something new. It gets everybody ‘fired up’ and creates interest, and enthusiasm (Payne, 1994, p.6). Assié-Lumumba (2004) has identified factors
that have an impact on the conception, design, implementation, likelihood of success, and diffusion of innovations in general. These include “the role of the individuals, groups, and the institutional units that introduce innovations and the official and actual beneficiaries; the method used to introduce the innovation” (p.73).

In the case of AKU-IED there was a lot of dialogue about the project innovation. The dialogue was specifically about the course outline, essential readings identified for the course and application of the knowledge and skills CPs had learnt during the course regarding identification, design and implementation of the project in real settings.

The purpose of this study was to investigate the innovation and thereby continue the dialogue over the course developed for EDP at the institute, identify gaps (if any) in the course, and offer recommendations to improve the course.

This paper aims to respond to the main question: “To what extent does the Educational Development Project (EDP) prepare M.Ed. CPs to apply their learning from the course in actual classroom/school settings as an initiative towards school improvement efforts?” The paper specifically discusses the following questions:

- Is there an alignment between the course conception, design, delivery and evaluation?
- What is the satisfaction level of the CPs regarding the course?
- What are the kinds of understandings, knowledge and skills that CPs acquire from the course?
- How do the CPs perform while doing the project?
- Does the EDP developed by the CPs contribute to classroom/school improvement?

**Programme evaluation**

An evaluation is action oriented. “It is conducted to determine the value or impact of a policy, programme, practice, intervention or service, with a view to making recommendations for change” (Clarke, 2000, p.vii). Clarke (2000) has presented evaluation as a form of applied social research. According to him “the primary purpose is not to discover new knowledge, as is the case with basic research, but to study the effectiveness with which existing knowledge is used to inform and guide practical action” (p.2).

However, Yates (1981) points to the difficulties in evaluating the effectiveness of academic programmes because of the absence of a coherent evaluation strategy. As raised by Gorostiaga and Paulston (1999), there are various models or new approaches in academic programme evaluation. Most
of these models range from outcome to process and among those for outcome evaluation. Kirkpatrick (1998) has developed a four-level framework for measuring; (a) reaction, (b) learning, (c) behaviour, and (d) results to evaluate programmes particularly related to teacher education. Basarab (1994) and Basarab and Root (1992) have reported, Kirkpatrick’s model has been widely used and adapted for use in evaluating teacher education programmes. His model has been regarded by Bernthal (1995) as a ‘classic model’ and Abernathy as a ‘supermodel’ in programme evaluation of training (Abernathy, 1999). Despite this, Adams (2001) integrates the model of Kirkpatrick with others and makes evaluation a continuous process with data collected through the pre-programme, during programme and post-programme stages.

In this study, Kirkpatrick’s model was used as a framework for evaluation but up to only the first two levels i.e. measuring reaction and learning of the participants at the post-programme stage. For pre-programme and during programme stages we will use mainly the ideas of Adams (2001).

Methodology

This study was initiated by the faculty of the institute. Both investigators have been involved in the development and teaching of the course designed to prepare CPs for EDP.

Sample of the study

All the eleven CPs who opted for the educational development project course during its first offering were invited to respond to a questionnaire. Out of eleven, ten responded. For case studies, the sampling unit was not the CPs per se but the projects they designed, implement and evaluated. There were four major areas in which CPs worked; (a) teachers’ pedagogical content skill development (b) curriculum development and enrichment (c) building community and school relationships and (d) improving, school leadership and management practices. Out of these four, two areas mentioned at b & c, were investigated for the study. From the six projects conducted by the CPs within these two areas, four projects, two in each were included in the sample as case studies. These are; (i) Let’s Talk and (ii) Let’s know what is unknown in Curriculum Enrichment area, and (iii) Developing school assessment policy and procedures and (iv) Transforming the school environment in Improving Leadership and Management Practices area.

The two investigators used a matrix to record their observations at the planning, designing and implementation stages of the projects.
Document analysis of materials included in the projects was also part of the study.

**Instruments**

For the study a combination of quantitative and qualitative approaches was used. Quantitative methods were (a) a questionnaire (*instrument 1*), and (b) a matrix (*instrument 2*). The questionnaire solicited the initial level of satisfaction of the CPs with the course and invited recommendations for its further improvement as well as gauging their understanding from the course. The first question of the instrument 1 comprised 14 statements on a 5-point rating scale, whereas the remaining three questions were open-ended questions. The matrix gave quantitative analysis of the needs identification, designing, implementation & evaluation of projects (see appendix 1) i.e. use of learnt knowledge and skills.

For the qualitative aspect two strategies were employed; interview (*strategy 1*) and document analysis (*strategy 2*). A structured interview was conducted with CPs and their project reports and deliverables were analyzed. Moreover, all documents relating to processes regarding planning, designing, developing and implementing the course along with reports and deliverables of projects were reviewed and/or analyzed. For in-depth analysis four CPs were studied as a case. For this purpose they were observed throughout their course work and implementation of the projects.

**Data analysis**

**Questionnaire and matrix**

For the quantitative analysis, the mean score for each aspect was calculated. In this regard opinions were converted into scores on a scale of: strongly agree/excellent (5), Agree/good (4), No opinion/satisfactory (3), Disagree/to some extent satisfactory (2), and Strongly disagree/unsatisfactory (1). Interpretation was made on the basis of average mean score for each aspect. The remaining part of the questionnaire was analyzed as for the interview and document analysis given below.

**Interview and document analysis**

For the analysis of data generated through CPs' interviews and analysis of project reports, along with deliverables and other documents, qualitative approaches were adopted by seeking patterns, identifying themes, developing major categories and planning each category under a code to generate explicit findings.
Findings and interpretation

Is there an alignment between the course conception, design, delivery and evaluation?

From interview

Yes, it was sequential and systematic, different kinds of recap activities were used to align the course. “The phases of needs analysis and prioritizing them were a major factor in identifying the project. This was helpful.” (CP-1) “Presentations, discussions, group work. Designing project tools however, needed more time”. (CP-3)

What are the kinds of understandings, knowledge and skills that CPs acquire from the course?

From interview

The kinds of knowledge and skills that CPs learnt from the course, and which they were able to apply, ranged from formulating goals and specific objectives, negotiations with the school, identifying, prioritizing and analyzing needs, planning, implementing, coordinating and managing project activities, using project monitoring tools effectively, collecting and analyzing results and writing a report along with gathering deeper insights into the nature and process of developing the project. Analytical thinking skills and developing alternate resources were also evident. “It encourages holistic development. By this I mean it is a process of integrating several skills to develop a concept.” (CP-1)

From questionnaire

CPs felt confident about developing data collection tools to conduct needs analysis (3.8), designing, implementing, monitoring and evaluating a project on a small scale (3.9), and data analysis for report writing (3.7).

What is the satisfaction level of the CPs regarding the course?

From interview

“It offered something creative and different from the dissertation.” (CP-3) “It offered me practical experience of the kind of work I am required to do as a professional development teacher when I return to my context.” “I have deeper insights to the project now, the nitty-gritty of the whole process.”(CP-3) “The need analysis process was thoroughly done; with these experiences I can now identify the needs of my school while doing my next project.” (CP-4). “The faculty was supportive, and the course was both
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sequential and systematic. However, one CP shared her discomfort stating, "too many facilitators and feedback confused my thinking". (CP-3)

From questionnaire

The overall mean score of 3.6 for the 14 items of the first question reveals that CPs were satisfied with the majority of aspects of the course and their learning from it. Course aspects (along with the mean) upon which CPs showed their satisfaction included; course outline (3.6), clarity upon assessment tasks and criteria (4.2), overall classroom discourse (4.2), effectiveness of essential readings (3.8), templates developed or provided in the class (3.8). However, CPs showed dissatisfied with the availability of relevant material in the library (2.5), some strategies employed in the classroom (3.4) and the way they selected the course (2.5).

The above mentioned picture from quantitative data become clearer as respondents identified some strengths and challenges of the course:

Strengths

Presentation of the course delivery, availability and presence of the course leader and team members, classroom discussion, group work, input of visiting faculty, practical work in the field and encouragement to improve the task were identified as strengths. Also identified were an alternate approach to research, focus on planned activities, promotion of templates and ongoing feedback. Learning from the course helped in designing, developing and conducting the projects with help in conducting further projects in the CPs' context.

Challenges

Reading material was insufficient; shortage of resources in the library. Extra workload which was not anticipated, it was assumed this course would be easier than doing research. Drafting consent letter for negotiation entry, designing data collection tools. Prioritizing time management, approach to report writing (hence writing one before), different kinds of feedback given (some in detail, others brief) and different teaching style of faculty were also big challenges.

Respondents also made some recommendations for improvement:

- More coordination required among faculty in providing and giving feedback.
- More literature to be made available, especially about small scale projects in the library.
- Expectations from the course be more explicit.
Knowledge of the subject and techniques for monitoring and evaluation project need better preparation and more time.

Does the EDP developed by the CPs contribute to classroom/school improvement?
From interview

Addresses the emerging needs of teachers/classroom and finds ways to overcome them for example in curriculum areas, classroom teaching, learning assessment, etc. raised the awareness of teachers, to seek other means rather than depending on one single source of knowledge such as the textbook. It also offered alternate ways of applying content knowledge, to teaching Algebra, assessments practices, English Language, Science and others. Systematic and sequential planning, implementation, monitoring an evaluation of the project cycle may help to undertake or initiate other projects at the classroom level. Helps place theory into practice, the notion of ‘doing’ - practically and learning from the experiences gained or not gained and redoing the same task, results in deeper reflection and helps overcome barriers to teaching/learning. “For me, the Project provided practical experiences for realization of learning.” (CP-1) “It motivated the teachers and students through active participation in a series of activity-based learning situations.” (CP-1)

“I got the opportunity to address some of the classroom issues and find their solutions.” “It enhanced my knowledge of planning and implementing small-scale projects. I got an opportunity to reflect in and on action and this helped me to gauge the situation from different angles.” (CP-2)

How do the CPs perform while doing the project?

While one CP improved the current syllabus of grade-8 in Algebra by offering new ways to teach the content by teaching alternate approaches for concept understanding and development, the other focused on activity-based learning in Science, yet another had foreseen that their were other ways of assessment of student learning, thus demonstrated and taught alternate strategies for assessment. The introduction of environmental awareness by creating “green school” and setting English language resource library for young learners was another endeavor to bring school improvement in achievable and doable ways. It provided me a “Practical implementation of linking theory into practice.” (CP-1) “I did not have Report Writing skills, this was the most challenging part.” (CP-3).

However, CPs felt anxious, stressed, at times confused and in need of more support. They were not confident in the early stages of the project cycle. They felt the whole process of developing projects was very
challenging. Literature search related to the project and their own project area was difficult to locate and difficult to grasp. "Limited computer skills and knowledge further exacerbated the situation." (CP-1) Being a new course, the reference material in the library was limited. "Non-availability of sample work and text was a major hindrance." (CP-3)

From questionnaire and matrix

Overall mean score was 3.9 for the use of learnt knowledge and skills mentioned in the matrix. This discloses that CPs were good at the use of learning from the course. They were particularly good at project design (4.4), its implementation (4.4) and evaluation (3.8). This data also depicts that CPs needed more input on exploration of project context (2.5) and use of relevant tools for needs analysis (2.8). For more details please see appendix 2.

It is interested to note that data from both sources complemented each other especially overall mean scores of 3.8 and 3.9 on claim and performance on designing and implementation of projects. Regarding developing relevant data collection tools for needs analysis, the claim (2.8) is in line with performance (2.8).

Another emerging problem for the faculty teaching the course was the lack of understanding of faculty supervising the course. A majority of the supervisors came from the research paradigm and not have a background in project management. Therefore, they guided the EDP supervisees according to research processes rather than a project management approach. To further exacerbate the situation CPs colleagues who had opted for the research methods (RM) course influenced their thinking as they too were of the opinion that EDP and RM had similar elements.

Another means of collecting data was the case study method. This provides further insights into CPs work.

Cases Studied

Case – 1 (To Know What Is Unknown)

CP-1 opted for project development due to 3 important practical reasons: 1) to develop as a professional development teacher, who would in the future be required to work closely with other professionals in curriculum development; 2) to gain skills in terms of planning, implementing, monitoring and evaluating an educational project; and 3) to explore and develop her own pedagogical content knowledge for teaching mathematics.
Her focus was to address the needs of mathematics teachers in the field of algebra in Grade 8. This need emerged from the need analysis conducted at the school. The need was greatly shared as significant as it was a means to enrich the curriculum; knowledge and skill enhancement of teachers, and to make it more relational and meaningful for students who feared mathematics.

For her the fundamental aspects of quality teaching which encompassed her implementation phase were motivation, learning by doing - the practical, ongoing feedback to teachers she taught and understanding of how to encourage teachers to reflect on their learning/teaching and make sense of their experience.

Her evaluation of the project revealed that majority of teachers did not using concrete material because they did not understand the connections between algebra and mathematics and they failed to gauge how students algebraic understanding, reasoning and thinking skills develop. By increased use of resources, other than the textbook, in the form of stories, games and algebraic tiles she increased students’ understanding of algebraic learning.

The major challenges she faced from the school teachers were syllabus coverage and change in teaching approaches. However, she overcame this aspect by using the textbook as a baseline but changed and extended the theory into practical activities. By recognizing teachers’ past beliefs and practices she demonstrated alternate ways of thinking about algebraic learning. She states that willingness from teachers to learn, vigilance, support, time and providing opportunities are crucial for teachers to sustain new ways of teaching mathematics. Her manual “Guide to teaching algebra differently” has contributed a rich source to algebra teaching for secondary school teachers.

Case-2 (Let’s Talk )

For CP-2 the needs analysis revealed that the school needed support in developing English language teachers’ knowledge and skills to improve the quality of teaching and learning of speaking and listening skills in Grade 5. The rationale for this project was to move the teachers’ thinking about the English syllabus as a ‘sacred’ textbook, and looking for means to alter and modify the existing text. Teacher-centered classrooms and delivering instructions in English in a lecture mode with students as passive listeners was a matter that needed immediate attention. The CP built her conceptual framework for her project on the Chomsky’s (1957) natural communicative approach, claiming that there exists an innate language learning capacity in all humans and that learning occurs in ways that are interactive.
Implementation was based on providing opportunities to learners for communication of their ideas that matter to them, this approach was based on the fact that everyone has something to share and learn from others. Listening activities songs, chants, poems to mimic, master sounds, rhythms and intonations were given. Authentic tasks were weaved in games as information related to their daily lives. Watch and listen, listen and speak, read, observe and talk, dialogues, debates coupled with agreements and arguments were some practical activities used.

Ample opportunities to practice speaking and listening in the targeted language was given to improve their skills. A collegial learning environment and a strong desire among teachers to bring improvement in students’ skills of listening/speaking were the two fundamental ways to promote learning. However, a significant learning for the CP herself was that there is a lot more involved in activity-based learning other than simply activities. Teacher’s competence in the target language, her fluency, vocabulary, pronunciation and thinking skills are necessary along with the support if alternate ways to fostering speaking and listening skills in students are required.

Case-3 (Review and improve assessment policy of a school)

The project of CP-3 set out to review and modify a current Assessment Policy (not explicitly written) in a school. This was the need of the school and it matched well with his interest and expertise. Traditional paper and pencil test was the only means for assessing student learning; this focused on rote memorization, hindering students’ skills in creative and critical thinking. Through a variety of measures he set out to explore students’ assessments practices and to determine whether the learning outcomes are achieved that teachers set to achieve their objectives. Data revealed that there were no open-ended questions, tests were summative rather than on-going, recording and reporting mechanism was missing, marking criteria and grading policy was norm referenced and teachers had little or no understanding of criterion reference testing.

A series of workshops were held for teachers and management. They ranged from creating an awareness by reviewing the existing assessment policy to hands-on by preparing different kinds of assessment tools such portfolios, surveys, checklists, rating scales, anecdotal records etc. By using alternate ways based on contextual needs a new policy was devised. The implementation phase included holding consultative meetings to create an awareness of new assessment practices, brainstorming with stakeholders and managers on what and how to review the existing assessment policy, preparing a draft policy, circulating for comments,
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incorporating feedback in final draft, validation and sending it to the Board of Governors for validation and inculcating the skills among teachers to use these practices. The outcome was a manual and guidelines as a ready reference for teachers and management.

Case-4 (Transformation of an ordinary school into a green school)

The main thrust of CP-4 was creating environmental awareness in a school where individuals are taught to cope with challenges to face the future. The school was looking for ways to inculcate social action, besides academic strength, and to foster the students’ role in contributing towards the school. One of the prime objectives of the project negotiated by the CP and unanimously agreed by the school was to bring about a change in the school community’s (student, teachers, and management) attitude towards the environment.

In the planning and implementation phase informal talk with stakeholders about ways to bring about school improvement was useful. Environmental education was seen as an emerging need because environmental issues did not arise in the textbook or in teachers classroom approach. Environmental teaching was felt to be theoretical and did not acknowledge the need of the environment nor the role that the students can play in the environmental care, conservation and preservation. The immediate response was to make use of the barren land that lay waste in the school. This would offer students several alternatives, namely an extra curricular activity to cultivate and nurture plants in the area, learn the content and scientific skills of planting to reaping, erosion, preparing compost, grafting, pruning, watering, different plant life, use of fertilizers, etc. Workshops were conducted, pictures and posters highlighting environmental issues--endangered earth-- were demonstrated for awareness, the campaign of all hands at work was established, and each class had a part in nurturing the barren land. Teachers’ capacity to infuse environmental issues in the social studies and science textbook was highlighted.

The evaluation and outcomes of the project revealed an enrichment of the Social Studies Textbook through designing hands-on-activities and the conception, development and establishment of the Green Club perceived as an effective strategy in preparing students to bring about environmental change in their immediate context.

Conclusion

Projects have the potential to make a genuine contribution to school improvement and thereby make a difference in schools. During the EDP Course M.Ed. CPs had several opportunities to disseminate their project
<table>
<thead>
<tr>
<th>Projects</th>
<th>Case 1</th>
<th>Case 2</th>
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<tr>
<td>Quality level</td>
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<td>Needs analysis</td>
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<td>o Relevance of tools used for needs analysis for each level</td>
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<td>Project design</td>
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<td>o Logical link among; identified needs, and goal, objectives and activities of the project</td>
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<td>o Support from literature for the proposed activities to fulfill the identified needs</td>
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<td>o Relevance of the tools with the proposed activities</td>
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<td>o Relevance of alternate strategies adopted during the project</td>
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<tr>
<td>o Quality and relevance of deliverables</td>
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<td>Evaluation</td>
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<td>o Proper analysis of the data for drawing conclusions</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>o Identification of challenges faced during the project</td>
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<td>o Identification of areas for improvement in design for such projects in future</td>
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<td>o Conclusion</td>
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</table>

Key 1 = unsatisfactory, 2 = to some extent satisfactory, 3 = satisfactory, 4 = good, 5 = excellent
### Appendix 2

*Overall mean score for CPs’ ability to use learnt knowledge and skills from the course*

<table>
<thead>
<tr>
<th>Quality level</th>
<th>Mean score</th>
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<tbody>
<tr>
<td><strong>Needs analysis</strong></td>
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<tr>
<td><strong>Level I</strong> Exploration of the overall schools needs</td>
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<tr>
<td><strong>Level II</strong> Identification of specific area for project</td>
<td>3.0</td>
</tr>
<tr>
<td><strong>Level III</strong> Identified the specific needs in the identified area</td>
<td>3.5</td>
</tr>
<tr>
<td>Relevance of tools used for needs analysis for each level</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>Project design</strong></td>
<td>4.4</td>
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<tr>
<td>Logical link among; identified needs, and goal, objectives and activities of the project</td>
<td>4.3</td>
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<tr>
<td>Support from literature for the proposed activities to fulfill the identified needs</td>
<td>4.5</td>
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<tr>
<td>Rationale of using M&amp;E tools</td>
<td>4.8</td>
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<tr>
<td>Relevance of the tools with the proposed activities</td>
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<td><strong>Implementation of the Project</strong></td>
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<tr>
<td>Negotiations</td>
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<tr>
<td>Accomplishment of the scheduled activities</td>
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<tr>
<td>Relevance of alternate strategies adopted during the project</td>
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<tr>
<td>Quality and relevance of deliverables</td>
<td>4.8</td>
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<tr>
<td><strong>Evaluation</strong></td>
<td>3.8</td>
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<tr>
<td>Proper analysis of the data for drawing conclusions</td>
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<tr>
<td>Identification of challenges faced during the project</td>
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</tr>
<tr>
<td>Identification of areas for improvement in design for such projects in future</td>
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<tr>
<td>Conclusion</td>
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</tbody>
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