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Development of Quality Teaching through Action Research

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Introduction

Research on effective schools has shown that the greatest influences on student achievement are the teacher and the quality of teaching that takes place in the classroom. Quality teaching requires, among other factors, the engagement of teachers in ongoing teacher professional learning by teachers.

Teacher professional learning must not only focus on enabling teachers to implement curriculum reform initiated by the National Department of Education, but more significantly, must also enable teachers to engage in a process of critically reflecting on their teaching and using research evidence to continuously improve their teaching.

The focus of teacher professional learning should be on improving teachers' teaching effectiveness and student academic outcomes.

A number of teacher professional development

models have been used in Papua New Guinea (PNG) with varying success. These include:

- the expert-novice;
- cascade or train the trainer, and
- school or cluster-based models.

Research has shown that the first two models were in most cases ineffective in improving teachers' teaching effectiveness.

It was found that teacher professional learning using these models did not have a multiplier effect, that teachers who are beneficiaries of these learning programs rarely use the knowledge and skills acquired to improve their teaching practices and that there was no institutionalisation and sustainability of what was learned.

Conversely, research has shown that site-based models of teacher learning are the most effective for sustained changes to teachers' teaching practices.

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Teacher Professional Development: The Policy Context

It has been recognised that having quality teachers is important in pursuing and attaining the educational outcomes desired in PNG. As such, policies have been developed and put in place targeting the improvement of teacher quality. These policies mainly centre around in-servicing of teachers through in-service teacher education programs run by the universities and teachers' colleges, train the trainer programs, and cluster-based in-service activities.

Programs that have been developed and implemented targeting teacher quality include the Teacher In-service Plan (TIP), school clustering, and the mounting of teacher in-service programs through various arrangements by teacher education institutions. The main focus of the teacher professional development policy is on the implementation of curriculum reform rather than improving teachers' teaching and student learning outcomes.

The teacher professional development policy is underpinned by the view that in order to improve teacher quality, teachers should be required to upgrade their teacher education qualifications through in-service programs offered by teachers colleges and universities, including attending in-service activities conducted at the national, provincial, and cluster levels. Quality teaching has been addressed mainly from these two policy perspectives.

In-service teacher education

Curriculum and structural reforms in PNG have had an impact not only in the education and the training of pre-serve teachers but also in the professional development of experienced teachers. Serving primary and community school teachers are required to upgrade their qualifications from a Certificate in Primary Teaching to a Diploma in Primary Teaching (In-service) while high school teachers are required to upgrade their qualifications from a Diploma in Teaching to a Bachelor of Education (In-service) Degree.

In upgrading their teacher education qualifications teachers are expected to acquire the required subject content and teaching pedagogy to enable them to effectively function within the conceptual framework of the curriculum reform.

This is viewed as an important strategy for improving teacher quality. Nonetheless, the emphasis on equipping teachers with content knowledge and teaching pedagogy to enable them to effectively

function as curriculum reform managers and implementers mean that teachers are trained to be technicians rather than intellectuals, capable of critically reflecting on their teaching and student learning and using the knowledge gained to improve their teaching on a continuous and sustainable basis.

There is no evidence to suggest that the current policy on in-servicing teachers through teacher education programs has contributed towards the improvement of teacher quality.

Teacher in-service programs

The provision of tailor made teacher in-service training packages, aimed at equipping teachers with relevant pedagogical and management knowledge and skills to enable them to implement the curriculum and manage schools, is also a government policy aimed at improving teacher quality and the quality of student learning outcomes. These programs are normally transferred from other countries, driven by external consultants in collaboration with the PNG government and the development partners, or developed in teachers' colleges.

A number of models are used to deliver these in-service programs with varying success. These include:

- ***Self Directed Professional Learning:*** Teachers attend residential study programs or are sent materials or workbooks and are required to work through these in their own time and without support.
- ***Workshops:*** Teachers attend short term workshops, often involving travel away from their homes and schools, and often tied to the introduction of a new program, curriculum, or policy direction.
- ***Train-the-Trainer or Cascade Models:*** One representative from a school or cluster of schools is sent to a workshop to learn new knowledge and skills. He or she is then required to return to the school or cluster and share the new skills with others. Usually the workshop will include training materials to assist the new trainer.
- ***School or Cluster-Based Learning A:*** An expert in new skills or curriculum is sent to a school or cluster to conduct a workshop or training. The expert may be from the National Department of Education, Provincial Education Office, teachers colleges, or a consultant; and
- ***School or Cluster-Based Learning B:*** Teachers or head teachers or other experts lead professional learning.

These models are based on different approaches to deliver as well as different relationships between the 'instructor' and the 'recipient' of learning. Modes of delivery include residential, face-to-face and distance models. The relationship vary from the 'instructor' being the expert and holder of all knowledge through to the 'recipients' designing activities with the expectation that they use their existing knowledge to develop new skills. Research in PNG and internationally has found that site-based models where participants take control and ownership of their own learning are more effective in making sustained changes to teachers' practices.

Research has shown that professional learning is successful when teachers:

- focus on improving student achievement;
- commit to seeking long term change;
- receive continued support from principals and other stakeholders;
- learn new skills and knowledge that builds on their existing competencies;
- use an evidence-based enquiry model, and
- use critical reflection.

Action Research

Action Research (AR) is based on an understanding that teachers will learn from researching into their own practice more effectively than learning through other forms of research. In AR, teachers engage simultaneously in workplace practice and research practice, through working reflectively and analytically. The aims of AR in educational contexts are always to improve teaching practice. This is achieved through a planned and systematic form of inquiry. The methods associated with AR involve a series of steps or stages including:

- reflecting on a situation, issue or an aspect to improve (this may involve collecting data);
- selecting a focus and planning an action (this may involve creating an action plan);
- implementing the action, collecting, analysing, and interpreting data;
- reflecting on the outcomes of the action taken (by thinking about the action and using the evidence drawn from the data); and
- re-analysing the situation or aspect and, as appropriate, continuing or modifying the action (and repeating the cycle).

As indicated by this description, action research often uses iterative cycles. The cycles are not uniform in terms of intensity or duration, rather the

nature of any cycle depends on the activities undertaken, the evidence used to evaluate the action, and the judgements and reflections made.

In PNG some small projects have used AR in educational contexts with varying degrees of success. As with any other methodologies developed to be used in PNG, contextual, geographic, economic, social and historical factors must be accounted for when adapting the methods.

This does not mean 'dumbing down' or limiting the methods but rather attempting to capture the essential elements of AR so they can be used by teachers in a variety of contexts across the country. For example, in many accounts of AR undertaken in Australia, teachers are guided and facilitated through the process with the assistance of researchers at every step.

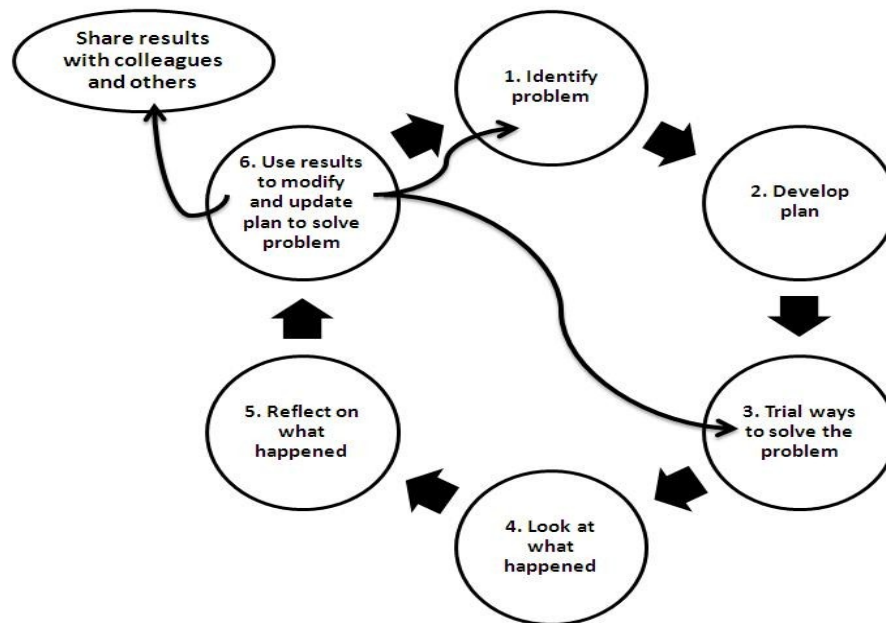
The researcher often works within the school undertaking the Action Research, or at least is in constant contact via regular site visits, telephone calls, or emails. This kind of regular contact is extremely difficult in PNG therefore alternative methods must be developed to ensure that teachers can work with irregular guidance.

Figure 1 (see back page) demonstrates one AR model currently being implemented in PNG. The essential elements of the cycle have been retained with minor modifications.

In order to improve the sustainability of the model and to encourage knowledge and awareness of the model across the country at the school level, the model has incorporated a stage where teachers share their results and their new understandings of classroom practices with colleagues. It is envisaged that this kind of sharing would take place at the cluster level, which could then lead to clusters of schools taking ownership of the development of a new cycle focusing on a problem or issue that is shared.

Another aspect of the model that has been adapted to suit teachers in PNG is that which is related to reflection. In many examples of AR, reflection is undertaken in written form, quite often as individual 'reflective journals' kept by teachers during the project. To account for the oral linguistic traditions of PNG including reflection on issues or problems undertaken dialogically, the model has incorporated a whole-school approach where teachers are encouraged to collaboratively discuss and reflect on each aspect of the cycle with and without the presence of researchers.

Figure 1: The Action Research Cycle



These collaborative discussions and reflections are guided by a set of scaffolding questions provided by the researchers.

Conclusion

If teacher quality is to improve, then ongoing professional learning must be provided regularly and continuously to all teachers in PNG. Action Research is one model of practitioner site-based professional learning that may contribute to the improvement of teacher quality. The adaptations to the model of Action Research model to suit PNG contexts directly address issues related to the success of professional learning.

The model provides opportunities for teachers to share their new knowledge thus having a multiplier effect on new learning. It is based on teachers' ownership of problems and

solutions which should lead to ongoing use of new skills and knowledge learned during the cycle.

The Action Research Model is considered for implementation to improve teacher quality and student learning outcomes. Incorporation of this model into the overall teacher professional development policy framework will enable its institutionalisation and sustainability as a professional learning approach.

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