A STRIKING MESSAGE WITHIN THIS CONVERSATION IS THE IMPORTANCE OF THE EDUCATION BRIEF AS A DRIVER OF THE ARCHITECTURE.

EDITORS' PREAMBLE: Dandenong High School is the amalgamation of three existing schools into a new ‘Schools within Schools’, SWIS, model opening stage 1 of 3 stages in 2009. In this interview, the principal, the architect, interior architect and ‘education architect’ unpick the process of transformation that resulted in a school model where seven matching school buildings each accommodate 300 students from Years 6 to 12. A striking message within this conversation is the importance of the education brief as a driver of the architecture. The interview reveals the complexity of the transformation process and the need for good communication and professional development with teaching staff before and after the design and construction process.

INTERVIEW: June 15, 2009

MC: Martin Culkin, Principal, Dandenong High School
RL: Richard Leonard, Architect, Hayball
MF: Mary Featherston, Interior Architect, Mary Featherston Design
JR: Julia Atkin, ‘Education Architect’, Learning By Design

TAKE 8 Three buildings out of seven have been completed and the students and teachers are beginning to experience the spaces. It doesn’t look like any other school we’ve seen. It is seven schools within one school, so as editors of TAKE 8 we are looking forward to hearing about your journey and how you have negotiated this complex process. Martin, as principal of the new school, we understand this is the first time you have been involved in the delivery of a new school.

MC Yes. We are a forerunner of a different way of doing business. It is really putting the curriculum before the design. The history is really about the provision of education in the local district where options for the students were incomplete. Redesigning the education of a district is challenging. The challenge was around developing something that would retain each school and would provide a breadth of options and enhanced student performance. They were the key ingredients. Associated with that was the department’s demand that we be innovative. We were asked to address seven or eight different areas in a particular format; one was a very elementary vision statement, some structures around how you would staff it, what the teaching and learning environment might be like, what the curriculum structures might be like, what the industrial structures might be like, what the ICT might be like—those kinds of things, and I think we could be forgiven for floundering around in the dark in those early days.

TAKE 8 What year was that?

MC That was in 2005. We were in new territory here working with three different school cultures.
TAKE 8 Please talk about the different cultures and the backgrounds of the students because Dandenong has a particularly interesting set of concerns and possibilities around its community group.

MC The broad Dandenong community is amongst the state’s most diverse. There are about 66 languages represented in this school. If you go back to the days of the three stand-alone schools, we had Dandenong High School with a population of about 1,400 students and a stable, traditional school. Doveton Secondary College came out of multiple mergers in that district over the years, closing 10 schools and had shrunk to a student population of about 170. There was Cleeland Secondary College which had about 550 students and was a school that prides itself on offering programs to particular groups, it actively recruited kids from amongst the Sudanese community for example.

TAKE 8 Richard, as architect could you please describe how this school is visually different to other schools which you have worked on?

RL I think the problem that Martin has discussed is really an enormous one, as these three very different cultures needed to be embraced in the conceptual thinking at all levels. It is stage 1, which is one-third of the entire project. As Martin well knows the full concept cannot be realised until all of the buildings are delivered because they are all so intermeshed with the methodology and with the school and the way that the school works. Cohorts of 300 students will be accommodated in each building as their home base. Each building is essentially identical, but will have its own separate character. As a model, the educational philosophies are reflected in the buildings.

TAKE 8 You have spoken about a SWIS or Schools within Schools model. Was that something that you saw, did you visit other schools in the early planning process?

MC We certainly visited schools in New Zealand and in the United Kingdom, but we didn’t see the form that we have developed. In terms of SWIS being represented within some of the literature, they do exist, but these are not autonomous schools within schools. The idea of breaking up a student population of 2,100 into a manageable, meaningful curriculum delivery unit was the driver here. Alfriston College in New Zealand had some notion of schools built around family units and we have borrowed a little bit from that.

TAKE 8 You did an overseas tour with the two other principals to look at other exemplary buildings.

MC We looked at a lot, but I am not convinced that you can pick up anything and make it immediately transferable to your own environment. You don’t provide structural solutions as the panacea of educational problems. You provide curriculum structures to have some hope of success.

TAKE 8 So you are saying you can adapt but not adopt?

MC Exactly, and you pick up ideas, but I wouldn’t just take this or that and replicate it. I don’t think any of the three of us did that. So the challenge was, what do we do now?

TAKE 8 Do we understand you chose a SWIS model because the community was horrified about a large school, so you wanted to break it down into manageable, meaningful groups and there were other ways that you could have done that. You could have grouped into levels or stages and one would see some arguments for that because perhaps there are different kinds of learning that are going on at Year 7 to what there might be at Year 12. Why did you not go down that pathway?

MC Let me just correct something. Certainly the community was horrified, but we too thought there was a better way. You can lapse into tried and true models—the junior and senior school model. We could have done that and there would have been 700 roughly in each group. That’s still far too big. What else can you do? I’ve always been interested in vertical structures, worked with them in several schools. It took a lot of debate and discussion.
TAKE 8 What is it about the vertical structures in schools that intrigues you?

MC We saw some real family learning in New Zealand schools where there were opportunities for senior students to work with younger ones; role modelling, some interactions and some cross-aged tutoring—interaction that is more representative of the real world experiences for kids rather than clustering them into lock step structures that are such a common feature in schools. Students would be in groups of 50 per year level as a meaningful size. So, we very early on wrote a curriculum map to see how you might get some stages of learning to make sense in a school. We focused our thinking around the transition at Year 7, the middle years and the later years.

TAKE 8 How did the teams of people come together? At this early stage was Richard on board as architect but perhaps not Mary or Julia?

MC That’s quite right. There were three stages. Right in the early stage, the educational rationale was certainly pre-architect. We were clarifying our thinking as best we could—terribly hard work. That was done through pretty much the leadership group of the three schools.

TAKE 8 Being?

MC Principals and curriculum representatives—not many.

JA When you are talking about how difficult that conceptual work is, I used to think it would be a hell of a lot easier to do physical exploration. If you left the shores to sail somewhere at least you have the tangibility of the ocean and the land, but when you try to conceptualise something afresh it’s incredibly hard because there’s a period of floundering and challenging. It just doesn’t emerge straight away. You have to keep chipping away, trusting that if you keep exploring together something will emerge. It’s a bit like Michelangelo, he chipped away and eventually the angel emerged.

MC That’s the pure form, this was complicated by vested interests.

MF Can I remind you of the lovely words that you had in the education rationale which were to ‘inculcate a love of learning’?

JA Even when you have that clarity about what you want, it’s getting to that tangible expression of those principles that is the hard bit. It’s not the principles themselves—that’s the easy bit.

RL I think that this is really interesting. That text was one of the earliest documents that was ever presented. In fact some of the very first documents that we have kept on file remain true to this day. So, it’s as if the principles were always clearly stated and in fact never varied. But, it has been the most complex process to work through. The master plan process took something like 18 months, but certainly for the first year we didn’t really draw, in fact, we weren’t providing an architectural service at all—it was terrific to be around that table of discussions.

MC The emergence of those words has some interesting history and one of the commitments we made was to make sure that, if we took them from somewhere, it was out of some research. What is this lodged in? Where does it come from? Will it stand up? That very early document you are referring to was the ‘coloured pages’ document.

RL Yes.

MC Do you mean the curriculum map?

MF The educational rationale?

MC No, just a document that was put together and tendered at one of those meetings on Friday morning, a very lengthy document, a multicoloured document. It was a bit of a stunt I must say.
TAKE 8 Tendered by you?

MC It was. But it was a bit of mischief. We were trying to get something on the table that had some solid thinking around it, it didn’t belong just to individuals, it was something objective and it got ripped into by people. It was an amazing experience. I’d do it all again if I had my time over!

TAKE 8 At this stage you were pretty much working in-house but you’ve got a clear goal from the department that you should be innovative.

MC Yes. The demand was around innovation and it was very open ended. It’s not like that now. The department did put in front of us some of the work of other architects and invited us to go and listen. Our question was, did it fit with our thinking and our local environment? The conclusion was that it didn’t.

TAKE 8 You say it’s not like that now. Do you mean because of the necessity for rapid development within the Building the Education Revolution initiative or do you think there have been other changes?

MC I think the Regeneration Project and the Building Futures processes have come back into a bureaucratic mould. This was a one-off opportunity and I have to say that they trusted us.

JA When you mentioned the BER—Victoria was ahead of that, they already had, from the department, the Building Futures program which was way ahead of Building the Education Revolution.

MF I think the department are throwing the ‘new’ more widely now. 2005 was quite significant. Things have hardened up—whereas then it was opening up, now it’s closing down.

RL Relevant to this project I think. It’s closing down in the sense of being driven by a federal government program, but I think generally that the mindset of the department is still as open and exploratory as it was back in 2005 when this project started off. There was an enormous amount of trust that the department was willing to extend to the school and the project, and in fact that caused considerable delay in the sense that we said we can’t put this project out to tender, we can’t design because we are still resolving what it is. That would cause some heartache at a fairly high level I can imagine. We couldn’t draw because we didn’t understand the project brief as the school was still going through machinations within the school, outside the school with the school community, and also at the departmental level. Across all sorts of levels a lot had to happen before reaching a point where we could say, now we have some clarity to progress as an architectural project. That would have taken at least 18 months before we got to that sort of footing.

MC Quite true.
And I think that as an outsider coming in later to the process, it takes quite a lot of time for the heads to move and come together, so it would have been detrimental had you been pushed harder and faster along a time line.

My gut feeling is that even if we achieved the same design a year earlier, I don't think it would have been successful in the sense that you had to go through the transformational change to reach consensus. In fact, as architects we often see situations where staff are not clear.

Richard, you are suggesting that this is a design that is owned by more that the architect and the interior architect, it's owned by a larger group of people. Sometimes it's useful to have drawings that clients can respond to. Could you tell us again why you didn't draw?

I think that's a very good point and one also made at the time was: if only we had options to discuss. But in our view it wasn't about options, it was a step before that to ask: where are we trying to head? We didn't have a mature view of it, so our belief was that drawings would sidetrack the solution and take us off in a different direction. It was in our interest to draw but we didn't feel confident at that stage that we were in charge of all of the facts, so it was very simple to explain that it would have been counterproductive to start throwing out options.

So things change. There's a moment when you feel you can respond, when you can draw. When do you get to that stage? Is it because external pressures become so strong that you can't resist them any longer or is it because you finally thought you'd reached some consensus? Was it when the curriculum map was finally agreed on?

No, I don't think so. I find that a very difficult question to answer.

I want to disagree with you in some sense. As soon as the curriculum map emerged then we had something more serious to work with. We started to analyse, how many kids are in this building at any one time, and what are they doing and what is their movement? I think one of the critical documents that quickly followed from that was your 'Day in a Life' where your leadership group sat down and role played four students with very different backgrounds with very different needs. This was the first time I've seen it done in my experience and it really put us all in a different head space to understand the building or the requirements from the students' point of view. So I think that point was sort of the take off in being productive at a drawing board level and then things started happening. We still hit plenty of bumps along the way, and that's when we started to say, hang on we need more expertise around the table and that's when people like Julia and Mary started to be swept in.

Julia you are very much an educator and do a lot of professional development.

Sometimes I actually describe myself as an ‘education architect’ doing educational design as a whole so it could be timetable, it could be curriculum, leadership—any aspect of how schools function to ensure that we are doing the best for learning. Like Richard's firm, I don't go around telling a school what it should be doing but rather listening deeply to what they are trying to do. I'm so overworked, so what am I doing taking this job on? Part of it was that they were persistent, but the other key thing was the Schools within Schools model. As Martin will say, it hasn't been an easy road being involved. I'm not interested in innovation for innovation's sake. I'm only interested in innovation if it actually delivers more fully, more richly on the basic principles that you try to deliver. One of the basic principles for me is how you create a place for human beings. If it's a place for human beings, you need what I call a human-sized organisation. How many students have you got in Year 7 across the school Martin?

About 350.

You've got a group of year 7s which is not naturalistic, and it's very hard to create a human dynamic, interaction within that. So SWIS was the vital thing that tipped me into saying I've got to find time to work with this group.
TAKE 8  Was this the first time there’d been this kind of endeavour in a school in Australia?

JA  This is the only one I know that has gone for that strong family sort of dynamic within a smaller structure. There are schools with ‘houses’ but not necessarily physically separate as we are getting here. Many schools I’ve worked with would have the very vital house structure going through from Year 7 to 12, and there is a lot of leadership and mentorship going on between senior year students and younger. There are those that encourage friendly competition which is how you keep unity and diversity, to build the whole school spirit, but here was the luxury of doing it within physical buildings not just conceptually. You see the physical expression of the Year 7 to 12 houses. I really see how important that is in this particular environment because of the size and also because of the multicultural attributes with many of them coming from displaced cultural community settings.

TAKE 8  You said you did not aim to overlay your own ideas; more you were keener to work with the ideas of the staff?

JA  Yes. Initially there was a lot of time with Martin, and a lot of time just soaking up the teaching and learning on all three campuses to get a bit of a sense of the school—the people and the places—because each of the campuses had their own highlights and strengths. I am a great believer in emergence; that the best idea and the best design will emerge if you have good process and openness of dialogue.

TAKE 8  So there wasn’t a point in this process where you were feeling as though there was going to be a mutiny? There must be a lot of grief as people who have taught for many years and are passionate about their teaching are now being asked to consider other ways of teaching?

MC  It’s a very confrontational concept for people, but student engagement across the three schools was marginal and was not going to improve by repeating more of the same, so we had to do something different. Turning around cultures, which for a long time have been for teachers rather than for students, is terribly difficult work and by no means has that work been fully achieved. That will be a long journey. But I think we’ve been inclusive of people and are concerned that it’s in their interest. Everybody has had the opportunity to participate and everybody has been listened to, not everybody has been agreed with, but everybody has been listened to. You have to bite the bullet and be strong about these things sometimes.

RL  It’s not necessarily a linear process is it?

ALL  Ohh Noooo!!

RL  It speeds up and slows down in accordance with what you need. This is a good time to bring Mary in because the focus groups, certainly from our experience, were the most intense that we’ve ever been involved in. I remember that day when you had just come into the process, Mary, and were being exposed to this and there was one particular teacher who said this is all terrific but I just can’t envisage what it means in three dimensions so then this is where the idea of the trial SWIS, the prototype came in.

JA  No, there was a step before that. There was a team from all three campuses. The shell was definitely designed and we were trying to get on with the interior and I realised how people couldn’t envisage it. Some people just saw standard classrooms and standard spaces and others were saying no, it could be different.

MF  You asked the different groups to think of a metaphor. One of the great privileges for me in this project, and there have been many, was being able to watch the techniques that Julia uses to get people to feel comfortable and think imaginatively. You asked each group to come up with a metaphor for the school. There was a book, a ball, a house and so there were discussions around those metaphors and then it moved on across the day from that.
The thinking of the leading group was more advanced than most of the staff at this stage. Martin, when you were away for that year your replacement said ‘Well Julia, how do you work it, do you come mid-year and run some model lessons and show people how to do it?’ My answer was no, because we were talking about getting people to the point of what pedagogy there needed to be. There wasn’t a ready-made solution, it was the inclusive thing. You have to keep going back and including another group and then another group and then another group and then they start to be advocates as well for something different.

The SWIS development team—that’s where I came in. They chose to be there. I think everyone came into it realising this is a long process and it gave them the luxury of and permission to be imaginative. And the ideas from the very beginning were very imaginative.

The early development team clarified the values and principles. We did that deliberately, the educational rationale had to come from the hearts and minds of those people involved.

When I said ‘imaginative’, I didn’t mean the design, I meant imaginative in relation to learning and teaching.

In terms of the logistics of the project is the educational rationale being resolved independently of the architectural design?

In parallel with.

And the two of you are now working with sub-groups of teachers.

It was known as the SWIS development team. We had the SWIS model but now had to actually do all the pedagogy and refine the curriculum design and work out how we get from here to there.

There was a moment in time when we had the broad building footprint design, and Mary said, ‘How can you build such a thing no-one has before? Don’t you want to try it out first?’ The department agreed to tender and build it without its internal fitout while a trial space in a prefab was developed and tested.

Richard, you talk about this as being quite a surreal moment. Eighteen months along the track and then suddenly the architect has very few lines on the page.

Yes I think this was the fork in the road for us. At this point we were being forced to go to tender, while a parallel effort was going on between Martin, Julia and Mary with a trial SWIS and pilot program happening on site.

You didn’t want to lock something into place because the pedagogy and the way it was actually going to work or could work was still emerging at the point we had to go to tender.

That’s the critical point. The ideas were opening up, it had the potential to be a very exciting process and product, and at that point, if we had said ‘We’ve got to make all the pedagogy and design decisions now, my guess was that they would have retreated into a conservative position saying ‘Ok, this is something we could live with, not something that we might develop together.’

It was a brave decision by the department to tender without internal fitout.

You could say that is the basis of good pedagogical design and good building design. I think you should always be able to answer the question as to why you designed it that way, particularly in educational settings because the resources are always limited.

And in your case you were repeating decisions that you were making seven times so they had to be good.

In our case one mistake will be seven, so we knew we had to get it right.

And that was exactly two years ago.
TAKE 8 At that stage you had already had an opportunity to test ideas with the prefabricated buildings and the interior layout really arose out of some of those early findings in the test environment.

MF It certainly confirmed some of the pedagogical directions because the teachers were able to test ways of working, particularly to test working together.

TAKE 8 And did you have one group of students and one group of teachers working throughout a term or a year in those spaces or did a range of groups test the spaces?

MF We had 50 Year 7s but it was pretty consistent with a small number of staff.

TAKE 8 Mary, could you introduce us to some of the different learning environments within the buildings and what the students experience was in the buildings?

MF There are three major aspects; each of which is different to the traditional way of doing things. One is the overall organisation of space which was to provide a home for a particular community of learners. So that’s the group of 50 students with three teachers. We are trying to create that home which means you want to keep it open, but you don’t want it to be overwhelming. The most important thing is the individual student’s sense of belonging and security. The second point is the number and the diversity of the settings which are both social and learning settings. The two were seen as inseparable. All of the discussions centred on the importance of relationships even before curriculum. So it was about social and learning settings to support a pedagogy that was also about the transdisciplinary curriculum and integrated projects. You need a wide variety of settings that form that community of learners. So that’s the rationale for the configuration of the overall space and its settings.

TAKE 8 And the third point?

MF The third point is to make sure the design fits the specific distinct nature of those settings and reflects the need of each of those kinds of experiences. For example, the needs of the child involved in wet, messy experiences are very different to a child in a community of inquiry setting. Each one is quite distinct in terms of space according to the number of participants, the kind of furnishings, the lighting, the services, the surfaces—all considered in relation to that range of experiences. It departs from the usual in that it’s relatively stable. It’s not a totally flexible environment. That always requires huge courage on the part of the client.

RL I think this is also fairly counter to the departments’ natural desire for flexible spaces. The process was a most rigorous approach to harvesting the information and reinterpreting the information for the teachers to see what it means in terms of physical layout. It really is a terrific process to witness, going deeply into an understanding about what their requirements are and reflecting that with very simplistic diagrams that pick up all of these little nuances and the different settings they need.

JA Mary, you are prepared to change, suggest and challenge. Just as I’m sure you, Richard, were prepared to do in the architectural brief. I guess I did on the educational side.

MF I’m very conscious of this in the work that I did in Wooranna Primary School. Architects would come in and say ‘We’ve done hundreds of schools in the time you’ve taken to do one’ and you realise that every project cannot go through this—it’s not realistic. I think that projects like this and others that we are working on are crucial at this time because we are rejecting traditional forms, traditional pedagogy, and traditional architecture. We are developing something different, and it must, in my view, eventually evolve another way of doing things.
TAKE 8  Well it's the idea, isn't it, of the 'early adopter' which then influences the mainstream? It's probably important to invest a lot of time and effort into some schools to enable and test new ways of thinking about schools.

RL  I think this is a good example of a process because we have to realise, speaking again from an architectural point of view, that every building is appropriate. With the complexities of education these days, we cannot pretend that we have the answers and that's why as a group we're sitting here. Ten years ago, five years ago it might have been just an architect and the principal having this discussion. Now we have people like Julia and Mary who were critical to the process.

JA  I guess the thing I would like to say is that although we agree we will evolve to another place it will be through 'adaption' not 'adoption'. The elements that have been emerging here will be responded to and adopted in other places, but you can't short circuit the work with teachers. You just have to do the head and heart work with the teachers.

TAKE 8  Julia and Martin, Mary has described the spaces. Could you please describe what these spaces mean for education? I know some spaces will fit 16, there are some that might fit 12. Can they be divided into classrooms of 25? Do the kids move? Have you changed the timetable for example, have you needed to move to longer periods?

MC  Yes, we have and I haven’t got all the answers to that because it is still emerging. We’ve got a model at the moment and we are trying to see if it works. It’s just eight-weeks-old. We decided two years ago to go to 75-minute periods, four in the day rather than the traditional six, 50-minute periods. We went through a long debate and discussion about that and it was adopted with a view to try and evaluate it. That has been done and there was an overwhelming subscription to it.

JA  I’d like to point out the timing of the way you did things. It wasn’t overwhelming because you didn’t do everything at once. The teams had already been established, with three teachers and 50 people and they struggled in the old spaces. The team of teachers is small enough that they have informal conversations in that one big staff room about using and integrating the various spaces.

MF  There is an American study about SWIS that says they haven’t worked because they didn’t recognise the significance of having to change all of these aspects of an organisation.

JA  And it’s when you get all those things working together that you get the pay-off. You don’t just have teachers working in new spaces. If you just have the spaces and you don’t get teachers collaborating, it doesn’t work. I think the other thing that Mary is saying is that the spaces are ‘purposeful’, they are not just a big barn where you can do different things.

MF  It’s not a whimsical approach of ‘I saw this in Denmark and we’ve got to have one of those’ and one of those and one of those—which is what’s happening now.

TAKE 8  How are the students responding? What are they doing to make it their own, what are their early thoughts?

MC  Look it’s anecdotal at the moment and particularly around Year 7 and 8 students. Year 7 students are totally enamoured with the idea. There’s no doubt about that. Every conversation we have with them is about that. Year 8 students have had other experiences at school already and they have taken a little longer to warm to it. And I can’t really speak on behalf of the rest of the kids although they are very excited about what this means for the collective future for the whole school.

JA  Of all the states I work in, and I work across all the states in Australia, Victoria has the best integration of facilities, curriculum, pedagogy and innovation. They are all working towards the same end and I don’t experience that level of integration in any other state.
Author/s: Culkin, M; Leonard, R; Featherston, M; Atkin, J

Title: Architecture, Design and Sustainability

Date: 2009

Citation: Culkin, M; Leonard, R; Featherston, M; Atkin, J, Architecture, Design and Sustainability, Take 8 Learning Spaces: The Transformation of Educational Spaces for the 21st Century, 2009, 1, pp. 107 - 115

Persistent Link: http://hdl.handle.net/11343/197496

File Description: Published version