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The person factor in professional development~

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~:New Zealand Educational system in 100 years (Codd 1990). ~

~;Central to this restructuring has been the "devolution" of ~

~=autonomy to schools. Curriculum development and Inservice ~

~@Professional Development are now viewed as "products", in line ~

~Cwith the New Right discourse motivating the restructuring, and as ~

~Csuch they are sub-contracted to the most competitive bidder. This ~

~Bpaper is not setting out to evaluate the pro's and con's of these ~

changes nor to discuss the present environment inservice ~

educators find themselves in. What I would like to do is outline ~

my personal experience of working under a contract and relate the ~

difficulties encountered working within a particular model of ~

inservice education for science teachers.~

Background~

The past five years have seen the most radical restructuring of the New
Zealand ~

Educational system in 100 years (Codd 1990). The Government intends to
~

~Sintroduce a new national curriculum for science in all schools within the
next two ~

~ years. ~

~PDr. Lockwood Smith, the Minister of Education, has stated that the new
draft in ~

~science Ä~L~ä~.,~0 ~

~C"sets out a progression of learning objectives in science within a ~

framework that gives a coherent structure to school science

from the first day through to the final day at school".

He has also stated that "our teaching of science in primary schools is not of the

standard that it could be." (Smith,1992) He goes on to say that "[Primary] teachers are not confident when teaching science, particularly sciences other than biology or the environment... The new national curriculum, combined with the teacher development programme announced in the budget, are the first steps in addressing these problems.... By the end of 1995, nearly 60% of primary teachers will have extra professional development in science.."

Curriculum development and Inservice Professional Development are now viewed as

"products", in line with the New Right discourse motivating the restructuring, and

as such they are sub-contracted to the most competitive bidder. In 1991, the

Auckland College of Education won a sizeable contract from the Ministry of

Education to deliver "professional development" to science teachers in the Auckland area.

There were two separate models. Model A was based on a five-day intensive workshop,

followed by several days of observations, analysis of progress and evaluation. Two

groups of twelve teachers from primary and secondary schools were selected for this

model. They were to then assist other colleagues to adopt a more student centred,

constructivist, approach to science teaching. In effect they were to be empowered to

become "leading teachers". Model B involved six groups of up to twenty teachers in a

series of two-hour workshops, held after school on a fortnightly basis, throughout the

second term. This was followed by several days of observation and evaluation. The

philosophical framework which supported Model B was to introduce and explore a

constructivist approach to the teaching and learning of science.

The 120 teachers who were selected for this model were from both primary

and

~Secondary schools. Because far more primary school teachers applied to be on the

~Course than secondary school teachers the ratio was approximately 3:1.

~The actual implementation of the contract was overseen by a Programme Steering

~Committee. There were six milestones to be met over the course of the contract and a

~Written report to be submitted to the Ministry at each date. My employment commenced

~[the day before the first course was scheduled to run. Advertising and recruitment for the

~Course had been organised in the first term by the project coordinator. Together, we had

~Worked a great deal on preparing support material for our courses.

~~~~~"Evaluation of Model B:"

~[An evaluation of Model B has been carried out for several reasons. Firstly it was part of

~the contract proposal to evaluate the effectiveness of the model and to compare it with

~model A.

~Secondly, over the duration of the "after-school" component of the course, nearly one

~third of the original participants "dropped out". While this is probably not surprising

~Given the difficulties of implementing such a large professional development programme,

~there was pressure to find out the reasons why. It was as though the success of model

~could be judged in part by the number of participants continuing the course.

~Thirdly, there was a desire to improve the delivery of subsequent professional

~development courses run through the Auckland College of Education.

Negative feedback

~about the course content and structure needed to be addressed.

~The initial step was to send a postal questionnaire to every participant who had been

~selected for the course regardless of whether or not they had attended any or all of the

~sessions. It attempted to ascertain which factors motivated or deterred teachers from

~attending. Five questions were asked.

1 Were there events before the course that deterred people from attending?

~e.g. Did the people who were selected for the course but never attended, have some

Reason beyond our control. Was the union ban on implementing any curriculum initiatives important or had personal circumstances changed?

2 Were there factors outside the course which deterred people from attending? e.g. Did ill health, family pressures, other commitments at school, inconvenient hours, poor facilities or too far to travel play a part?

3 What aspects of the course itself deterred people? e.g. Was the course content inappropriate or too challenging, were no new resources shared, did participants feel insecure in their knowledge?

4 What was important in motivating teachers to attend the sessions? e.g. Was it that their ideas about learning were challenged? or that they thought about teaching. Did they enjoy reading the course material, meeting other teachers, journal writing etc?

5 What could have been done to improve attendance at the sessions? [e.g. Would it have helped to limit the course to only primary or secondary teachers or to have more than one teacher attend from each school. Would it have been better held in a different term, at a different time or in a different location?

A further survey, with more open ended questions, has been sent to 50 course members asking them what impact the course has had on their teaching and which aspects were most beneficial to them. Responses are still coming in and they have not yet been analysed.

Results

The response rate to the questionnaire has been around 85%. It has been difficult to access what people really thought about the after-school component of the course. It appears that while people have pulled out of the course they do not feel inclined to explain their reasons. And that while there has been some negative feedback, people are generally loathe to offend.

The results from the questionnaire have highlighted some general trends. Broadly speaking, the questions have been answered in the following way.

1. Those people who did not attend any sessions were most inclined to have had a change in personal circumstances which prevented them although union pressure was also

^Eimportant. (1/3 of the non respondents did not attend any sessions) ^^  
2. ^Reasons why participants did not attend all the sessions were as expected.

Family ^^

^\pressure, parent-teacher meetings, report writing and ill health were cited most frequently ^^

^Ras being either quite important or the main reason. Sports coaching commitments, ^^

^Qinconvenient hours and too much personal time being involved were also important ^

^considerations. ^

3.^^The single most important factor within the course which deterred participants was that ^^

^[it failed to deliver information on the implementation of the new, draft curriculum. From ^^

^Vthe responses it appears that the way in which the course was advertised and what was ^^

^Tdelivered were quite different. The expectations of many course members were not ^^

^Umet. A greater opportunity to share resources and more practical activities for the ^^

^Tclassroom were required. Many felt that there was too much work expected of them ^^

^MFor a few, the loosely structured format and non-directive facilitation were ^

^considerations. ^

4. ^^Of the course itself the most important reasons why teachers kept attending were that ^^

^Sthe course challenged their ideas on teaching and learning and that it offered the ^^

^Yopportunity to share ideas, new teaching strategies and resources with others. The fact ^

^Jthat it was government funded was important to many course participants.

^ZAspects of the course which had a negative effect on attendance included journal writing, ^^

^Wthe photographic assignment, and giving students questionnaires to complete before the ^

^next session. ^

5. ^Factors concerning the course structure which ^ would^

have motivated greater ^^

^Qattendance were related to encouraging more commitment. For example, a full-day ^^

^Uworkshop at the start of the course, having two people from each school attend and a ^

^(recognised certificate at the end of it.@^

^ZFactors which were suggested as possible means of encouraging attendance which were ^

~]not~

~ supported were to have a course fee refundable at the completion of the course, to ~

~Have it later in the evening, to have only primary or secondary school teachers and to ~

~Have a larger group. Having the course in the third term was not seen as desirable, but ~

~\*neither was having it in the first term. ~

~~~~~~Reflections~

~TOne of the fundamental philosophies underpinning the contract proposal was that the ~

~actual course content would Ä~~~L~~~~~ä~.~,~0 ~

~5"be influenced by the discovered needs of the course ~

~Cparticipants, in line with the constructivist approach to teaching ~ and learning." (A.C.E. p6)Ä~~~L~~~~~ä~.~,~0 ~

~YOn reflection, this may not have been the most effective strategy to employ. Wanting to ~

~Ygive teachers ownership and control of the course meant that many different expectations ~

~Qwere voiced. These ranged from teachers wanting to know how best to spend their ~

~[allocated science budget, practical ideas to use in the classroom and how to implement the ~

~Qnew National Curriculum to wanting to discuss the philosophy and research behind ~

~Wteaching and learning in science. It was obvious that as a group we would be unable to ~

~8fulfill everyone's' needs. Elizabeth Jones (1986) wrote: ~

~@"The clearer I can be about my expectations at the beginning of ~

~Ca class, the more likely students are to feel secure and trust me, ~ themselves and each other." (p8)Ä~~~L~~~~~ä~.~,~0 ~

~[If a more directive and structured course had been implemented from the outset, I believe ~

~Uparticipants may have felt more comfortable and perhaps would have been more open to ~

~Vchange. The actual contact hours were too limited, and teacher time too precious, to ~

~[allow for a truly constructivist approach. I know that this is the argument that teachers ~

~Zuse in their own classrooms and as professionals, we counter it by saying that there is a ~

~Zvast difference between what we teach and what the students learn. We forget this at our ~

~bperil but the reality is that it is not possible to ascertain where each individual is at in such ~

a short time. ~

~Anthony Cassidy wrote:Ä~~~L~~~~~ä~.~,~0 ~

~="Instigating and encouraging change in teachers' methods and ~

=attitudes can be like sweeping porridge uphill, through long
Agrass. Large injections of time, energy, patience and ingenuity
?are required to produce even the smallest discernable result.
9Once this is accepted, however, and expectations revised
8accordingly, the exercise can be rewarding, and genuine
2progress can be made." (Cassidy: source unknown)
ZAsking teachers to reflect on aspects of their own practice also requires
a great deal of
Rtime. Various researchers (e.g. Wildman and Niles) suggest that " 20-30
hours of
\instruction is needed to assist teachers...with another 20-30 hours
spent in practice" in
Zorder to give them the necessary skills. Within the time frame of six
two-hour sessions
Ythere was little time for an indepth study of these techniques. However,
the seeds were
Ysown and participants were conscious of the philosophical perspective of
the course. It
Yis hoped that they will come to accept that they are professionals with
the expertise to
leffect positive changes in their own classrooms.
SUsing journal writing as a tool for reflecting on their practice met with
enormous
Yresistance. Very few could be coerced or persuaded to write in a
journal. They claimed
]that filling in forms, keeping records and report writing took far too
much of their time as
Vit was and that to spend any more time writing was inconceivable. From
the responses
Yof the questionnaire, journal writing was considered as unimportant by
more than half of
\the participants. Many claimed that they did reflect on their teaching
daily but that they
Twere not prepared to commit their thoughts to paper. (It makes me wonder
what they
Wreally think about teaching) This was a resistance I was unable to
overcome during the
course.
David Tripp (1987) commented:

AThe major problem I encounter with in-service action research is
?the desire to change. The teachers see themselves, as indeed
>they are, as successful in their classrooms: how else could
3they teach, study and have family and other social
4commitments, if their teaching were not relatively
straightforward?" (pg 215).

YAs I worked with participants I realised that this was not always the
case. Many of the

Teachers did not see themselves as successful in the classroom. In fact, many of them felt

that they were only just coping with the ever increasing expectations of society. In

recent years, all teachers have faced classes with an increasing ethnic and language

diversity. "Mainstreaming" and a reduction of Government funding to support services

has meant more special needs children in classes where there is little teacher-aide time and

no teacher training or support. Many more students enter school from impoverished

backgrounds. Meanwhile, the educational goals have been expanded to encompass a

mastery of basic skills, intellectual development, career education, citizenship

participation, moral and ethical character development, emotional and physical well

-being, creativity and self-realisation. As well, teachers are required to collect money for

photographs, mark registers, chase unpaid school fees, help sell raffle tickets, check

uniforms, do crossing patrol, wipe up accidents, coach sports teams and encourage the

cultural group. The draft New Zealand Curriculum Statement in Science (1992)

[promotes the role of the teacher as a facilitator of learning rather than a transmitter of

information. Teachers need to: "provide a supportive atmosphere of mutual respect where all

experiences, ideas, and beliefs... are valued as starting points

for learning." (p9)

Many see this as yet another demand. In order to cope, many teachers are prioritising

where their energies are directed. As one participant commented,

"after an 18 hour day "professional development" is not top of

the list"

Apart from feeling threatened and pressured by increasing demands, secondary teachers

rarely are very reluctant to try new teaching methods because they feel hamstrung by the

imposition of external exams. While they have the content knowledge at their disposal,

[their reasons for not wanting to adopt more student centred approach to learning are often

couched in statements such as "I would try that if I had the time" or "I have tried it with

[my junior classes but the seniors have got exams." In one classroom I visited the teacher

^Eassured me that she had "done interactive teaching in the last unit." ^
^ [Primary school teachers, on the other hand, are far more aware of
"constructivist" methods ^^
^Xbut lack content knowledge. Some had not taken science as a subject
since they were 14 ^^
^Zyears old. I am in a quandary as to what to do in this situation.
Despite arguing that ^^

^]teachers do not have to be the "experts" on every aspect of science in
order to motivate and ^^
^estimate the students' interest in the subject, I question the merits of
telling teachers that they ^^
^ [are capable of teaching science without a suitable depth of background
knowledge. Raising ^^
^]awareness of the need to include science in topic work can have a minimal
effect on practice ^^
^ ^if not accompanied by knowledge of the science itself. In the worse
scenario, teachers with ^
^ [a little bit of knowledge and a lot of enthusiasm can set up learning
experiences which are ^
^Cconfusing, ill-informed or wrong! As Peter John commented:
(1992)Ä^^L^^^ä^B^A^UÄ^ ^
^E "teachers who rely solely on their pedagogical knowhow will find it ^^
^Gdifficult to explain, correct and reinterpret the subject for children ^
^Sunless they themselves know and understand it."
(p64)Ä^^L^^^UÄ^ ^^Ä^^L^^^',^0@^
^I believe there is a need for intensive, short science courses to provide
better subject ^
^matter knowledge. ^
^ZPitching a professional development programme at the right level is very
difficult at the ^
^Sbest of times. In a review of Kinder and Harland's book, Curren
concludes that Ä^^L^^^i^e^e ^
^B"If the sights are set too high the result may be demoralisation, ^^
^>anxiety and revolt. But if the expectations are too low, the @^
^=intervention may soothe and reassure, and thereby even ^
^@dissipate ^
^ the momentum of change. There may be a region ^^
^=between these two undesirable effects, leading to beneficial ^^
^=curriculum development. But some of us... suspect that this ^
^\$mid-point is too narrow to land on".Ä^^L^^^ä^',^0 ^

^WTrying to meet the needs to so many people, from such different
backgrounds, on a 1 : ^^
^W120 basis was the most difficult and frustrating aspect of the contract.
Although the ^^
^Xgroups did have quite a different character about them, it was difficult
to distinguish ^^
^Sbetween them until the last few sessions. For example, one group were

stropky and ^

^Xpolitical, arguing about everything and anything. Another group turned into a womens' ^

^Vsupport unit. The range within each group was very diverse. There were teachers who ^

^Vhad been in the profession for over 20 years alongside first year teachers. Some had ^

^RMasters degrees in science while other had no science qualifications at all. The ^

^Uclassroom situation varied from private, single-sex schools to schools in lower socio ^

^X-economic areas, there were new entrant teachers and teachers of young adults. While I ^

^Tfound this difficult, the diversity was one of the strengths of the course in many ^

^Sparticipants eyes. They have commented positively on the opportunity to meet with ^

^&others teaching at different levels. ^

^WWith a union embargo currently in effect with regards implementing and developing the ^

^Rnew curriculum, some of the momentum has been lost. A new contract dealing with ^

^Uassessment has been won by the Auckland College of Education for 1993. Although the ^

^Ycontract was negotiated before an evaluation of this course had taken place some changes ^

^ [were made to the course structure. A full day workshop will be held at the start for each ^

^Zof the groups to help facilitate group dynamics and to set clearer expectations. Because ^

^Othe contract is focused on assessment it is doubtful that there will be such a ^

^Wmisconception as to the course content and a more structured outline will be possible. ^

^ ^But, a lone facilitator will still deliver the package to 120 participants and I do not envy ^

^them that task. ^

^RFullan (1991) quotes a deputy minister of education as having said to a colleague Ä^L^ä^.,^0 ^

^>"Well, the hard work is done. We have the policy passed; now ^ ^,all you have to do is implement it." (p65)Ä^L^ä^.,^0 ^

^RI would like to suggest that this is yet another politician who is unaware of the ^

^!practicalities of the real world.``

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