the students on board, the process is in motion. Make sure that everyone understands what Technology is all about and share your enthusiasm.

"The Board of Trustees thrives on successes because they are a way of marketing the school as well as proof that their children are offered all possible opportunities for achievement."

Steve also uses direct communication with parents to lift the profile of Technology in his school. "Every year in about the fifth week we invite the parents of our senior technology students to a product technology evening, and invite senior staff as well. Parents have been tremendously responsive. We get a fantastic turnout and a lot of feedback has come back into the school about how valuable the night was. This type of feedback will also help lift the profile of technology with senior management.

"I ring the parents of my class each term and give them a 'State of the Nation' talk on their son's progress. Our parents also have online access to the course outline so they can see what's due and what's coming up. We try and connect that triangle between the student, the teacher, and the parent. It's a little more work for us but it has been successful."

And don't forget to involve the Deputy Principal, Brian says. "Because they're the ones who get all the strife and trouble. They don't get enough 'good stuff'. It's nice that the Deputy can see evidence of student learning and consequently see students in a different light."

Another way to lift the profile of Technology within the school is by involving students in school-related projects. Marietjie's Year 11 Food Technology class helped redesign the school's canteen offerings. To research the project and justify their decisions, and test reaction to their alternative offerings, the class ran sensory tests in the school foyer.

Reflections on student achievement

Brian, Marietjie, Steve, and Arthur have all had the pleasure of seeing students succeed, and it's something that gives them an obvious and continuing pleasure.

Steve: "Tim Taylor, one of my ex-students from about three years ago, keeps in contact. He completed a viticulture degree in Dunedin and has recently moved to Western Australia to pursue a career as a wine-maker. He has remarked that a lot of what we taught in the product technology course aligns to his current role and has proved to be very valuable. He found that some of the stuff that we covered at Year 13 aligned well with level one at university."

Brian: "A young scholarship winner told me that in his first year of university architecture he wasn't allowed to bring in clients or stakeholders. 'I think that's wrong,' he said. 'When I did technology and graphics you taught us that we have to consult a client, we had to consult stakeholders'. So he's now put architecture on hold for a year and is studying sociology, learning about how people react to different things. He's now doing a double degree in architecture and sociology – through his study of human behaviour he can bring into his practice a far greater understanding of the needs of stakeholders."

Marietjie: "By sharing the achievements of some students you can inspire others. Amy Lim (see **www.techlink.org.nz/student-showcase/food-and-biological/amy**) got a scholarship last year. She's a great student, and her success had a chain reaction within the school. This year we have other students interested in following in her footsteps. This increased interest in Food Technology in Year 13 has been helped by the fact that Technology is now an accredited subject for university-entrance. Amy has opted to do a business degree, but she said 'I now know how food companies work and I'm going to try and take my business knowledge back into the food industry'."

A call to action

Go ahead, commit yourself:

- talk to other teachers and visit their classrooms;
- spend some time exploring the Techlink website to get ideas on classroom practice, individual projects, enterprise links and implementing the curriculum, ;
- get in touch with your local Technology Advisor to discuss ways forward;
- attend the TENZ biannual conference to establish contact with other teachers;
- get your senior management alongside;
- involve parents and students;
- approach the journey as a series of steps, not as a leap into the unknown; and
- build on the successes you enjoy along the way and share them with others.

As Steve Ronowicz observed: "Once a teacher has started to think about teaching Technology they're-half-way there."

useful links

Curriculum support:	**www.techlink.org.nz/curriculum-support**
Case studies of teacher practice	**www.techlink.org.nz/case-studies**
TENZ, the professional body for Technology teachers	**www.tenz.org.nz**
Futureintech:, for industry support in your classroom	**www.futureintech.org.nz**

techlink involve » evolve

Adopting Technology Education

Despite the fact that Technology became part of the New Zealand curriculum more than ten years ago, some teachers are still hesitant about changing their teaching approach to align to it.

Techlink has therefore asked four teachers to put the case for Technology and explain how they see the subject as an evolutionary step forward. What real benefits does Technology offer students? What satisfactions flow from teaching Technology well? What advice can they offer to those teachers ready to commit themselves all out to the subject?

Benefits – what Technology does and what it gives

In the mid 1980s Brian Allen was worried that students were being taught skills and knowledge that were fast becoming redundant in the world around them. Where, he asked, was the Technicraft programme leading kids? If the aim of the programme was to prepare students for a broad range of future career options, then it wasn't doing a particularly good job of it. And nor was it doing a particularly good job of mirroring practices in industry.

When Brian was first exposed to Technology he immediately recognised that the new curriculum provided the approach he was looking for. As well as equipping students with a set of hand skills, Technology teaches them to think and had the potential to prepare students properly for the changing world, he says.

"Technology education prepares students for a wide range of careers. It teaches students to think and this is applied through the reflection, justification and analysis that a student does as they become technologically literate. Take, for example, when a student uses a glue to join two pieces of material. As teachers we would encourage students to test a variety of glues and pick one that's got the right properties

the teachers interviewed

Brian Allen

A woodwork teacher since 1972, Brian sat on the 1983 Ministry of Education committee that looked at Technology teaching and led the change to the teaching of Technology in several schools. In 2004, as HOD Technology, he rejuvenated the Technology Department at St Patrick's College, Kilbirnie. In 2007, as Adviser with Massey and Waikato Universities, he worked extensively with North Island teachers to develop their understanding of Technology Education. (Brian has recently accepted a new position at the Correspondence School).

Marietjie van Schalkwyk

Marietjie specialised in Home Economics at university in South Africa and taught the subject for 14 years. When she immigrated to New Zealand in 1997 and started teaching at Wellington High School, she didn't feel comfortable with the idea of teaching 'Food Technology' (a term she had not heard of before) and focused on Home Economics-based units. However, Marietjie is now an enthusiastic Food Technology advocate, finding it a fascinating subject.

Steve Ronowicz

Steve trained as a teacher after 14 years as an automotive engineer. He taught at Feilding Agricultural High School for 13 years before moving to Tauranga Boys' College in 1999 to head the Technology Department. During his 22 years of teaching Steve has experienced the transitions through Engineering Shop work, Workshop Technology and Design Technology to the current Technology curriculum. Steve is currently on a one-year secondment to NZQA.

Arthur Johnstone

Arthur recently moved to Waihi College from the UK, bringing with him 21 years of teaching experience. Much of that experience was gained in the UK but Arthur also spent time teaching at an international School in Kuwait. He has a Masters Degree in Educational Management.

for the job. Apprentices need to know what type of glue to use when fixing say gib-board. Not every glue retains the flexibility yet also the rigidity required for gib-board."

With a background in Technology, a young apprentice will think about the properties of the materials they are using and will understand the need to choose materials with the right properties for the job at hand. They will come to work equipped with what many employers wistfully describe as initiative.

Steve Ronowicz also saw the potential of the new curriculum pretty quickly, because he recognised his experiences with product development aligned neatly with the processes outlined in the Technology curriculum. Experience had validated Steve's understanding and appreciation for the product development process and in Steve's eyes this experience also validated the new curriculum. And he came, in time, to appreciate that aspects of the achievement standards actually validated and extended his own understandings.

Marietjie van Schalkwyk says the greatest benefit Technology offers students is the opportunity it presents for them to think creativity within a sound framework of good project management.

"The teaching of Technology is based on project management processes. Students learn to think, analyse, and ask questions. They can't move forward unless they have first formulated the right questions and then found the answers."

When Arthur Johnstone introduced Technology to Waihi College, he was already a convert, having taught product design in the UK, which has a very similar approach and philosophy. However it was still a challenge, he says.

"The first task was to gain the confidence of the students and this was done by showing them examples of work produced by my students in the UK. I said 'if they can do it, so can you!' Secondly, I needed to develop the resources to teach Technology – the tools, machines and equipment. Then I needed to decipher NZQA standards and work out what the curriculum required (an on-going process)."

To teachers who feel that Technology tends to focus on planning and process to the detriment of the teaching of hand skills and will somehow disadvantage students heading for the trades, Arthur is adamant that Technology doesn't devalue skills.

"Far from it," he says. "Technology teaches skills relevant to the world that students will be living in. The world of technology is constantly changing, and the curriculum equips students to recognise and exploit this change.

"To argue that 'practical' teachers should focus on skills because New Zealand has a skills shortage misses the fact that such a narrow focus wouldn't actually provide what most students need or want. No student will ever use purely manual skills in their career. Even using the broadest of

In this project, which won a 2006 Transpower Neighbourhood Engineers Award, ten Year 5 and 6 pupils from Elm Park Primary School worked with an engineer to design and create a fountain for their primary school.

definitions, Arthur says, the number of students who will make their living in jobs where manual skills are the priority are limited and this has been the case for some time.

If Technology is properly taught, there is no reason why those who follow a trade-based course should be disadvantaged, he says. "I have no doubts that Technology is the best vehicle to keep practical subjects alive in schools."

"I have developed several Technology departments in the UK, making the transition from a more traditional approach to a process-led technological approach. In every case students have been given increased opportunities to express their creativity and realise their potential.

"I have always expected staff to work to ensure students produce high quality outcomes that demonstrate high level thinking skills and high level design and manufacturing skills. At no stage do I believe that following a technological approach has lead to a diminution of technical knowledge or practical skills. There is no reason why it should!"

Marietjie agrees: "Technology is the foundation of any craft. Students need to think about what it is that they want to do, look at what skills they have, what their options are and the process of making it all works. Technology enables them to understand the process behind any object."

Technology also supports a student's communication skills and literacy, she says. "The need to record all the data related to the development process is an opportunity for students to practice their communication skills. This is just one example of how Technology links with all of the other subjects taught in school. Thinking and expressing yourself clearly flows naturally out of each lesson."

Marietjie believes this sort of clear thinking can be applied to all aspects of life, not simply to careers in technological industries or trades. The same processes applied to finding a solution to a technological problem and managing a project can be applied to 'everyday life' – choosing transport, planning a camping trip, creating a healthy family meal, or coaching a sports team.

A good example of the universal applicability of technological practice is seen in Brian's approach to his job as an advisor. "I have to see a need and opportunity when I go into a school, I have to do my research, I have to collect some data to base some decisions on, I have to consult my clients, I have to consult my stakeholders, and I'm using tech practice in my role as Advisor."

Taking the first steps

If a teacher has come to recognise the benefits Technology offers, what's the best way to go about realising some of those benefits?

To Marietjie, the first step is clear: "Familiarise yourself with what's going on out there and see what's possible. Go to the Techlink website, and see what's being done. It's much easier when you look at the case studies. Some teachers have done some amazing stuff. The way Havelock North High School has structured their whole department. If you look at examples like that, it will motivate you.

"Get as much advice as you can from other people. I've found that other teachers are happy to share – visit their classrooms and see what they are doing. And then just do it, because it's really exciting. Had we not got the right advice, we would have never had our Green Bread unit"(see **www.techlink.org.nz/BP633-kiwi-bread**).

Go and visit a school that's doing Technology well in a similar context, Steve Ronowicz says. "Observe what they are doing and what their outcomes are. Form a relationship to support each other."

To find suitable schools for visiting, contact your local Technology Education New Zealand (TENZ) branch. TENZ branch meetings are an ideal way to network with like-minded teachers whose experiences can be invaluable. To become a member of TENZ and participate in local branch meetings visit **www.tenz.org.nz**

In this project, Technology students designed and manufactured original lighting units for a local city nightclub, in consultation with the client, university design students and industry professionals.

Take small steps, says Brian. "Start modestly and gradually. Start off with something small and simple that offers good chances for success and positive reflection, then build on that."

"A helpful strategy at St Pat's College was to use Futureintech Ambassadors (**www.futureintech.org.nz**) who visited regularly and worked with students. These young people working in Technology help students to be more realistic in their learning and gave them real and practical examples of how they solved a need or an issue. Students built up a relationship with the Ambassadors, who helped them with key factors, planning strategies for practice, being more specific in evaluations and writing a brief to enable a measurable outcome, and suggested materials to use they had not considered."

Winning the support of the school

Ok, so you're convinced. But what about the rest of the department? What about senior management and the Board of Trustees?

The key, Steve believes, is communication. "Technology leaders and teachers need to communicate to senior management the benefits of Technology. They need to explain what they plan to do, why they want to do it, and most especially how it benefits students."

But be realistic and think strategically, he says. "School budgets can be tight. Securing funding for resources and/or upgraded premises may need to be a medium term goal."

Don't try and do too much at once, Brian cautions: "Don't try and win over the Board and the principal in one year. Have some student success around some small examples in your classroom. Expose the Board to them. Photograph the outcome, record the outcome, so that the Board can see it. And it's not only the board, pull in the parents as well."

Parent support is crucial. At St Pat's Brian deliberately set out to court this support, with some success. When a student did something particularly good, he made sure people knew about it. "I wanted the Board, the principal and the parents to know. I'd tell the student: 'Go home and tell your parents'. Then I'd ring up and ask: 'Did your son come home and tell you?' If they said 'Yes, it was good!', I'd say 'Well if it means something to you, tell the principal'. So then the principal discovers these wonderful things going on, and he goes and congratulates the teacher, and the teacher says to the principal 'Well how about sharing that with the Board? So the principal does, and ultimately the Board will ask the teacher to come back to the Board and share what they are doing. Then you've got the cycle going. So you have to be thinking a little bit to get that going."

Marietjie suggests a similar strategy. "It all starts with the teacher being motivated to deliver Technology. No principal will deny an enthusiastic teacher an opportunity. We do a lot of show-and-tell about students' success and once you have

Strategies to implement the 2007 curriculum in your school

The teachers featured here come from varying backgrounds and disciplines. All share a dedication and passion for Technology as a subject and have, through perseverance and initiative, used both the old and new curriculums to produce impressive results in Technology classrooms. All have taken an active role in making the curriculum work for them.

For teachers looking to make the shift, there are a number of strategies to keep in mind to make the transition rewarding and achievable for both you and your students.

In Malcolm Howard's experience, there are several key elements that can help with implementation. "It's so important for a school that you bring the various areas of Technology together as one faculty. For teachers, I suggest getting together with other Technology teachers to share ideas and make sure that you familiarise yourself with the huge amount of resources that are now available for Technology teachers."

> *"It's important that students have lots of chances to make mistakes without it being a big issue, so I go round to local businesses who are always keen to help with free materials."*

Steve Jeffares feels that Technology can tap into the skills and knowledge of any teacher no matter how diverse or unrelated they may seem to the classroom

"I think it's a career where you use everything you've learnt. To new teachers I would say: Use your entire breadth of knowledge within the classroom – for example, if you're into the guitar maybe one year your students could make acoustic guitars."

> *"My advice is to stop teaching students and start mentoring them. Never believe that students can't do something, because they can do amazing things as long as you don't hold them back."*

Steve also believes regular professional development is essential in keeping up with such a dynamic teaching area and can help immensely in keeping up with the interests of the students.

"We need to be able to identify where students are at, so we can see which doors to open and guide them, adding specialist knowledge when they need it."

Steve acknowledges that different schools require different approaches and recommends adapting projects to the specific demographics and interests of particular groups of students to capture their enthusiasm. For those with limited resources, he recommends being creative with what you have.

"It's important that the students have lots of chances to make mistakes without it being a big issue, so I go round to local businesses who are always keen to help with free materials."

For those new to Technology or introducing it to a school, Diana Eagle recommends starting slowly. "Take baby steps, don't think that you can do the whole thing well all at once, just concentrate on your strengths and bring that to the Technology curriculum to get that going first. Also be connected to your students enough to know what they can cope with. So think carefully about how you present materials to students so that you can bring them on board and keep them motivated and interested in what you're trying to present to them."

Ian Watson also emphasises the importance of the teacher/student relationship and how it has changed with the new curriculum.

"My advice is to stop teaching students and start mentoring them. Never believe that students can't do something, because they can do amazing things as long as you don't hold them back. The other thing is to always keep it real. If they ask a question, don't give them the answer but ask them to research and find out for themselves."

In summary, to implement a successful Technology programme:

- Work with your existing strengths and those of your school and colleagues.
- Actively seek PD and support from the wider community.
- Communicate with other schools and teachers to share ideas.
- Put your name forward to be an external assessor.
- Join support networks in your area such as: Technology Education New Zealand (TENZ); New Zealand Graphics and Technology Teachers Association (NZGTTA); Home Economics and Technology Teachers Association New Zealand (HETTANZ); New Zealand Association of Computing and Digital Information Technology Teachers NZACDITT.

Find out more...

To find out more about building a successful Technology programme, a good starting point is the curriculum support section on the Techlink website:
www.techlink.org.nz/curriculum-support

Subject association links:

www.tenz.org.nz
www.nzgtta.co.nz
www.hettanz.org.nz
nzacditt.org.nz

Teacher Talk 2

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Implementing the Technology curriculum – then & now

The Technology curriculum was gazetted in 1995 and evolved over time to keep up with new teaching ideas and attitudes. To gain some insight into that evolution, Techlink talked to four teachers about how the 1995 curriculum brought about challenges and encouraged breakthroughs, and on the changes the 2007 curriculum has brought since.

We hope their experiences help provide a way forward for Technology teachers in translating some of the concepts within the curriculum into successful classroom practice.

The impact of the 1995 curriculum

Malcolm Howard was the HoF of Katikati College when the 1995 curriculum was released and he found it challenging to implement for a number of reasons. "It was quite a radical change for schools in terms of introducing a new curriculum into a very traditional school structure. It was such a vague document with nowhere near the level of support we now have behind it. We also had the weird situation where the seniors were under the old system of Design Technology and Home Economics, while we tried to teach Technology to the juniors, so implementing the new curriculum with these factors was very hard work."

Other teachers and schools shared these concerns. Diana Eagle felt comfortable with the old Technicraft and manual practices and was apprehensive about making the significant change to the 1995 curriculum. She also found that her school was reluctant to make the move.

"At that point, Technology was being introduced across all the subject areas and it became clear very early on that it wasn't going to work. Everyone else was very busy with their own subject and didn't see Technology as something they really needed to look into. So because people didn't get on board, it didn't really catch on."

Diana felt that her Home Economics background gave her a good grasp of

The teachers we interviewed...

Malcolm Howard

Malcolm has taught Technology for 16 years specialising in Year 7-13 ICT but also teaching in other areas of Technology at a junior level. Malcolm was made Head of Faculty at Katikati College in 1996 and was responsible for establishing a Technology faculty in line with the new curriculum guidelines. Malcolm was also a member of a Beacon Practice partnership with Hillcrest High School that focused on teaching ICT within Technology. Malcolm has a Bachelor of Engineering from Canterbury University and is currently an advisor in Technology at Waikato University

Ian Watson

Ian was a tradesman for Air NZ before training as a teacher at Auckland Secondary Teachers' College. Starting at Manurewa High School before moving to Otumoetai College in Tauranga in 1999, Ian has over 27 years teaching experience in the field of Technology and has followed the changes in this area closely from the original 1995 document through to the 2007 curriculum. Ian has also worked as an external assessor for schools, which he feels gave him invaluable experience and insight into the different ways Technology can be taught.

Diana Eagle

Diana Eagle was a Home Economics teacher at Tararua College for ten years before the introduction of the new curriculum in 1995. While Diana admits to having difficulties with the document initially, she persevered to become a pioneer in making the transition from Home Economics to Food Technology. She has played a key role as a lead teacher in curriculum and qualifications related professional development initiatives and has considerable experience in both internal and external assessment for NCEA.

Steve Jeffares

Originally a builder, Steve moved into architectural design before training as a teacher at Waikato University in 1995. His first position was at Whakatane High School where he was the HOD Technology until 2004, when he left to complete a diploma in Technology education from Massey University. He now teaches at Edgecumbe College and also works with provincial rural schools, helping them make the shift from manual training to a more broad Technology approach.

technological practice, but there were other elements within the 1995 document that she thought weren't easily applied to her work in the classroom.

"I found the Technology document hard to read and understand. As for the examples, I felt they didn't relate well to the classroom and I couldn't see how you could really bring it in very easily, often they were just one-off ideas that couldn't be used for a programme."

It wasn't until the introduction of NCEA that Diana felt the school really embraced Technology, with teachers attending NCEA professional development days. Initially this raised more concerns for Diana and her fellow teachers as many unfamiliar concepts were introduced.

"Of course we'd talked about Technology before, but when they started talking about 'plan of action' and 'formulate a brief' I remember thinking 'What the heck! What is this all about?' So while it was intimidating, it did push me into going away and being proactive about finding out how to do things I wasn't sure about. So I just got stuck in and started developing units of work."

At the time, teachers reacted to the document in different ways, with some seeing it as a step in the right direction, some criticising its lack of direction, and others ignoring it altogether. However, there seems to be general agreement that in those first years the support for teachers attempting to implement the curriculum was insufficient.

Ian Watson also tried hard to implement the curriculum. "I felt pretty comfortable with the old Design Technology, so when the new curriculum came along there wasn't much direction and I felt the professional development was quite poor. Without that support in place I had a real fear of not being able to perform for the students, as I didn't know what to do to get them to pass or to gain excellence."

The introduction of the 1995 curriculum had differing responses from many teachers. With any new initiative there are bound to be teething problems and while many teachers felt overwhelmed by the new document there were also positive responses to the underlying ideas within it, with some seeing the potential more immediately than others.

Approaches to the 1995 curriculum

While many teachers felt intimidated by or had problems with the curriculum, many took a proactive approach. Malcolm Howard was pragmatic about the challenge of implementing the new curriculum within a larger framework and set about the task of marrying the old structure with the new.

"It was a long, slow process and took a lot of perseverance. One of the key strategies of implementing the 1995 curriculum was trying to pull together the various historical areas that were all part of Technology – such as Workshop Technology, Home Economics and Computing – to make one designated Technology faculty. Another important factor was negotiating with the curriculum committee to get space on the timetable for Technology."

To deal with her concerns, Diana Eagle tried to do whatever it took to make her existing strengths work within the curriculum and to improve her knowledge in areas she felt were lacking.

"I just got stuck in and started developing units of work. As I had no degree, the science and food chemistry side was difficult for me. So I contacted a food technologist to help me with those aspects. This gave me room to concentrate on my strength which was classroom practice, going out and finding stuff like standards of production. Because I was unfamiliar with Food Technology and technological practice it was basically learning on the job. This was quite a shift for my students as well, but I kept it pretty basic and they handled it well."

Diana also became involved in external assessment which gave her access to other Technology teachers with successful ideas and practices that she could apply in her own classes.

Venturing further afield than his own classroom also helped Ian Watson to address any concerns he was having with applying the new curriculum to the classroom.

"I talked to a lot of my peers and made contact with other technical teachers around the place whom I saw as being successful," says Ian. "I also had a really good look at the programmes that had already succeeded to see what they were doing right. Eventually I was chosen to become an external assessor for school for NCEA and that gave me invaluable insight into what other people were doing around the country which I thought was great professional development."

Steve Jaffares dealt with his concerns about the clarity and delivery of the curriculum by concentrating on the essential elements that he agreed with and translating his understanding of these to the students.

"My original view of the curriculum was that it was a good problem solving machine that differed from the old curriculum's 'build this' approach," says Steve. "So we made sure that we promoted the philosophy and intent of the curriculum as I had summed it up and condensed it down to what we thought was the critical direction of it – what we thought was really good for the students' problem solving."

Left: Ian Watson and his Year 11 students making a dirt surfer – see www.Dirtsurfer.com.

Thoughts on the 2007 curriculum

As seen from the four teachers' comments, initial reactions to the 1995 curriculum document were varied. As with any new endeavour ,the Technology curriculum had to find its feet and has certainly had its problems within those first few years.

Fourteen years have passed since then and that original document has been refined and changed to address many of the issues faced at first, as well as to keep up with current developments in Technology and in teacher practice.

In 2007, the new Technology curriculum was introduced, revitalising an area that has sometimes been taken for granted within school infrastructures.

Malcolm Howard is impressed with the changes it has brought.

"It's really 'chalk and cheese' when you compare the introduction of the 2007 curriculum with the 1995 one, where you didn't really know what was required at each level. The new curriculum is so much more specific, with measurable objectives where you can see the progression up the curriculum levels. The support around it has improved too.

> *"I just love it! I absolutely love it. It's just so dynamic and exciting. I just feel energised by the whole curriculum...*

"This time around we got layer after layer of support material for introducing the curriculum, with things such as the curriculum support material, teaching strategies resource and case studies on the Techlink website. The other hugely significant difference is the fact that our seniors will have the opportunity to be doing courses out of the Technology curriculum at the same time as the juniors, so that's going to be a significant advantage."

Steve Jaffares has always had very clear ideas about what was wrong with the old curriculum but is happy to report that many of those concerns have since been answered. "The new curriculum is superb and I think it is quite remarkable how it has evolved and been refined with all the bad stuff taken out of it."

> *"This time around, we got layer after layer of support material for introducing the curriculum, with things such as the curriculum support material, teaching strategies resource and case studies on the Techlink website.*

Ian Watson was also apprehensive about the 1995 curriculum due to its lack of direction and unfamiliarity but has since become a full convert to Technology education within the 2007 curriculum.

"I just love it! I absolutely love it. It's just so dynamic and exciting. I just feel energised by the whole curriculum and that's because I've done the hard yards, asked the hard questions and got off my bum and talked to people who know the answers.

"With the 2007 curriculum you could suddenly do Technology that was real and I think that was a big thing. If the students decided what they wanted to make and did the research or the technological background on that project, then it became real, and once it was real they got really hooked."

While Ian was reluctant to leave Design Technology behind he is positive about the new direction.

"Design Technology was more teacher directed so it was impossible to create that level of student involvement and enthusiasm for making a real product. Whereas Technology is more student directed, so my role now is more like mentoring than teaching."

For Diana Eagle the key competencies as laid out on the front end of the document have created opportunities for teachers to work to their individual strengths.

"I like the new curriculum because it has brought all the different subjects together on the same page and you're finding your focus from the key competencies, values, principles and the pedagogy rather than just ticking all the boxes within your area. With the three components, I like it that people will be able to find their strengths, where if they're really good at the Practice stuff they can say 'ok I'll do mostly that in this unit and dabble in Knowledge and maybe a little Nature.'"

Diana also believes that many of the problems she and other teachers faced in 1995 in translating the curriculum to the classroom may be a thing of the past.

"The new curriculum is a lot more user-friendly and realistic for teachers, and, because of that, students benefit and aren't put into situations where they have no idea what is expected of them. I know that it is still evolving, but I'm pretty impressed with what I've seen so far."

> *"The new curriculum has brought all the different subjects together on the same page and you're finding your focus from the key competencies, values, principles and the pedagogy rather than just ticking all the boxes within your area.*

It's this evolution that Steve Jeffares believes is integral to making a sustainable document that works with the necessary developments within Technology.

"One thing I think we've all learnt is that we can't lock it in for so long. What is valid pedagogical understanding of the curriculum in 1995 is not going to be the same in 2000. This discipline is in a state of flux and it's always going to be like that because it's a changing world and a changing landscape.

"Even those purists who were saying 'technical skill has no place in a technology curriculum' are now saying 'hang on a second, maybe it actually strengthens and underpins our Technology curriculum'. So there's been a shift in many camps."