Evaluation of Student Facing Web-Based Services: Final Integrated Report (Nielsen/NetRatings)

Report to the Ministry of Education

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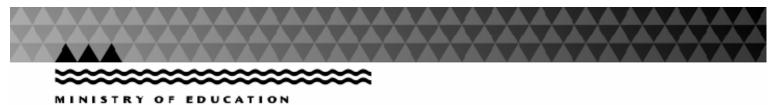# Evaluation of Student Facing Web-Based Services:
Final Integrated Report

Report

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Current Operation And Impacts Of Web-Based Learning Services Within The Contemporary Learning Environment Of Children And Young People In New Zealand

New Zealand children and young people are increasingly turning to, and relying on, the online medium to support their learning – in both formal and informal contexts. Not only is the Internet a popular resource for homework, assessment and other school-specific activities, but it is an important means of sourcing information, generally, of entertainment, and a tool for communication and self-expression.

All of these activities contribute to students' development and for this reason, an increasing set of web based tools are becoming available for New Zealand children and young people, catering also to teachers as in-class resources or tools for lesson preparation.

Three such services include online reference service Any Questions which aims to improve children and young people's information literacy; Studyit – a website primarily catering toward NCEA students with a unique online forum moderated by teachers; and WickED – a website aimed at younger students aged between 7 and 12 years and their teachers, with dedicated content linked to the school curriculum, as well as forums, quizzes and games.

Through the service evaluations conducted of these three websites, it has been found that a large number of children and young people in New Zealand (and indeed teachers and parents) are finding value in these tools but it remains a challenge to ensure their access and regular use across a broad range of the population. Inequality is particularly evident among students attending lower decile schools who are the least likely to have Internet access at home; and service use is skewed toward 'higher achieving' students and those more pro active in their learning.

Overall Impacts

The overall impacts of web based services are beginning to emerge, namely, encouraging young students to be self sufficient and independent in their own learning by providing them with tools that are at their disposal around the clock. Even young students using the WickED website felt that one of the important elements of the site was the way that it allows them to work by themselves; and the teenage users of Studyit cited the '24/7 availability' and 'interaction with peers and teachers' as two of the site's key benefits

The two-way communication and interaction facilitated by the online medium is an ideal stimulus for participation, with applications like online forums being an excellent tool to teach the core skills of relating to others, managing self and participating and contributing. Value is gained not only for those who actively participate in forums (ie posting messages), but also among the 'lurkers' who refrain from posting comments but who still play an active role reading others' posts and who can be just as engaged in the content.

Another method of self expression (uniquely) found on web based services is the ability for users to **publish their own work**. This is beneficial to build children and young people's confidence and again, to teach the

skills of participation and contribution. It is important to note that this element of the services appears to be under utilised at present and requires more encouragement and perhaps, more guided use, from teachers and parents, to encourage student contribution.

Limitations To Impacts

The current technological age has created an interesting situation whereby children and young people, particularly secondary school students, have **fast overtaken adults** in their adoption, interest and sophistication in using the online medium. For this reason, teachers and parents may feel somewhat intimidated or 'left behind' when it comes to introducing their students / children to web based learning services and this issue must be taken into account when promoting the services and driving usage. Adults are a great source of awareness of these websites for the children and young people in their care, and they need to feel comfortable and confident when recommending them, and in demonstrating use. If adults have difficulty, or lack confidence, using particular websites or specific features on websites, this will also create a barrier to use among children and young people.

Variability Of Impacts

On a similar vein, particularly among younger users (ie primary school age), teacher-led use of, and introduction to, online services is an important driver of use and is key to their uptake. Evidence suggests that teachers need far more promotion of online services and a greater link to the curriculum might encourage greater and more frequent use of online tools in the classroom. Two in five teachers who had visited the WickED website noted a "lack of time for use of WickED at school" as one of the barriers to students using the site. It is evident across a variety of teachers, parents and carers that traditional offline learning tools, such as books, continue to take priority over online tools as the most recommended resources. Further promotion and education campaigns surrounding the benefits of online services to children and young people's learning is required for teachers and parents.

This issue is not isolated to younger students. While a good proportion of the Studyit user base (largely NCEA students) make use of the online forums to assist their studies and communicate with peers, it was interesting to note that very few adults felt they would position Studyit as 'a place to communicate with other students'; though this could be a real selling point to encourage use among students. Many adults may not yet recognise the two way communication and interaction that online services can offer their students and children. It appears that children and young people who are guided by teachers and parents, who are **confident and sophisticated Internet users themselves**, may be at an advantage in being introduced to a range of online services that will benefit their learning across a range of areas.

Another characteristic influencing the impacts of online services surrounds, not surprisingly, **accessibility**. Home-based use of learning tools is common, hence, those students without such access are missing out on the 24/7 nature of the services. Though the WickED user base revealed little inequality among students attending low, medium and high decile schools, this was not so among Studyit and Any Questions users which revealed a distinct skew toward those attending higher decile schools. Without awareness and introduction to these services, at least in the classroom or by school librarians, these students without home access will be at an increasing disadvantage as online use becomes further ingrained into children and young people's every day lives.

Comparative Advantage

The anonymity of the Internet, as well as the means by which it can facilitate interaction and communication, particularly across a diverse range of locations, are important benefits to promote learning among children and young people. The Studyit forums are uniquely positioned to provide NCEA students with access to teachers and other students across New Zealand, to respond not only to study-related questions but also providing a forum for general communication with peers. These features allow children and young people to build confidence in their own abilities and take learning at their own pace.

As mentioned previously, the ability to **easily self-publish** is also a unique method of expressing oneself and of contribution. Through no other medium in the past has this been possible and young people across the world are flocking to sites such as YouTube, MySpace and Flickr to network with others and share information about themselves and their lives.

The Any Questions online reference service offers immediate assistance to any student with Internet access across New Zealand – another unique form of learning facilitated online. The concept of teaching information literacy in this manner is challenging without face to face contact, but is also the only service of its kind, catering to a geographically diverse range of New Zealand children and young people. Such learning is intended to equip them to safely and effectively make use of the plethora of online tools now available to them.

Alignment With The NZ Curriculum And Effective Teaching

While not explored in detail, there is some evidence that clear links to the curriculum can drive value and satisfaction with online services. This was particularly true among users of Studyit who appreciated the site's relevance and link with NCEA assessment.

Surprisingly, there was less than anticipated use of the content on the WickED website which is specifically tied to the curriculum ('Themes'). It is therefore important to ensure widespread communication to teachers, improving their awareness of the resources on offer on websites like WickED. Content that is specifically packaged to be used in class or to help teachers prepare for lessons would likely be highly appreciated and encourage high levels of use. The challenge lies in the effective promotion of such resources and ensuring that their format and content caters to teachers' requirements.

Alignment With Practices Of Schools And Other Providers

The point raised above – effective promotion of web based services to stimulate greater use among teachers – may require a step further than simply building awareness. Teachers, administrators, school librarians and also, policy makers, may need to **shift current practices toward the online environment** as more and more learning and teaching resources become available through the medium. This may require a change in perception as well as behaviour, through providing education and communications to clearly state the available online resources and their value to children and young people. It is likely to take some time to evolve long held perceptions and behaviours which focus on the use of traditional tools like books. The conduct and communication of further research to prove the effectiveness of various web based services could be valuable in shifting perceptions and behaviours over time.

Support Of The Organizational Objectives Of The Various Project Partners

Each of the services is contributing toward the project partners' broad objectives of providing web based learning tools to be used by children and young people across New Zealand. Among users, satisfaction has been found to be fair in the case of WickED and Any Questions, and higher among users of Studyit but overall, each of the services is providing **value to the current user audience** as a readily available tool which facilitates children and young people's development – whether through informal or formal contexts.

An important challenge lies not only in encouraging a greater cross section of children and young people to **trial the services**, but also to **stimulate more repeat and regular use** among the existing user base. A large proportion of users of WickED and Studyit were found to have used only a small number of the applications and content areas on offer through the site; for example, only one in three users of Studyit had visited the online forums and less than one in ten WickED users had done so. Encouraging more users to the Studyit forums, and more repeat visitation, is key to the service's objectives of providing a means for NCEA students to communicate and interact with their peers and with teachers.

With specific regard to WickED's objectives, the site's original intent was to support learning in after-school centers. It was found that only 7% of users had ever accessed the site from such a center with the majority of site use being at school, during a class, or at home. This finding may call for a new communications and education campaign aimed at after school-center staff in an effort to encourage more use from this audience.

As already mentioned, there could also be much greater visitation of the 'Themes' content on the WickED site, which is developed and maintained to relate specifically to the curriculum as an aid for teachers. Greater awareness and encouragement to use WickED and the 'Themes' content would likely result in better utilisation of these resources, in line with the site's original intent.

In relation to Any Questions, it was found that it is difficult to teach and engage students in the learning of information literacy during a brief online 'interlude', creating a challenge for site managers to overcome through programs such as operator training. Technical barriers are also evident, which limit the ability of those on slower Internet connections to easily connect to operators and access functions like co-browsing, which would enhance users' learning. The low penetration of broadband Internet across New Zealand continues to hamper the degree to which the Any Questions service can operate to its full capacity and, in turn, fully meet its objectives in teaching information literacy.

Unanticipated Benefits Or Issues For Teachers, Librarians, Schools, Project Partners

It is interesting to note that, in some cases, 'lower achievers' (ie those faring less well at school) were found to be obtaining just as much value from web based resources as their higher achieving counterparts. While it remains a challenge to stimulate use among less engaged and less pro active students, particularly those attending lower decile schools and without home Internet access, it is comforting that such students will benefit from using the services once introduced to them.

As has been a recurrent theme through this report, building awareness, and other campaigns aimed at driving use and recommendation among teachers, as well as parents, will be important factors in the success of web based education services going forward. Outside the hands of education policy makers, project partners and educators is the greater challenge of attempting to equip all of New Zealand's children and young people with ready (personal) access to the Internet. This would give them the opportunity to explore all of the online content and applications now available, which can enhance their learning and development in ways that other mediums simply can not facilitate. The affordability of Internet access in the home appears to be an issue creating a divide between those from varied socio economic backgrounds, in their access to learning and development tools.

Alignment With Young People's Preferences For Their Learning

New Zealand children and young people are calling on a variety of resources to support their studies, with a large number particularly citing online search engines such as Google as a typical first step for any research. This audience has rapidly adopted the online medium for a wide host of their activities – school-related and otherwise – and incorporating these tools into their formal learning environments is a great complement to the method by which they are now comfortable and confident communicating and seeking information.

Most notably the Studyit forums and the Any Questions online reference service align with young people's preference for communication (ie, communicating online through messaging and message board systems) and, in turn, their learning of social skills and the ability to relate to others. Among the Studyit user base, older teens (aged 16 to 19) were found to be four times more likely to use the forums than their younger counterparts and the collaborative and communication elements of the site were found to elicit the highest levels of satisfaction. The challenge ahead is to build regular use of the forums amongst a range of students, particularly those faring less well academically and without ready-access to the Internet (ie, at home).

A Change In How Young People Access And Manage Their Learning

Evidence gathered among the children and young people who are currently making use of WickED, Studyit and / or Any Questions definitely reveals a change in the way children and young people access and manage their learning. It is clear that young users appreciate the new found forms of **independent and 'always on' learning** and study tools facilitated by web based services, and their availability from home increases the convenience and likelihood of accessing them. Never before have so many New Zealand students had such a plethora of education and learning resources at their finger tips.

However, this leads to the important comment that not all children and young people are in the privileged situation of having such ready access to web based tools and the user base of all three services evaluated was found to be **skewed toward those with home Internet access** (Studyit and Any Questions to a greater extent than WickED). It will be important to put strategies in place that attempt to create equality in access to information and learning tools for those without home Internet access. Whilst difficult, considerations could include an increased allowance of unstructured but supervised Internet use during school time, during which students would be encouraged to log onto services like Any Questions, Studyit or WickED

Service Success And Sustainability

The success of web based services will be contingent on achieving:

- Use across a broad spectrum of the population including those without home access to the Internet and those less pro active in their own learning

- More regular use of the services among the intended audience to optimize the degree to which they promote learning and fulfil their objectives

- Better levels of usage of all of the content and tools on offer through web based services to ensure a more efficient use of resources

Increasing Reach And Frequency Of Use

Encouraging and stimulating trial and continued use of these services across a broader spectrum of New Zealand students is a great challenge for project partners, policy makers and in some cases, teachers. To some degree success is hindered by the lack of equality of Internet access across socio economic groups; with a great degree of online learning now taking place in the home among those children and young people whose families can afford a home Internet connection. To bridge this inequality, strategies such as dedicating more actual class time to unstructured Internet use may help facilitate independent learning via web based services. For example, students could be encouraged to trial online communications tools like online forums, and to upload and publish content online or to generally interact through games, quizzes and the myriad of other resources on offer on the Internet.

This unstructured use would allow students to follow their own interests to create a positive, informal learning environment which could then be carried through outside of school time, in school or public libraries or other Internet access points available to those without a home connection. Note that online applications like messaging services and forums can be very addictive and engaging, stimulating much repeat use once trial has been successful.

Such strategies may also prove beneficial in encouraging more use of web based learning services among those 'lower achieving' and less pro active students. Allowing them to seek out their own interests online, rather than dictating use, will likely be more conducive to stimulating their trial and repeat use of such services; again, creating an avenue for pedagogical development through less formal methods of teaching.

The second strategy required to improve the reach and usage of web based services is widespread **communication and education aimed at adults** (teachers, librarians, parents, carers etc) to not only improve their awareness of the services on offer, but also to educate them as to the merits of these services for children and young people's learning. It is not surprising that adults of relatively low Internet sophistication and confidence do not yet understand the value that interaction through online forums, or the ability to publish content, can have on their student's learning and development.

This education can help in shifting perceptions, and ultimately behaviours, of the older generation toward greater recommendation and accompanied use of the Internet as a learning device and not one to be avoided. Of course, education for both adults and students surrounding **safe use of the Internet** must also remain a priority to ensure the success of these services.

Increasing Engagement And Depth Of Use

It is apparent that a number of content areas and tools currently provided through web based services are achieving little use and this results in an inefficient use of resources dedicated to developing, maintaining

and hosting such content. A decision needs to be made as to whether to continue maintaining all of this content or to pare back and deliver a more focused set of options; this is of particular consideration for the WickED website which currently offers a broad range of content and features - some achieving little use among the intended audience.

As discussed in each individual service report, tactics can be put in place to encourage better exploration and use of more areas of content on each website; through improved usability practice as well as stimulating greater use among teachers as a class preparation tool and / or an in-class teaching resource. Again, in some cases this is reliant on more communication to teachers to ensure they are aware of what is on offer and how it can assist their preparation and teaching; in other cases the introduction of more education for teachers to shift their methods toward the online channel may be required. In any case, it is a challenge for policy makers to better ingrain web based services into teachers' every day 'tool bag'; particularly those without the luxury of widespread Internet access (ie, numerous PCs with a connection) in their classroom or school library.

The **sustainability of web based services** will largely be contingent on proving (and continually improving) each services' reach, across a broad cross section of the New Zealand population and in particular, increasing uptake among those from a lower socio economic background. In addition, it will be important to continue to gather evidence to measure and prove the value of such services for New Zealand children and young people's learning and development, and reinforce web based services' role and unique positioning as an effective and efficient tool for such development.