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Overcoming marginalized children learning through professional development of teachers

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Abstract

This paper will discuss on the attempt in improving marginalized children through professional development of teachers. Despite all efforts to overcome the difficulties of learning face by marginalized children, their performance both in the external as well as in the school-based achievement assessments showed that they lag behind in the learning of Science and Mathematics. This situation starts at the primary level and hence resulted in dropouts before they could pursue their secondary education. Based on a series of observations and consecutive school visits, the researchers were able to identify some of the difficulties faced by the teachers in the teaching of Science and Mathematics as well as in the learning of the language. Teachers tend to use similar approaches as teaching children in the urban schools, which are more directed in nature. Many of the Science and Mathematics teachers do not possess sound pedagogical skills to apply alternative approaches, which are suitable within the context and realm of the marginalized children. In overcoming the situations, teaching modules were developed to provide alternative ways of teaching science. Additionally, teachers were also introduced to the concept of action research. Preliminary results showed that not only teachers perceived that the modules were very useful and beneficial to them, their pupils were also motivated and demonstrated active involvement in the learning activities.

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1. Introduction

Action research is considered a tool that is used to help teachers and other educators uncovers strategies to improve teaching practices. It provides an opportunity for teachers to reflect on their practices and plan an action to improve their work. The methodology of action research means that the teachers have to evaluate what they are doing. They have to check whether their action is really improving the teaching and learning in their own classroom. However teacher often appears to be too busy to read research reports, let alone to look for alternative strategies. Action research is considered a professional development opportunity for them to look or test a new instructional strategy

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or evaluate in existing pedagogical method. In many research studies, participating in action research has been found to be the impetus for positive change exemplified by teacher improvement, self reflection, and overall learning that enhances classroom practices (Ross, J., Rolheiser, C. & Hogoboam-Gray, A. (1999), Sax, C., & Fisher, D. (2001) and Jamil (2002)

It was with this view, that Educational Planning and Research Division, Malaysia, pioneered a project to inculcate research culture among managers of education and teachers by means of action research from 1993 onwards. A handful of school teachers and education officers were sent to attend courses on action research and to become facilitators later when they come back to conduct similar courses. They were asked to disseminate their knowledge and skills to other teachers in schools through the preparation of modules, running of workshops and courses. This was to ensure a multiplier effect in inculcating research knowledge in schools. Action research course is also being offered in the Initial pre-service teacher training programme. On the assumption that teachers have had attended these courses, this research was carried out. There was a disparity in performance between marginalized primary schools and urban schools students, especially in languages and science. A collaborative action research was planned involving 20 teachers teaching marginalized schools in two areas and six lecturers from the university (Universiti Kebangsaan Malaysia) and two lecturers from a teacher Education institution (Institut Perguruan Batu Lintang); to improve the performance of the teaching and learning of the students in science learning.

Collaborative action research consists of primary science and mathematics teacher working together with educational lecturers within the marginalized school situation in order to improve their practices (and to come to a better understanding of their practice).

The objectives as the study was therefore as follows:-

i) To improve the teaching and learning of science.

ii) To test a new instructional strategy through collaborative action research.

2. Literature Review

Drawing from many research studies, Jamil (2002) concluded that efforts to change the form of teaching in the classroom would be more fruitful if teachers are willing to accept change as being important and are willing to try. The process of just giving out orders, guided materials and detailed curriculum or providing more teaching aids to teachers will not be effective. This emphasis has been given by Fullan and Hargreaves (1992: 22)

Knocking down walls, as many open-plan schools did in the 1960s and 1970s, is not enough to bring about change. Nor is writing supposedly teacher-proof curriculum guideline-national or otherwise. Teachers can always shut the door and get on with what they want to do anyway. Education change that does not involve and is not supported by the teacher usually ends up as change for the worse, or as no real change at all. In the end, it is the teacher in his or her classroom who has to interpret and bring about improvement.

There are many alternative strategies of teaching primary science. Some of the works that we have done, have shown to be not only improve learning effective but also in propagatening student interest such as the use of toys (Leong S.C 1999), cartoons (Hamidon, 2008) and low cost apparatus.

More efforts should be put in training and developing teachers to have the required characteristics by involving them from the beginning to carry out action research in classes or their classroom. Findings from many studies have postulated that action researcher has improve the level of effectiveness - teachers become more reflective, more skillful in analyzing and solving problems. They have higher self-esteem and autonomy in the classroom context.

3. Research Method

An exploratory visit was made to three primary (elementary) schools in the state of Sarawak (one of Malaysia's 13 states) to observe the teaching of science in these schools. Group interviews, were then held in each school to seek the science teachers' views on students learning science and how to improve their work. The school has a small population of about 200 students generally, and two to three teachers teach science. The mode of teaching is teacher-directed. Teachers said they also prefer to explain to the students the concepts and phenomena taught rather asking students to explore or inquire on their own. The main reason offered was that student come from low income families, poor surrounding with poor background and not adequately prepared to conduct activities on their own. The pedagogical approach taken was quite similar to the method employed in big classrooms in the urban schools. Teachers were asked to reflect on other possible teaching strategies and they seemed ignorant about new strategies.

A group of marginalized teachers were attending a short course at the teacher's institute during the conduct of the research and were contacted if they were interested to improve the teaching and learning in their schools through collaborative action research with the external educators. 20 teachers volunteered and from a brief discussion they too, face the problem of student's lack of interest and have poor performance in science and mathematics. It was agreed that they be exposed to alternative methods of teaching science and develop together teaching module which will be tried later in their schools through reflective teaching and further development of an improve version of the module. As a result, a teaching learning workshop to improvement will be made. A workshop was organized for their purposed. It was held in one centre. Six lecturers and 20 primary teachers participated in the workshop. The schedule of the workshop is as shown in the Appendix A.

Various alternative teaching methods in teaching science at primary level were presented with examples and demonstrations. Among them were the method of teaching using toys, cartoons, low-cost apparatus, and environmental objects by the lecturers. These approaches have been experimented and earlier by the group researcher and demonstration the participating in the workshop; will work to tested. It needs fostering to be effective in teaching and learning of primary science and foster student's science interests.

During the workshops, teachers were asked to work in group of 5 together a lecturer in order to develop a teaching module based on one of the topic chosen from standard four science curriculum. Group discussions were held during the 3 days workshop with constant feedback from the group members and the whole groups in the final presentation. Based on the inputs, they would further improve the modules before trying-it in their respective classroom group later. The co-researchers (lecturers) will pay a visit during the try-out periods. Reflection and further improvement of the module will be made from the feedback during teaching-learning trial-out.

An evaluation was held at end of the workshop. Each group of 5 teachers will answer the following two questions:-

I) What do they feel about the strength of the workshops?

II) What do they feel about the weaknesses or the suggestions for improvement of the workshops?

Each teacher (in the group) will write 5 statements on a paper for the answers to each of the questions. Then each one of them will read out as they transfer their answers on a flip chart. They will cross out in case others have read out and share similar feelings. After all the group members have written their statements, each one will then rank the item statements (1 to 5) in order of importance after reading the statement on the top 5 items. The top 5
items for each question will be forwarded to the whole group pool for comparison. The final top 5 items will be selected based on the mean of the ranks scored. Table 1, summarized the results of the evaluation of the workshop.

The results of the evaluation suggest that the workshop and module development were beneficial and eye-opener to them. They have gained valuable insights for improving their teaching and learning. A second phase of the workshop and the research is being planning and will soon begin when the new school term start and the teachers (and lecturers) will be trying-out the modules (with the new teaching strategy).

4. Conclusion

The teaching and learning of science in primary (elementary) school can be improved using alternative mode of teaching which appears to be more effective and could hold, students interests. Teachers teaching in marginalized schools should try new strategy of teaching. Support group from university lecturers can work with the teachers collaboratively in embarking actions research in the development of teaching modules to improve the quality of teaching and learning in our schools.

References


