

## Problems and Benefits of the BEAM Program for Secondary Mathematics Teachers in Lanao del Sur I: Bases for a proposed Program in Enhancing Mathematics Teachers Competencies

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### Abstract

This study looked into the problems and benefits of 102 Mathematics teachers in Division of Lanao del Sur I on the BEAM program for secondary Mathematics teachers. The descriptive method of research was employed with a checklist as the main instrument used in data gathering. This was supplemented by observation and interview to verify the veracity of the data obtained. The use of frequency distribution, average weighted mean elicited the result of the study: (1) A typical secondary school mathematics teacher is described as a female; about 31 – 35 years old; married; BSE graduate, with an eligibility of category B and C; attended seminars and trainings five years back at about 51 hours and above; with a position of Secondary School Teacher 1 (SST 1); and rendered services from 5 to 9 years; (2) A typical secondary school in the division of Lanao del Sur I have 4 to 14 teachers with more (28.41%) students in first year level; (3) Mathematics teachers sometimes implemented the BEAM program on teaching strategies and assessment of students' output/performance, but mathematics teachers never implemented the BEAM program on integration of ICT in teaching mathematics; (4) Mathematics teachers always encountered problems in the implementation of the BEAM program on assessment of students' output/performance and on integration of ICT in teaching mathematics; and (5) Mathematics teachers were sometimes satisfied in the implementation of the BEAM program on teaching strategies, assessment of students' output/performance and integration of ICT in teaching mathematics.

**Keywords:** problems and benefits, output/performance, integration, implementation

## Introduction

It is a universal belief that the key factor in any sound program of education is the teacher. As Gregorio (1987) emphasized, regardless of high quality of administrative and supervisory leadership, of curriculum or of physical plant, the course of instruction will suffer if it is in the hands of persons other than a competent teacher.

The role of contemporary teachers has three dimensions: Firstly, there are the roles expected of him, defined by the goals of education which a society and its school adopt and specifically defined what is expected of him in terms of his conduct, performance and are based on his operational routines. Secondly, there are roles which he assumes, based on his perception, belief and capabilities. And thirdly, there are the one thousand and one things which students confront him, to which he is full to respond or may ignore (Salandanan, 2001). Of the roles mentioned, the most challenging one is how to make the learner learn, love to learn and most of all make his learning more meaningful. In other words, a teacher or a mentor must be fully equipped with teaching skills.

But how should a good mentor be equipped with teaching skills? Rosas (2004, Bulletin Today) posited that to improve quality education as well as the competency of teacher they must be equipped with new skills, new strategies and new innovations that are relevant to the needs of basic education. These new skills are needed to respond to the changing of the times.

Gone are the days that learners are confined to the four corners of the classroom. Today, classrooms are merely places where students converge to process their experiences. Learners come to school not only to listen to their mentor. Learners even challenge ideas of their mentor to show their active interaction as a result with their encounter with outside world. Learners easily relate school experiences with what they learn outside the school. This is the reality mentors re facing nowadays.

With the advent of technology, teachers are now faced with gigantic task of addressing the need to make every learner competent in the basic tools to prepare them to live I a highly competitive world. This is the framework of the restructured education of the Department of Education. As conceived, Restructured Basic Education Curriculum (RBEC) aims to empower the Filipino learners to capable of self-development throughout one's life and to be patriotic, benevolent, ecologically aware, and godly. This curriculum must be flexible to meet the learning needs of a diverse studentry and is relevant to their immediate environment and social cultural realities. The basic tool subjects such as; English, Science, Mathematics, and Filipino are not to burden the learners with additional dispensable content but to increase the time for task and activities to gain mastery of the basic competencies and to help the learners reflect and understand contextualized content. Thus, in the structured curriculum, training in life skills, the identification and analysis of values, and the recognition of multiple intelligences permeate all the learning areas.

However, for quite sometimes that RBEC was implemented there are still inadequacies in terms of developing competencies of students on basic tools, like English, Mathematics and Science. Evidence of this loophole are results of international and national student assessment tests (TIMMS, National Diagnostic and Achievement Tests and the high School Readiness Test, 1997), which indicate the low performance levels of Filipino students in areas like application, comprehension, problem solving and what is generally referred to as the higher order thinking skills (HOTS). These results tend to indicate that the development of these skills, often considered key elements of quality education, are not given appropriate focus in classrooms.

Obviously, many teachers teach and assess students in a manner that focuses on factual recall and rote memorization (DepEd Bulletin, 2005).

Due to these inadequacies, the Department of Education exerted efforts to remedy the situation. Linkages with the international organization were established. One of these linkages is the Australian education aid called the Basic Education Assistance for Mindanao (BEAM). BEAM (Basic Education Assistance for Mindanao) is a project jointly funded by the Government of the Philippines (GoP) and the Government of Australia (GoA) through its International Development Agency (AuSAID).

### **Objective of the Study**

- (1) Determine the degree of implementation of the BEAM program for secondary teachers on teaching strategies, assessment of students' output/ performance and integration of information and communication technology in teaching mathematics;
- (2) Find out the degree of occurrence of problems encountered by the teachers in implementing the BEAM program;
- (3) Determine the benefits by the teachers from the BEAM program; and
- (4) Establish the specific program and activities that can be instituted to enhance the teaching competencies of secondary school teachers.

### **Statement of the Problem**

This study attempts to determine the problems and benefits of the BEAM program for Secondary School Teachers in Lanao del Sur I from SY 2002 – 2006, bases for a proposed program in enhancing Mathematics teachers' competencies.

### **Significance of the Study**

The results of the study will provide the school administrator an insight of a specific program to be developed in enhancing the competencies of the teachers, especially mathematics teachers. It will also help him identify the strengths and weaknesses of the teachers that may surface in the attainment of educational goals and objectives of DepEd - Lanao del Sur I in particular. The findings of the study will encourage teachers to re – think their teaching methodologies and incorporate innovative teaching strategies to enhance their teaching competencies for quality learning outcomes. It will also help teachers to perform their task as secondary school teacher. This will maximize the use of time with minimum efforts but with good quality outputs.

In addition, the results of the study will yield information which can help the students to be cognizant of the benefits of the BEAM program can contribute to teaching – learning process. The study also will inform parents of the schools' effort in enhancing competencies of teachers in teaching which are useful to their children. The findings of the study are also useful to the community leaders and local officials since it provides them information about the efforts of the DepEd in raising the academic standards of secondary schools. Finally, the study will bring awareness to the BEAM management that teachers are actively involved in their program and research studies are conducted to help find ways to improve and sustain the program. And, this study will serve as a reference for other researchers who would like to undergo studies related to BEAM and to the improvements of teaching competencies.

### **Research Design of the Study**

The descriptive method of research is employed in the study with the use of questionnaire checklist as the main instrument in gathering the needed data. This is supplemented by informal interviews and observations.

Descriptive design was used because it sought to provide information about variables which are the personal and professional profile of the respondents that includes age, gender, civil status, highest educational attainment, position, eligibility, length of service and seminars and trainings attended 5 years back as well as the profile of the BEAM target secondary schools.

### **Method of Procedure**

With the use of the descriptive design, information about problems confronting the teachers and benefit derived in the implementation of the BEAM program are identified. Results and findings of the study would become the basis for proposed program in enhancing the teaching competencies of mathematics teachers.

### **Collection of Data**

After the approval of the research proposal, permission from the Schools Division Superintendent was secured. The researcher personally distributed the questionnaire to the respondents. Immediately, after the approval of the request, the researcher met the groups during their free time and explained to them the nature of the study in order to get their support and cooperation in answering the questionnaire.

In administering the instruments, the researcher explained the instruction, the purpose of the study as well as the encouragement of the respondents to ask questions before they start answering the questionnaire in case of doubt about the direction to avoid confusion as much as possible.

### **Findings**

The BEAM program on teaching strategies had an overall average mean of 2.07 which means teaching strategies of BEAM are “sometimes” implemented by the teachers; an average mean of 1.96 resulted on the indicator assessment of students’ output/performance which means that the BEAM strategies in assessing students’ output/performance is “sometimes” implemented by the teachers. With regards to integration of information and communication technology to lessons in mathematics, it is “never” implemented by the teachers.

The problem encountered by the teachers in implementing the program on teaching strategies had an average mean of 2.365 which is described “always” encountered by teachers. With regards to assessment of students’ output/performance, teachers “seldom” encountered a problem as it yielded an average mean of 1.905.

An average mean of 2.29 resulted on the integration of ICT which means integration of ICT in teaching mathematics is “seldom” encountered by teachers.

Benefits of the BEAM program of teaching strategies as perceived by teachers yielded an average mean of 2.24 which means that teachers are “sometimes” satisfied on the teaching strategies of the BEAM program. Benefits gained on the BEAM program on the assessment of students’ output or performance had an average mean of 2.13 which means teachers are “sometimes” satisfied on the BEAM program on assessment of students’ output or performance. An average mean of 2.15 resulted in the integration of ICT which means that teachers are “sometimes” satisfied on the BEAM program on the integration of ICT in teaching mathematics.

## Conclusion

A typical teacher from any of the secondary schools of Division of Lanao del Sur I is female, married, aged 31 – 35 years, a BSE graduate, attending 50 hours and above in seminars trainings, and workshops, had other eligibility like PRC - Category B and C, rendering services in teaching for 5 – 9 years and with a position of Secondary School Teachers 1 (SST 1).

In the implementation of the BEAM program on teaching strategies, assessment of students' output or performance and integration of ICT in teaching mathematics, the teachers sometimes implemented. However, there are problems sometimes encountered by the teachers in the implementation of the said program. Although, teachers sometimes encountered problems in the implementation of the BEAM program, at the same time, they also satisfied in its implementation.

Finally, on the three indicators of the BEAM program to secondary mathematics teachers, degree of occurrence of problems met by teachers ranks first followed by the level of satisfaction of the benefits gained from the implementation of the BEAM program; and degree of implementation of the BEAM program ranks last.

## Implications

Mathematics teachers are in their middle age, dominated by females, still new in the profession but have complied with the minimum requirements for teaching not only educational attainment but also attained the required eligibility. Teachers aspire for academic promotions as shown by their eagerness in attending seminars, conferences and trainings.

Secondary schools in Division of Lanao del Sur I have the least number of teachers which may be attributed to the year the school was established and number of students is decreasing as the curriculum years increases. These schools are implementing the BEAM program to enhance the teaching competencies of Math teachers; however problems are met, specifically on the application of concepts related to teaching strategies. Integration of ICT was also a problem in the sense that teachers are not equipped with necessary skills in computer and lack computer machines.

As to benefits, there is an application of the techniques and strategies in teaching Mathematics, though there is slight evidence of full adoption of techniques due to inadequate instructional materials. Nevertheless, it was observed that Math teachers are trying hard to adopt and implement the BEAM program.

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