So What Do Parents Want and Expect from a Technology Education Programme? – An Exploration

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ABSTRACT: Everyone seems to have a view on how and what should be taught in our schools and Technology Education is no exception. In New Zealand, as in the United Kingdom, recent legislation has encouraged parents to take a more active role and to voice their opinions (Banks 1994). Satchwell and Dugger (1996) observe that in the current context of educational reform, parents *are* questioning what students should be expected to know and be able to do. So what do parents want for their children?

This investigation briefly documents a new partnership between a College of Education and a primary school in New Zealand. Parents were questioned over the course of the first year of this new partnership, in order to determine their expectations from the Technology programme.

Keywords: expectations, parents, perceptions, pre-service education, specialist teachers, technology education

BACKGROUND – THE NEW ZEALAND SETTING

The majority of New Zealand primary schools cater for children until year 6. When the children are in year 7 (average eleven years old) they attend an intermediate for two years. Intermediate schools bridge the gap between primary and secondary schools. Children are taught the 'core learning areas' by a classroom teacher, but rotate around a variety of specialists including Technology teachers. Schools in remote areas or with special circumstances may retain their year 7 and 8 children instead of sending them to an intermediate. These schools are called 'full primary'. The government provides additional money for these children to be transported to another school or Technology centre in order for them to be taught by specialist Technology teachers. These schools/centres are called providers. At year 9 (average age of thirteen) children attend secondary school.

In 1989 New Zealand educational reforms gave schools more decision-making authority. This enabled the schools to choose what programmes were appropriate for their children. In the past intermediate schools providing Technology Education were funded directly from the Ministry (Schollum 1996). In the special circumstances, funding was permitted to be given directly to individual schools for the delivery of Technology Education (Brown 1999; Pedersen 1997; Pole 1992).

NEW ZEALAND CURRICULUM CHANGE

On 8 February 1999, 'Technology Education in New Zealand' became compulsory for all children until the end of year 10 (Creech 1999a). This brought with it many changes, especially for specialist teachers in intermediate and secondary schools (Brown 1999; Chamberlain et al. 1999; Mawson 1998). For the majority of these teachers, the new curriculum expected not only a change in what was taught but also how it was taught (Wicklein & Rojewski 1995). This curriculum had a very different pedagogical base than the earlier workshop craft syllabus (Compton 1997; Compton 2001).

Prior to this children were taught either 'manual' or 'techni-craft' which included subjects such as woodwork, metalwork, sewing and Home Economics. In December 1998, the Home Economics curriculum was revoked (Creech 1999b). Here implementation was resisted and it took time for the majority of schools to teach Technology in keeping with the philosophy of the document (Brown 1999; Chamberlain et al. 1999). Some teachers did not support the philosophy of the new curriculum. Although they changed the titles of existing courses eg. Home Economics became 'Food Technology', the courses did not extensively alter. Altering the name on the door was seen as a way of putting up a barrier to the further intrusion of innovation (Martin 1998).

INITIATION OF PARTNERSHIP

In 1998 A group of parents of year 7 and 8 students from a full primary school made a complaint at a Board of Trustees' Meeting (meeting of the governing body) about the Technology Education programme of the selected provider. At the same time Technology Education lecturers, at a neighbouring College of Education (Teacher Education facility), were concerned about the lack of quality Technology Education being observed by the college students. The College of Education was approached by the principal and a partnership was subsequently established between the college and school. This partnership allowed professional development for the tertiary lecturers (many of whom had not formally taught this subject), an opportunity for the college students to witness technology in action and the implementation of current practices for the teaching of year 7 and 8 children.

During 2000 the College of Education taught Technology to 56 year 7 and 8 children. The two composite (mixed) year 7 and 8 school classes were divided into three College classes, which lowered the teacher to pupil ratio to a more ideal figure (Barlex 1994, p. 142). This meant there were two year 8 classes and one year 7 class. Six College lecturers were paired to maximise their strengths. The year 7 and 8 children would walk over to the College and the six lecturers, over the course of a year, would teach the Technology classes using a range of technological areas and contexts.

The College also established a web-site for parents to see what had happened after every technology class.

The purpose of this study was to examine parental expectations of the programme prior to delivery and compare these with their expectations after delivery.

METHODOLOGY

The researcher could find no evidence of a similar partnership involving a tertiary educational institute providing a full programme of Technology curriculum delivery to a primary school. It was therefore decided that this was an important partnership to investigate. This paper outlines one aspect of this research. Parents were questioned at the beginning and end of the first year, in order to determine their expectation of both the partnership and programme.

The case study model (Yin 1994) was used to investigate the partnership and subsequent programme, as the situation in which the intervention was being evaluated had no clear set of outcomes. This single case study was used to record a unique case. Tellis (1997) writes that these are ideal for revelatory cases where the observer may have access to a phenomenon that was previously inaccessible.

> Case studies are multi-perspectival analyses. This means that the researcher considers not just the voice and perspective of the actors, but also of the relevant groups of actors and the interaction between them. This one aspect is a salient point in the characteristics that case studies possess (Tellis 1997).

In order to evaluate the partnership the initial expectations of the parents needed to be recorded (Shield 1996). These initial expectations could be compared with final views in order to determine the perceived success of the programme. All parents were given questionnaires to ascertain their initial and expectations final views of the programme.

METHODS

All parents were posted a sheet outlining the research, a consent form and a questionnaire. Fifteen parents (27%) responded to this questionnaire. This is a low response rate – particularly given the initiative was driven by them. The questionnaire asked about their initial expectations from the technology department. The parents were then asked how they regarded Technology Education teachers and why this was the case. It was hoped to differentiate those parents whose expectations may have been influenced by teachers' personalities or teaching styles as opposed to the subject. The next question asked what the key aspects of a successful Technology Education programme was, in order to determine if the parents understood

the difference between techni-craft and Technology Education. Parents were asked if and where their child had been taught Technology. This identified parents whose children had been taught by the provider, perceived as unsatisfactory. Comparisons were able to be made between these groups in order to see if the results were biased by the previous experience.

Questions used in questionnaire

Before the programme:
- What were your expectations from the Technology Department?
- How do you regard Technology teachers? Why was this?
- What do you think are key aspects of a successful Technology Education programme?
- Has you child been taught Technology before? If so what and where?

Semi-structured phone interview questions at completion of programme

- How did your child react to the first few lessons of Technology taught by the College lecturers?
- What did you think when your child came home with their first product they had made?
- How did your child respond to the next set of Technology classes?
- How did your child respond to the last set of Technology classes?
- On the whole do you think this cycle has been effective? Why?
- What aspects of the programme could be improved upon?
- Have you anything else you would like to say?

Parents were asked to indicate if they were willing to be interviewed at the end of the programme. Five of the parents who responded (33% of respondents) were interviewed by phone. The semi-structured telephone interview (Patton 1990), was recorded and later transcribed. During this interview parents were questioned on classes the children had experienced, if there were any possible improvements for the programme and if they had anything else to add. Each parent interviewed, was given a copy of the transcription of their interview and asked to verify its accuracy and that of emerging findings.

Strauss and Corbin (1990) claim that qualitative methods can be used to better understand little known phenomenon. For this reason, data was gathered using qualitative methods and analysed using 'open coding' (identification of themes) and later 'axial coding' (refinement and re-examination of themes) (Strauss & Corbin 1990).

VALIDITY

Patton (1990) states that credibility depends less on sample size than on the richness of the information gathered and the analytical abilities of the researcher. It is important however, to emphasise the small sample size.

Initial data was gathered from only 15 parents with 5 parents personally interviewed at the end of the first year of the programme. Half of these parents had children who had experienced Technology with the previous provider. The unusual action the school made by sourcing a new provider demonstrated the strength of the parents concerns. However, when responses from all parents were compared, there were no detectable differences between parents who had this prior experience and those who had not. The school is small and the principal had stated parents openly talk to other parents about issues. Although parents may not have had experience with the previous provider they probably were well aware of others views. This may have had an influence on the data.

FINDINGS – SO WHAT DO PARENTS WANT AND EXPECT FROM A TECHNOLOGY EDUCATION PROGRAMME?

The word expectation was defined by parents, in the questionnaires as being, what they thought (expected) would happen. The following are findings from questionnaire responses. This was significantly different to how the definition upon which this research was founded. That is – expectation as 'what they would like to see'. This significant aspect of the research is discussed in more detail below.

Question 1 – Initial expectations from the technology department

Parents expected a similar programme to that of the previous provider. They 'expected' techni-craft subjects to be taught in the traditional manner, which they themselves had been taught. Any improvements in the new programme would come through having better qualified and more experienced teachers provided by the College of Education.

Parent 1 stated they 'expected technology to cover the old home economics, science, metal work, woodwork'. Parent 11 wrote technology was 'an interlude from the academic studies perhaps useful life skills in the cooking, sewing and woodwork areas gained'. Parent 8 had 'not very high' expectations. This again indicated the notion what they *thought would happen* in the centre as opposed to what they *wanted to happen* in the centre.

Question 2 Regard for Technology Education teachers and why this was the case?

Seven of the responses stated a negative regard for technology teachers. Parent 10 wrote 'many are, old-fashioned'. Parent 8's low regard of technology teachers was 'because of my own experiences'.

Five of the responses stated a positive regard for technology teachers. Parent 12 stating 'technology teachers are often enthusiasts and experts in a given field'. Parent 11 stated that although they were highly regarded 'I don't consider this subject as important as maths, English etc'.

Three of the responses stated ambivalence to towards technology teachers. 'Tech. Teachers . . . can be very variable', Parent 6 stated.

Key aspects of a successful Technology Education programme

Responses from parents seemed to be able to be categorised into three areas; what was taught, how it was taught and how it prepared the children for the future.

Parent 11 wanted what ever was taught to catch' the pupils interest'. Parent 3 thought a successful programme should be 'linked to today's issues' They wanted 'enough resources for all students to actively participate'. Parent 10 wrote they wanted their 'child involved in design, marketing as well as production'. Parent 12 thought, 'learning to use a range of tools systematically and creatively' was important.

Parent 9 stated key aspects of a successful programme would 'demonstrate planning, process and bring out creativity'.

Parent 1 appeared more focussed on how the programme should be taught, stating the teachers should be 'well organised . . . good communication skills'. Parent 6 thought they should be 'enthusiastic teachers'.

Parents focussed on the application of the knowledge and skills gained from the programme. They thought a successful programme would prepare their children for the future. Parent 4 wrote 'to link different technologies with their application e.g. The workplace, hobbies etc'. Parent 10 thought a successful technology programme should prepare them for year 9 technology.

Semi-structured interviews. At the end of the year, 5 parents who had volunteered were interviewed at length. Their responses were used to enrich the original data. During this interview parents were again asked their initial expectations of the programme. The parents were then questioned on classes the children had experienced, if there were any possible improvements for the programme and if they had anything else to add. As each interview varied slightly responses have been collated and quotes used to support trends found.

Figure 1 shows the criteria used by parents, at the end of the year, to assess a successful Technology Education programme. These criteria had changed from those identified in questionnaire parental responses to the initial questionnaire. The emphasis moving away from the product brought home, to what is learnt and how the child feels about this learning.

The parent's emphasis initially had been on the children making things. After the year, the focus had shifted on to understanding the process with little or no mention of the teaching of skills even though this had occurred when needed by the child. Most parents focussed on the learning that occurred in making the product, or the process involved. Interview Parent A stated the children 'do far more innovative things. They are looking at the whole not just looking at the product . . . and learning something and
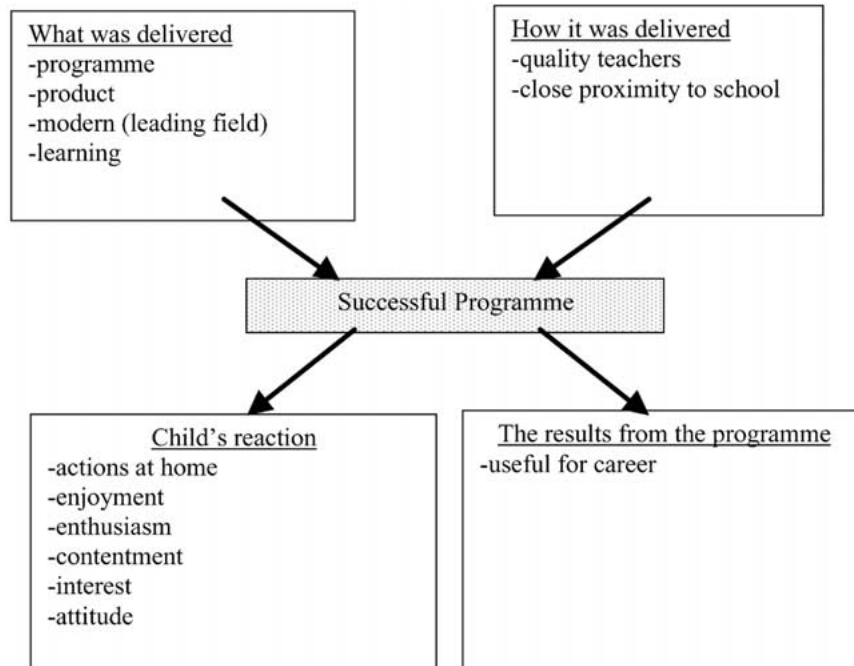
Figure 1. Parents' final criteria for a successful Technology Education programme.

coming up with a finished product'. Interview Parent B stated the child could explain 'what they had done, how they did it . . . the process and there is a great amount of learning'.

Most parents were very pleased with the staff and how the programme was delivered. Interview Parent C stated, 'she has really enjoyed the attitude of the teachers'. Children were able to walk over to technology when they needed to as well as for Technology classes (if this had been previously arranged with teacher and lecturer). Two parents commented on this as a positive aspect of the programme.

Some parents commented that their children had realised they had an interest or talent previously unknown. Other parents were focussed on preparing the children for secondary school. Interview Parent D stated the programme 'has definitely moved him out of the primary sort of level into the more looking at things that would more likely to be interested in, in secondary school'.

All parents commented on the children's reaction to the programme. This was a major emphasis at the conclusion of the programme. The parents believed the children had learnt a lot, enjoyed themselves and were more capable after the experience. Two parents commented on how the children were trialing ideas at home. Four parents noticed a change in their child. Parent E stated, 'he has gained so much confidence to work and try things

on his own'. Interview Parent D stated, 'they had huge pride in what they achieved. I think it was beyond what they thought they were capable of as well'. Interview Parent B stated 'All I know is when my daughter comes home happy that the department is doing things right'.

DISCUSSION

The parents were found to be the most positive stakeholders of the programme. This may be due to the ownership they had of the initial problem. The parents stated they were very pleased the school was listening to their needs and developing an alternative solution. For this reason they may have been overly favourable because the programme was addressing their problem more than anyone else's.

Expectations

Academics frequently use the term 'expectations' when referring to a stakeholders hopes, wants, aspirations, and ideals for a programme.

   (Mutua & Dimitrov 2001) cite the following researchers use of the term 'expectations'.

• Mercer & Chavez (1990) conceptualised parents' expectations in terms of *hopes*.
• McNair & Rusch (1991) use expectations to refer to *desires*.
• Seyfarth, Hill, Orelove, McMillan & Weham (1985) refer to expectations in terms of *aspirations*.
• Hanley-Maxwell, Whitney-Thomas & Pagoloff (1995) in terms of visions for the child's future outcomes.

The use of the word 'expectation' in this study was intended as ideals for the programme/what the parents would like to see occurring.

   This study reveals that these parents interpreted the word 'expectations' very differently. The majority of parents in this study interpreted the word to mean what they presume will occur, not necessarily what they want or hope will occur. This contrast in interpretations of the focus question may lead researchers (including principals and the Ministry officials) to assume parents want traditional techni-craft. They may expect it to be taught but the findings of this research clearly shows this is not what they want.

   Technology Education is subject to a dilemma when parents evaluate its programmes. Dodd found that when parents evaluated programmes they did so with a limited number of practices in their own education. This knowledge came from their own experience or that of their children (Dodd 1998). This is true with all subjects, however few if any parents have experienced education via the New Zealand Technology curriculum. Thus when they evaluate the programme they do so using comparisons with personal experiences (especially those of their childhood), prior experiences with other programmes and later on attributes that they develop.

Parents expectations appear to have been influenced by teachers' personalities or teaching styles as much as by the subject. Nine of the fifteen parents who responded, initially had an negative or ambivalent regard for technology teachers, which appears to have been influenced by prior experience. Thus the majority of parents are 'expecting' technology to be taught by teachers they have a low regard for. For this reason alone it is easy to see why parents have a low 'expectations' of technology programmes.

This study highlights the difficulty researchers will encounter if they ask parents what they 'expect'. It also raises the concern of parents having the ability to influence a school's provider of technology education based on these 'expectations'. Most people in the field of technology education are very aware of the confusion caused by the multiple meanings of the word technology but are they equally aware of the confusion of the word expectations. Schools need to be aware of this confusion when canvassing parents' 'opinions' on the bottom of newsletters that are sent home.

DeCourcy wrote, 'Teachers constitute one of the most observed professions. Everyone who has been a student starts to develop ideas about what constitutes teaching, good or bad' (DeCourcy 1997, p. 2). Parents initially focussed on the teachers' organisational ability, at the end of the programme they focused more on the child's response to the teacher. By the end of the year's programme most parents related the effectiveness of classroom practice to the effect it had on their child.

It must be remembered these findings are derived solely from the parents of one school. Banks (1994) quotes Finegold and colleagues (1990) stating, 'general education is the vocational education of the upper class; vocational education is the general technology of the working class' (Banks 1994, p. 206). The school involved in the partnership has a very high socio-economic status. Would parents from a low socio-economic school provide similar responses? Although generalisations from case studies, need to be made with prudence, it is hoped that the data generated would facilitate a greater understanding by the readers (Tellis 1997).

Although the College established a web-site for parents to see what had happened after every class, in many aspects the parents were still the least informed, of all the stakeholders, about the programme. So their measure of success relied on the happiness of the child. Their initial yard-stick by which they were measuring the success of the programme, was based on improving a programme perceived as poor quality.

CONCLUSION AND IMPLICATIONS

Parents of the year 7 and 8 children wanted their children to be happy and in a positive learning environment. The parents wanted teachers who were passionate about their jobs. One notion, which was frequently mentioned, was that the parents at this school liked to be involved. They liked to be consulted and informed. However this research also highlights the

need for caution in this consultative process. Parents know what they want for their children but may not know what the Ministry wants and expects of and for their children.

A distinction arose between parents' expectation of and their hopes for a programme. While parents may expect one thing they may hope for something completely different. This demonstrates the importance of carefully phrasing questionnaires when canvassing parental views.

Although it has been widely claimed, by traditional technicraft teachers, that parents want traditional techni-craft type education for their children, this study shows otherwise.

While parents may express definitive views as to what should be included in a programme they appear to respond positively towards a quality programme even if it differs markedly from their expressed objectives. This appears to be particularly so if their children are happy with the programme. This also indicates the role of schools to educate parents as to what 'quality education' is.

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