EDUCATION AND HEALTH STANDING COMMITTEE

Eighth Report — "A Better Connected Future:
Opportunities for Digital Innovation in Secondary Education" — Tabling

MS J.M. FREEMAN (Mirrabooka) [11.03 am]: I present the eighth report of the Education and Health Standing Committee titled "A Better Connected Future: Opportunities for Digital Innovation in Secondary Education". I table also the submissions to the inquiry.

[See papers 3063 and 3064.]

Ms J.M. FREEMAN: This inquiry made 21 findings and 11 recommendations, which is not many, and I want to go through one of the reasons for that. This inquiry followed up on the Auditor General's report of 2016 on whether information, communication and technology in public schools is appropriately planned and managed and whether public schools can access the information, communication and technology advice and support they need.

The Auditor General's report indicated that the last strategy, the vision strategy, was from 2014 to 2016, and that remains the case. The report indicated also that absent in its vision were implementation plans and strategies and a measurement for progress. The Auditor General at the time recommended an updated vision. The Education and Health Standing Committee also looked at the Public Accounts Committee follow-up that it did on the Auditor General's report. An undertaking was given at that time to the Public Accounts Committee, and the education department advised that an ICT vision statement would be published by 30 October 2018. In June 2019, before embarking on this inquiry, the Education and Health Standing Committee invited the education department to talk about what it was doing about the Auditor General and Public Accounts Committee reports. The committee was advised that the vision would be tabled imminently. On that basis, we had full and frank discussion about the potential for ICT in schooling, particularly around engaging unengaged students. Given the understanding at that time that the vision was imminent, the committee considered it would be timely to consider how digital innovation could assist secondary students, particularly to learn anything, anywhere, anytime.

Indeed, in embarking on the inquiry, the committee anticipated that it would be assisted by the vision in contributing to a really important area in our community of learning not only about technology, but also with technology. Unfortunately, the vision was not produced, so the committee continued to focus on how digital technology in secondary schools could increase student engagement and reduce absenteeism and what was available. It was clear to the committee that without a clear information communication technology vision, strategy or implementation plan, implementation in secondary schools was uneven and unsystematic. It is really important that we look at issues around learning more than just about technology. The committee did that and on pages 13 and 14 of the report there are some really great case studies on how they are applied in other parts of Australia. When we visited other schools, we saw some great case studies of how information technology was being used by a couple of them, particularly Merredin College and Cecil Andrews College. They were both great examples of what should happen.

The difficulty the committee continuously came up against was that there was no overall vision or strategy. Ad hocery seems to be occurring currently. Recommendation 1 is the core recommendation of this report—that is, that the department produce its vision. Also, if the vision on learning outcomes from implementation is not available, the department should at least release its infrastructure component—the nuts and bolts of what it wants to deliver into our secondary schools. When the Department of Education came back to us, we asked again for the ICT vision statement, given that we had been told about it in June. The department came back to speak to us again in a hearing and we were told that the ICT vision statement was being expanded to encompass aspects as important as student engagement, teaching practices and learning outcomes, but it was disappointing that the committee was not given any guiding principles. We were also disappointed that the Department of Education's key provider of technology to schools, Solutions IT, did not respond to the committee's request to put in a submission. The committee also requested it to attend a hearing. It was very disappointing that we could not gain a greater understanding of what is being delivered to our secondary schools by a key provider of technology to schools.

We did not do a survey on each individual school; that was not our job. We wanted to value-add, but it is difficult to do that when there is no overarching set of guiding principles to look at and say, "The committee can go and talk to academics or other people in the field", although we did receive submissions from Edith Cowan University. However, it is still not entirely clear that the Department of Education has a good understanding of what is being used in schools.

I will talk about this a bit more later, but one of the issues of the modern era is data harvesting. If schools use Google or other applications, there is the risk that students' data may be harvested. We need to be aware of those things. The committee certainly welcomed the October 2019 announcement that the bandwidth would be increased to 100 kilobits per second per use. We recognise the importance of fast and reliable internet, and that announcement was absolutely in response to that. Many of the submissions emphasised the importance of connectivity. Indeed, Edith Cowan University, in its submission, recommended a wholesale review of the way in which access to the

internet is made available to government schools. In saying that we welcomed that announcement, I alert members to table 3.1 on page 41 of the report, which outlines a bandwidth comparison between three states—Western Australia, South Australia and New South Wales. This was a major issue in many of the submissions, including the submission from the Computing Association of WA, which said that when it canvassed its members in preparation for its hearing with the committee, there was an explosion of comments on the topic of bandwidth and connectivity. Table 3.1 is headed "Comparison of bandwidth delivery to schools across three states". I urge members and the Department of Education to look at that table. It is clear that if we want to be competitive in the highly competitive education sector across Australia, we need to take ECU's advice to undertake a review to ensure that our bandwidth meets the requirements of our schools.

Bandwidth is the amount of data that can be delivered to each student, and it is necessary because in terms of what it delivers, it relies on clear digital education learning goals. We are not saying bandwidth for bandwidth's sake; we are saying, "We accept that what you deliver into schools in terms of the capacity for bandwidth relies on clear digital education learning goals." Those goals can range from simple individual classroom use of devices, to a more rich, digital-based curriculum across schools, to media-rich technology use. The issue is that there is no vision or strategy around that. Yes, it is great that we have more bandwidth, but we need an understanding of how that bandwidth is used and whether it is sufficient for achieving what we want our secondary students to achieve in the future. Programs are championed by fantastic and very skilled teachers and leaders, but it is clear to us that the education department needs fewer ad hoc, school-by-school programs, and a broader strategy commitment for delivery to all secondary schools.

Table 3.2 on page 42 shows the ad hoc nature of program delivery. It is headed, "Costings for secondary schools/sites using the School Managed Internet program". We can see that Bunbury Senior High School pays $1 150 a month for a 100 megabits per second bandwidth, while Australind Senior High School pays $120 a month for the same bandwidth. Something would seem to be amiss if there is such a difference in what high schools are paying for the same bandwidth. There are some issues around whether it is residential-type bandwidth or business bandwidth. I obviously took an interest in Balga Senior High School, which was paying more than $1 000 a month for 100 megabits per second, while Ashdale Senior College was using exactly the same bandwidth and paying $799 a month for 400 megabits per second. That is considerably more for considerably less. When we spoke to Balga, it was unaware of this. It was at the beginning of its negotiations to arrange its internet speed, and suddenly I was saying, "Well, there's a school that's getting the same amount for considerably less." We are really concerned about how that is operating. The nuts and bolts seem to be that it is something that can be delivered at this point in time, even if some of the other aspects of the vision cannot be.

The report also details Bring Your Own Device programs at page 47. We note the government's welcomed and well-received announcement on mobile phones, but we also note in our findings that at least half of all secondary schools have Bring Your Own Device programs. Victoria has now embarked on a pretty much complete Bring Your Own Device program in secondary schools because of the nature of technology and the fact that kids want to bring in more technology. Victoria has a policy for BYOD, assistance with insurance and assistance for people who would not otherwise be able to afford these technologies. Again, without any vision or any sort of strategy around this, some schools may require students to bring their own devices. Each school has their own policy around that.

I briefly spoke about data harvesting, and the report goes into some of those issues at page 53. There is a recent commonwealth government report titled "Artificial Intelligence and Emerging Technologies in Schools". University of Newcastle Associate Professor Erica Southgate, who we got to talk to, said something that was particularly important. She stated —

> It is particularly an issue when artificial intelligence is infused into applications, because you cannot really tell it is there. For most artificial intelligence, you cannot tell that it is there; it is working in the background. It is harvesting lots of data. Often we do not now know what data we are giving away.

That is something we have to be really cognisant of, and it needs to be considered in the Department of Education's vision. Recommendation 8 is that the vision statement —

> … must include principles related to technical, social and ethico-legal aspects of digital technologies and the regular training required for teachers on these aspects.

Finally, I want to congratulate those school leaders and teachers who are at the forefront of this area and delivering great teachings and learnings into our schools with digital education. I want to thank our research officers, Sarah Palmer and Jovita Hogan, and all the other members of the committee. In particular, I want to thank the member for Nedlands, the deputy chair, Mr Bill Marmion, who will no longer be sitting on the committee. As the chair, I thank him. He has always been extremely bipartisan in how this committee has done its work, and I think we have done great committee reports. They have never been released to big fanfare—we have received some international media attention—but they have made a change. We did a report on vocational education and training in schools and from

that we have seen quite effective and ongoing change that will benefit students in our schools. I believe that when we get the response from government to our report on type 2 diabetes, that will also have an impact. That is one of my main goals for this committee—that is, to add value to departments and to the Parliament so that our community has a better health system and education system.

MR R.S. LOVE (Moore) [11.21 am]: I would also like to talk about the eighth report of the Education and Health Standing Committee, "A Better Connected Future: Opportunities for Digital Innovation in Secondary Education". In doing so, I wish to acknowledge the efforts of my fellow committee members: the chair, the member for Mirrabooka, who was energetic and engaged in this whole inquiry; and I also join in recognising the efforts of the deputy chair, who as per the motion that was given notice of yesterday, is apparently leaving us to carry out other duties. The member for Nedlands has always been a very engaging, dedicated and valuable member of the committee, given his long experience in public service, as a minister, and a consultant engineer before that. He brings a breadth of knowledge of Western Australian industry and history going right back to the Marmion family, who were very early settlers in the area. Anybody who travels to the northern suburbs will be aware of Marmion Avenue, Marmion Reef and all those areas. They are very entrenched into Western Australia.

These committees also include backbenchers such as myself and the member for Kimberley. She has a degree of regional interest and a special interest in the welfare of people from her district and Aboriginal people especially. She does a great job. The member for Wanneroo, who I do not think is here today, has experience in education and is a valuable member of the committee as well. Of course, these reports do not write themselves. We have the assistance of our excellent research staff—Dr Sarah Palmer, who I think is busily uploading this information on the webpage, and Jovita Hogan. Thanks very much to them for their very professional efforts and for putting together this report.

This report examines the rollout and role of technology in schools—technology both as a tool and as an area of learning. As we examined it, we saw that it means many different things in many different schools—how it has been taken up and how it is being somewhat ignored. Prior to commencing the inquiry proper, we had a preliminary visit to Hale School some time ago. We saw the technology at Hale provide opportunities that would have become available only in very recent years. Those opportunities were helping to bridge the gap between students who were struggling with learning and the expectation of what would be a normal level of performance for most students of a given age and stage. Equally, students who were not so challenged and may have special interests were able to follow those interests in many exciting ways. As I said, when the members of this place were at school, some of those technologies had not been considered or thought of. Hale was also extensively engaging with technology with regional and feeder schools in an endeavour to support and assist those schools. Let us face it, I guess it was also to market its wares to the students at those schools. When I think back to the engagement of the students at Hale and some other schools we saw during the inquiry proper, it was a contrast to the austere and disengaged learning environment that we encountered at a government school in a regional area.

It is clear that technology, if fairly distributed and resourced and backed up with willing, engaged and energetic teaching staff, as we saw in some schools, especially at another regional school we visited, has the opportunity to bridge the gap in opportunity that exists for students right across the state. Unfortunately, if access, the equipment, or the engagement of staff is not similar in all schools, I fear that the wonderful technology that could help to bridge that gap will only further disadvantage those who are already marginalised. As can be seen in table 3.1 of this report, the expectation of bandwidth per student in New South Wales is 50 times more than that envisaged for Western Australia. Given the geographic dispersion of Western Australia's population, that figure is unacceptable. That is a challenge for the Department of Education in the future—that is, to ensure that technology helps and is provided and gives assistance to everyone in their educational journey, no matter where they are in the state. If we do not do that, all we will end up doing is making sure that people who are further away from the centre, who already suffer educational disadvantage, will be left further behind in the dust. It is a great opportunity, but I believe the education department needs to look very seriously at ensuring that this educational opportunity is available to everyone equally right across the state.

MR W.R. MARMION (Nedlands — Deputy Leader of the Opposition) [11.27 am]: I rise to also speak on the eighth report from the Education and Health Standing Committee, "A Better Connected Future: Opportunities for Digital Innovation in Secondary Education". I think this is one of the most significant reports that the committee has tabled over the last three years that I have been on the committee. I think every member of this house should read it. Before I talk about the report, I want to echo the thoughts of the member for Moore. I thank the chair of the committee, the member for Mirrabooka; the member for Moore; the member for Kimberley; and the member for Wanneroo for the excellent work they have done and the learning I have acquired in this area. The only reason I was put on the Education and Health Standing Committee was because I was the shadow Minister for Health for one year when we went into opposition and I have maintained my term on the committee since then. I believe that however long I speak on this topic is how long I will be on the committee, because I think the next motion to be moved by the house is about committee membership. I think the word was "dispatched". When I heard the word

"dispatched", I thought I would be put in a paddy wagon and taken off somewhere! It has terrible connotations. I also thank Dr Sarah Palmer, the principal research officer, for the wonderful work she has done, and our research officer, Jovita Hogan. They basically did all the work and put all the words together. It has been a pleasure working with everybody. Indeed, we went on one overseas trip for the type 2 diabetes report. I think the report will come to the fore in time through changes in the way that people live their life and how the health system evolves over time with, perhaps, changes to dietary requirements.

I go back to this significant report. In Western Australia, we pride ourselves on having a terrific education system. We always talk about getting science, technology, engineering and mathematics subjects into schools without considering the technology, instruments, such as phones, and connectivity that is available in schools and whether teachers are able to teach the subjects. There are all these parameters that have to be lined up. Let us say that someone is lucky enough to be at a school that has the resources, teachers and capacity to provide a curriculum based around technology. Even if the school has all that, the student also needs the tools at home to do homework. It is not only STEM subjects; nowadays, it is every single subject, including English, literature and the arts. Homework can involve doing research. How do students do research? They use Google, and have the ability to google and do research. In my day, when I was a young boy, we had encyclopedias. If students had an encyclopedia, they could look up a book, and use the library at school. In the farming community, a lot of people had the *Encyclopedia Britannica*, and salesmen would go around selling them to people in rural communities, which you would be aware of, Acting Speaker.

The ACTING SPEAKER (Mr I.C. Blayney): We could never afford them, member.

Mr W.R. MARMION: Yes, a lot of people could not afford them. Some lucky families had the *Encyclopedia Britannica*. These days we do not need it; we just need technology. It needs to be embedded in every single subject. If we want to be a world leader in our education system, we need all our children to have the resources and opportunities to succeed. Obviously, there are areas in the regions where it is hard to have the technology; it costs money and also it is difficult to get the broadband bandwidth. We have to have a goal and strive for it. I think the chair emphasised that our number one recommendation is to have a plan and a vision, and, from that vision, have a strategy and a work program so that, where possible in Western Australia, schools have all the resources necessary to deliver a world-class education to our children. The member for Moore highlighted what Hale School has. Obviously, it has more money and resources. We visited the school and saw what it has in place. Certain educational tools and technology can now be used to bring students who are not at the level of other students in their year, and dyslexic and autistic students, into the main stream. Indeed, there are examples of students who are dyslexic and were not performing who got very high ATAR scores when they concluded year 12. Technology can assist them. There is the other side as well, which the member for Moore also mentioned. There are bright students who are not challenged in their class, and technology can be used by teachers to give them more advanced work and keep them occupied and interested. Technology is something that we have to embrace if we want to be a world leader in every single subject and profession; we need to have children with those skills coming through.

This report has some fantastic recommendations for the Department of Education. When we met with the education department, it showed that it is working on a vision. I am confident that this report will assist it in making sure that the vision becomes a prominent part of how it runs the business of education in Western Australia. I hope it has key performance indicators that drive the bandwidth for schools. As we see in the table on page 42 of our report, schools are funding their own extra bandwidth, and probably the most expensive is at Canning Vale College, which is paying $4 000 a month so that it can have 1 000 megabytes per second bandwidth. It decided that that is an important way for it to be an effective college. A number of schools have seen the importance of this, but it needs to come under a banner of some strategy or vision.

I commend this report to the house. As this is my last statement as a member of the committee, I also reiterate my thanks to all the members of the committee for helping me learn a little about health and education.