EDUCATION AND HEALTH STANDING COMMITTEE

HEARING INTO DIGITAL TECHNOLOGY IN EDUCATION

Please provide the Department of Education's response for the Committee on the following:

Hearing Questions

1. *When was Connect introduced to schools, and what is the schedule for review and upgrade of the platform? (see page 8 of transcript)*

Response: Connect is continually evolving and utilises an agile software development methodology which means that development is relatively fast and responsive to user feedback. Since its official release at the end of 2014, Connect has undergone continual development, including both new features and enhancements to existing functions. Development of Connect is a consultative process and new functions are informed and prioritised in a number of ways including:

- research on best practice and trends in the Kindergarten to Year 12 education technology environment eg support for different learning models including blended learning and learning analytics;
- user consultation forums;
- online community participation; the Connect Support Community has a membership of over 5 300 Department employees;
- pilot implementations;
- feedback collected during school leadership planning meetings, and staff and parent training sessions; and
- analysis of support provided.

An update to Connect is typically released once or twice per term and includes a mix of new features, enhancements and bug fixes. Some of the new features that have been released in the last 24 months include:

- integration of a media-streaming service to enable staff and students to upload a video to a secure environment (currently in pilot);
- the ability for parents to send absentee notes easily and securely online;
- integration of Webex web-conferencing to enable easier delivery and access of synchronised (real-time) online classes within Connect Classes. This has been particularly beneficial for younger students accessing learning via Schools of the Air;
- major redesign to the interface to provide a more contemporary look and enable Connect to work responsively on all devices including smart-phones, tablets, etc. Connect adapts automatically to screen size and resolution;
- option for schools to publish students' semester reports to Connect for parents;
- student engagement tracking, providing an ability to see how often students engage with different learning tools in Connect and view collated responses to online discussions and submissions; and
- updates to mobile App 'Connect Now', enabling parents to access student reports via the app.

2. *In relation to the School Managed Internet program, please provide:*

    a. *A list of the regional schools that have taken up SMI (see page 10 of transcript)*

    Response: Please see **Attachment 1 – List of Regional Schools / Sites utilising the SMI Program.**

    b. *How much per month each of the 60 secondary schools with SMI is paying, and for what bandwidth (see page 16 of transcript)*

    Response: Please see **Attachment 2 – Costings for Secondary Schools / Sites utilising the SMI Program.**

    Costings are recorded at the initial advice provided by the school and reflect a point in time view.

3. *How does the funding model for schools account for social inequities between schools e.g. the needs of schools in low socio-economic areas may be greater than others and parent contribution limited (see pages 10 and 11 of transcript)?*

Response: The State Government is strongly committed to supporting public schools in its provision of high-quality education to all Western Australian students. All students are entitled to participate in an education program that satisfies the requirements of the Western Australian Curriculum and Assessment Outline, regardless of their financial situation.

All public schools are funded through the Student-Centred Funding Model (SCFM), which ensures that schools receive sufficient funding to address the needs of their students and to cover general operating costs without having to rely on the school's ability to raise funds locally or the parents' capacity to pay.

The SCFM allocates funds for each student enrolled in a public school with different funding amounts allocated depending on the year level of the student (per-student funding allocation). The model also provides targeted student characteristic funding allocations for schools with eligible students to meet the specific learning needs of Aboriginal students, students facing social disadvantage, students with English as an Additional Language and students with a disability.

The social disadvantage allocation is provided for eligible students to help schools address the higher and additional learning needs of students from the most disadvantaged backgrounds. The measure of social disadvantage is based on parent occupation, school education and non-school education data obtained from enrolment records. The underlying statistical model for the determination of this measure has been developed in collaboration with the Australian Curriculum, Assessment and Reporting Authority (ACARA).

Funding is provided for each student in the three most disadvantaged deciles (deciles 1-3) in Western Australian public schools. The highest amount of funding is for students in the first decile as they represent the most disadvantaged students. Funding for each student increases as the proportion of students in each decile increases.

The SCFM also includes school characteristic funding to ensure that schools are not disadvantaged due to their size or location.

Schools with lower enrolment numbers receive an enrolment-linked base allocation which is responsive to the differences in school types and promotes equity within the model. The enrolment-linked base allocation depends on the type of school and reduces to zero as enrolments increase to the point where per-student funding is sufficient to cover the general operating costs. In 2019, the maximum enrolment-linked base allocation for primary and secondary schools was $428 891 and $804 164 respectively, while the maximum enrolment-linked base allocation for district high schools was $643 336 for schools where all the students were primary students and $804 164 for schools where all the students were secondary students.

The parameters of the enrolment-linked base were informed by comprehensive research and stakeholder consultation, and ensured that minimum operational costs would be met, including administration structures for each different school type and historical site costs for every school.

A locality allocation is also provided to eligible schools in outer regional and remote areas of Western Australia to help meet the complexities unique to their locations and the higher costs associated operating in regional and remote locations.

Additional funding is also provided to specified schools for strategic programs and services, through a range of targeted initiatives. A number of targeted initiatives include additional funding to address the needs of students with social disadvantage. For example, this State Government has provided funding to enable schools to appoint an additional 300 FTE education assistants and an additional 50 FTE Aboriginal and Islander Education Officers (AIEO). The additional 300 FTE education assistants provides funding to 238 primary schools and district high schools with the most socially disadvantaged students. The additional AIEO FTE is allocated to regional senior high schools, district high schools, remote community schools and regional residential colleges.

In recent years, there has also been a considerable investment in Science, Technology, Engineering and Mathematics (STEM) initiatives through the STEM enterprise schools project, the construction of a new STEM centre and the State Government's 'Science in Schools' election commitment to support schools in improving their STEM programs, particularly those with the most disadvantage students. This includes transforming 200 primary school classrooms into science laboratories at schools across the State.

The SCFM supports greater local control and decision making by principals and their school communities in determining how funds are spent. All schools operate with a one-line budget, which provides greater flexibility to develop educational programs and staffing profiles that best suit the needs of the school communities.

4. *In relation to the BYOD model: (see page 16 of transcript)*

   a. *A list of the schools (primary and secondary) that have a BYOD program in place*

Response: Please see **Attachment 3 - List of Schools / Sites that support BYOD and have a BYOD agreement in place.**

Note: there are schools that support BYOD but do not have agreements in place; therefore, the Department assumes that it is not yet active.

   b. *If available, an indication of what it costs students to supply their own device*

Response: BYOD costs are not tracked centrally and would vary depending on the volume, type and model purchased.

   c. *The number of schools with a BYOD program for each year from when the program was introduced*

Response: BYOD rollouts for schools have not been undertaken as a central program and as such are not tracked centrally.

   d. *Whether the BYOD program is anticipated to grow (i.e. will it eventually be an expectation that all students supply their own device?)*

Response: BYOD rollouts for schools have not been undertaken as a central program and as such are not tracked centrally.

General Questions

5. *In relation to bandwidth provided by the Department:*
   a. *Your submission states that the Department is aiming to provide a minimum of 100kbps per user across all schools. When do you expect to achieve this?*

Response: In term 3, 2020.

   b. *What does the Department currently provide?*

Response: Average is about 25Kb/s per student in secondary schools.

c. What is the bandwidth currently provided to the following schools?

Response:

Secondary school	Bandwidth at mid-October 2019
Applecross Senior High School	100Mb/S
Balga Senior High School	20Mb/S
Churchlands Senior High School	4Mb/S (not a SOE school and not managed centrally)
Dianella Secondary College	20Mb/S
Gilmore College	50Mb/S
Girrawheen Senior High School	20Mb/S
Kiara College	20Mb/S
Perth Modern School	50Mb/S
Rossmoyne Senior High School	100Mb/s
Shenton College	100Mb/s

The existing bandwidth allocation model for secondary schools is allocated on the basis of student numbers.

6   How many schools have students enrolled in SIDE, and what is the breakdown by district?

Response: Students at SIDE are enrolled on either the current or external rolls, dependent on enrolment eligibility.
- Home-based SIDE students are enrolled on the SIDE current roll and, for these students, SIDE is their only school. These students are usually geographically isolated, involved in elite performance programs, temporarily living or travelling overseas, or travelling within Australia.
- Students enrolled in another school (public or non-government) and accessing an educational program through SIDE are placed on the SIDE external roll. These students access SIDE programs when their base school cannot provide an appropriate course when specialist teachers are not available, and/or students transfer between schools, and/or there are timetabling constraints within a school.
- Students with special circumstances can apply to enrol with SIDE through the Referral Program. These students are most often unable to attend a regular school due to severe medical/chronic health problems, severe mental health issues, pregnancy or parenting responsibilities and other special cases. The students in the Referral Program are enrolled on either the current or external roll according to their circumstances.

SIDE Flexible Delivery for Secondary Students as at 7 October 2019:

Table 1: Public and non-government schools accessing SIDE Flexible Delivery for Years 7-12

Education Region	Number of schools accessing SIDE	Number of secondary students accessing SIDE
Goldfields	10	149
Kimberley	6	72
Midwest	15	471
North Metropolitan	36	261
Pilbara	10	295

South Metropolitan	44	254
Southwest	31	260
Wheatbelt	14	258
Other	Unknown	50
Total	**167**	**2 070**

*Note: The education region *'Other'* relates to students with no supplied school name.

SIDE Enrolled Secondary Students at Semester 1, 2019
At the Semester 1 (February) student census, 270 full-time secondary students and one part-time secondary student were enrolled on the SIDE current roll.

7. *Does the Department provide best practice advice to schools around safety and ethical issues, particularly to address unseen collection of data from students using Microsoft and Google products and services?*

Response: The Department's *Students Online in Public Schools* Policy and Procedures governs the way schools must protect students as they engage with online services. The policy requires:
- students to be educated about the risks associated with online activities and how to adopt protective online behaviour;
- supervision for students using online services at school; and
- an assessment of the risk of third-party service providers, such as Google, before a service is implemented with students.

The Department provides support and advice to schools via the Intranet (Ikon), including information on:
- protecting students and network security in general;
- links to websites about safety online (including Australian Communications and Media Authority, Australian Federal Police, ScamNet, Stay Smart Online, etc:
- the ability for a school to request a security test to assess if there has been a breach of policy or data integrity; and
- specific guidance on data collection for special purposes as provided by the Nationally Consistent Collection of Data on School Students with Disability.

Further, to assist schools in the assessment of risks associated with the use of third-party services, the Department is conducting a security and privacy risk assessment on commonly used services. This includes surveying the providers and establishing a consistent and thorough process. Schools will be provided advice on which services meet the Department's security and privacy standards and support for obtaining parental consent for the use of the services.

The WA Government is proposing to introduce a whole-of-government privacy and responsible information sharing legislation for the WA public sector, and the Department is participating in consultation on its development.

8. *In relation to the statement in your submission that 34,000 online classes were delivered in term 1:*
   a. Can you confirm that this means that there were 34,000 instances of online classes delivered to multiple schools across the State throughout the 10 weeks of term 1?

Response: Yes. There are over 130 secondary schools using Connect for teaching and learning.

c. *How many different types of classes were there and which subjects were the online classes used for?*

Response: There are variations in the conventions that schools and staff use for naming their classes, making it difficult to quantify the number of classes in specific subject areas; however, the following uses are commonly seen in secondary schools:
- providing course outlines, assessment requirements and learning materials for senior secondary ATAR subjects;
- publishing digital resources such as videos, homework templates, electronic copies of documents and links to websites to support both class and homework activities;
- engaging students in reflection and collaboration through online discussions and peer feedback;
- providing differentiated curriculum to cater for students with different learning needs;
- enabling continuity of learning for students on a work placement or those unable to attend school for medical and mental health reasons;
- encouraging student autonomy with self-paced learning via sequenced learning activities;
- supporting students to set goals by providing marks and feedback (available for both students and parents); and
- creating Connect classes across schools to cater for small class groups, particularly in regional areas.

The following are some specific school examples:
- Morley Senior High School has, on average, 680 students per month accessing Connect. During Term 1, 2019, Morley Senior High School engaged students through Connect in the following ways:
  – 443 Connect Classes were started across all subject areas with the 10 most active online classes being senior secondary ATAR subjects;
  – 14 online discussions created by students and teachers were viewed 614 times and commented on 95 times, engaging students in collaboration, peer feedback and reflection;
  – 2 047 items of online learning content were published, providing media-rich learning opportunities for students via text, images, homework templates, electronic documents, web-links, sound and video;
  – 527 notices created by school staff and teachers were viewed 3 871 times by students;
  – 44 online submissions created by teachers allowed students to upload 539 assignments; and
  – 1 775 items, eg assessment requirements, course outlines and learning materials were downloaded by students from class libraries.
- Six different schools in the Midwest Education Region use a Connect Class to bring together 12 teachers and nine students for an online Primary Extension and Challenge program. The schools include Carnarvon Community College, Carnarvon School of the Air, Exmouth District High School, Meekatharra School of the Air, Mount Magnet District High School, and Useless Loop

Primary School. The Connect Class allows academically-advanced but somewhat isolated students to collaborate with other students of similar ability.

- Two teachers, one from Pinjarra Senior High School and one from Coodanup College, utilise Connect to provide an ATAR English program for their small groups of Year 12 students. The Connect Class provides 20 students (six and 14 students respectively) collaborative learning opportunities outside of their own school.

9. The New South Wales Department of Education operates a lending library of software and hardware kits (called STEMshare) so that schools can try before they buy. Does WA have a similar scheme?

Response: The Department's Statewide Services Resource and Information Centre, which all public school teachers may access, has the infrastructure for a service like *STEMshare;* however, it does not currently specialise in lending out software or hardware. It originated as a resource collection focused on the teaching of English as an Additional Language or Dialect (EAL/D) and includes a large collection of hard-copy books on a range of STEM topics. For example, the centre holds a range of scientific models, including parts of the body and cross-sections of insects, to support EAL/D students with limited schooling backgrounds and little exposure to the concepts of biology. The centre also has a range of games and teaching resources that provide students with visual diagrams of concepts to further support their learning.

In addition, the Department's Regional Laboratory Technician Group (RLTG) has a range of resources available on loan to public secondary schools. This includes specialised STEM equipment such as data-logging accessories and four robotics kits each containing 12 spheres. Public secondary schools may contact the RLTG with their request by email at rltteam@education.wa.edu.au.

10. How do schools become DigiTech schools, and does being one attract any extra resources?

Response: Schools with expertise in Digital Technologies curriculum can apply to become DigiTech Schools. Selected schools receive funding of $44 000 over two years to:
- share teaching and learning practice; and
- provide face-to-face and online support to schools across the State.

The selection process to become a DigiTech School involves the following:
- schools submit expressions of interest;
- review of written submissions by selection panels;
- consultation with Department staff, including those in Statewide Services, Public School Accountability and education regional offices; and
- follow-up school validation visits where needed.

Bring Your Own Device Program

School/Site
Albany SHS
Applecross SHS
Armadale ESC
Ashdale Secondary College
Atwell College
Australind SHS
Aveley Secondary College
Baldivis Secondary College
Belridge Secondary College
Bridgetown HS
Broome SHS
Bruce Rock DHS
Bullsbrook College
Bunbury SHS
Byford Secondary College
Canning Vale College
Carnarvon CC
Cecil Andres College
Christmas Island DHS
Churchlands SHS
Comet Bay College
Como Secondary College
Dalyellup College
Darling Range Sports College
Dowerin DHS
Duncraig SHS
Eastern Goldfields College
Eaton CC
Fremantle College
Geraldton SHS
Gilmore College
Greenwood College
Halls Creek DHS
Halls Head College ESC
Halls Head College
Harrisdale SHS
Harvey SHS
Hedland SHS
John Forrest Secondary College
John Tonkin College
Joseph Banks Secondary College
Jurien Bay DHS
Kalamunda SHS
Karratha SHS

List of Schools / Sites utilising the
Bring Your Own Device Program

School/Site
Kent Street SHS
Kiara College
Kinross College
Leeming SHS
Manea Senior College
Manjimup SHS
Margaret River SHS
Melville SHS
Merredin College
Mindarie Senior College
Mt Barker Commuity College
Mt Lawley SHS
Mukinbudin DHS
Nannup DHS
Newton Moore SHS
North Lake Senior Campus
Northam SHS
Northcliffe DHS
Ocean Reef SHS
One Arm Point RCS
Perth Modern School
Quairading DHS
Roebourne DHS
Rossmoyne SHS
Sevenoaks Senior College
Shenton College Deaf EC
Shenton College
Southern River College
School of Special Education Needs: Behaviour & Engagement
Thornlie SHS
Western Australia College of Agriculture - Denmark
Western Australia College of Agriculture - Harvey
Western Australia College of Agriculture - Narrogin
Wagin DHS
Warnbro Community High School ESC
Willetton SHS
Yanchep Secondary College

Data Source: Computer Census 2019 as at 30 September 2019

Costings for Secondary Schools / Sites utilising the School Managed Internet Program

School/Site	Provider	Cost per month	Bandwidth
Armadale SHS	Vocus Comms	$ 899.00	100Mbps
Ashdale SC	Datacom	$ 799.00	400Mbps
Atwell College	iiNet	$ 99.00	100Mbps
Australind SHS	Aussie BB	$ 120.00	100Mbps
Aveley SC	Cloud Corp	$ 1,111.00	100Mbps
Balcatta SHS	Vocus Comms	$ 799.00	100Mbps
Balga SHS	Datacom	$ 1,064.00	100Mbps
Bridgetown HS	Aussie BB	$ 109.00	100Mbps
Bunbury SHS	Ciphertel	$ 1,150.00	100Mbps
Busselton SHS	Telstra	$ 100.00	50Mbps
Canning Vale College	Vocus Comms	$ 3,999.00	1000Mbps
Cape Naturaliste College	Telstra	$ 139.00	100Mbps
Carine SHS	Telstra	$ 700.00	400Mbps
Collie SHS	Exetel	$ 70.00	50Mbps
Comet Bay College	Telstra	$ 1,066.00	400Mbps
Coodanup College	Telstra	$ 1,293.00	100Mbps
Dalwallinu DHS	Telstra	$ 90.00	50Mbps
Dalyellup College	Aussie BB	$ 109.00	50Mbps
Duncraig Senior High School	NEC	$ 3,250.00	1000Mbps
Geraldton SHS	Vocus Comms	$ 104.50	100Mbps
Gingin DHS	Aussie BB	$ 89.00	50Mbps
Girrawheen SHS	Aussie BB	$ 109.00	100Mbps
John Curtin College	Vocus Comms	$ 658.90	500Mbps
Jurien Bay DHS	Aussie BB	$ 89.00	22Mbps
Kalamunda SHS	Wideband	$ 548.90	50Mbps
Kinross College SC	iiNet	$ 109.99	100Mbps
Lesmurdie SHS	iiNet	$ 79.95	100Mbps
Malibu School ESC	Aussie BB	$ 89.00	50Mbps
Melville SHS	iiNet	$ 109.99	95Mbps
Mukinbudin DHS	Crisp Wireless	$ 500.00	50Mbps
Narrogin SHS	iiNet	$ 79.99	50Mbps
Newton Moore SHS	Aussie BB	$ 84.00	50Mbps
Ocean Reef SHS	iiNet	$ 109.99	100Mbps
Perth Modern SHS	Telstra	$ 719.00	400Mbps
Rossmoyne SHS	Vocus Comms	$ 2,399.00	500Mbps
School of Isolated & Distance Education	TPG	$ 825.00	700Mbps
Sevenoaks SC	Node 1 (WiFi)	$ 199.95	100Mbps
Shenton College	Vocus Comms	$ 548.90	500Mbps
Southern River College	Vocus Comms	$ 799.00	100Mbps
Wanneroo SC	Datacom	$ 961.00	100Mbps
Waroona DHS	iiNet	$ 99.00	100Mbps
Warwick SHS	Aussie BB	$ 109.00	100Mbps
Willetton SHS	TPG	$ 1,948.00	1000Mbps
Wongan Hills DHS	Aussie BB	$ 109.00	98Mbps
Yanchep SC	Vocus Comms	$ 1,385.00	100Mbps
Yule Brook SC	Aussie BB	$ 109.00	100Mbps

Data Source: As advised by schools
NOTE:
Bandwidth prices vary depending on the type of bandwidth.
Schools make their own arrangements - ICT does not have access to the contractual arrangements - schools report the costs.
100Mbps at $109 per month is usually an NBN residential grade service - limited service levels, copper or wireless technologies, no guarantee for speeds, asymmterical bandwidth (download speeds higher than upload speeds) e.g. 100/20
100Mbps at $1,293per month is usually an Commercial broadband service with service levels, bandwidth guarantees, fibre optic technology and symmetrical bandwidth (100Mbps inbound and 100Mbps outbound)

List of Regional Schools / Sites utilising the
School Managed Internet Program

School/Site	School/Site	School/Site
Adam Road Primary School	Glen Huon Primary School	South Bunbury Primary School
Australind Senior High School	Hannans Primary School	South Hedland Primary School
Baler Primary School	Holland Street School	Tjuntjuntjara Remote Community School
Baynton West Primary School	Jigalong Remote Community School	Treendale Primary School
Bluff Point Primary School	Jungdranung Remote Community School	Useless Loop Primary School
Bridgetown High School	Jurien Bay District High School	Waggrakine Primary School
Bunbury Primary School	Kalgoorlie Primary School	Wananami Remote Community School
Bunbury Senior High School	Kalumburu Remote Community School	Wandina Primary School
Burringurrah Remote Community School	Kambalda West District High School	Wangkatjungka Remote Community School
Busselton Senior High School	Karratha Primary School	West Busselton Primary School
Cable Beach Primary School	Katanning Senior High School	Wongan Hills District High School
Cape Naturaliste College	Kingston Primary School	Yakamia Primary School
Capel Primary School	Lake King Primary School	Yulga Jinna Remote Community School
Cascade Primary School	Laverton School	
Cassia Education Support Centre	Manjimup Education Support Centre	*Data Source: Department of Education ICT Dashboard as at 8 October 2019*
Cassia Primary School	Manjimup Primary School	Centrally Funded SMI Services
Castletown Primary School	Margaret River Primary School	
Collie Senior High School	Mount Margaret Remote Community School	
Dalwallinu District High School	Mount Tarcoola Primary School	
Dalyellup College	Mukinbudin District High School	
Denmark Primary School	Muludja Remote Community School	
Denmark Senior High School	Narrogin Senior High School	
Djugerari Remote Community School	Newton Moore Education Support Centre	
Dunsborough Primary School	Newton Moore Senior High School	
East Narrogin Primary School	Ngaanyatjarra Lands School	
Eastern Goldfields College	Ngaanyatjarra Lands School	
Eaton Community College	Ngalapita Remote Community School	
Esperance Primary School	North Kalgoorlie Primary School	
Esperance Senior High School	O'Connor Education Support Centre	
Gairdner Primary School	O'Connor Primary School	
Gascoyne Junction Remote Community School	Pia Wadjarri Remote Community School	
Geographe Education Support Centre	Port Hedland Primary School	
Geographe Primary School	Ravensthorpe District High School	
Geraldton Senior High School	South Bunbury Education Support Centre	