The Role of AnyQuestions.co.nz / UiaNgaPatai.co.nz in the Development of Students' Skills in the Inquiry Learning Process

Anthea Hamlet, Manager

Anthea Hamlet is currently the Manager of AnyQuestions.co.nz/UiaNgaPatai.co.nz. Before this role she was a school library adviser and reference librarian with the National Library of New Zealand. As an ex teacher, she is interested in teaching and learning in all contexts.

Anne Coppell, Trainer

Annie Coppell is currently Service Coach for AnyQuestions.co.nz/UiaNgaPatai.co.nz, a role she has held since June 2008, and has been an AnyQuestions.co.nz online operator since the beginning of the project in 2004. Annie's other role is as Reference Librarian - Teen Services at Auckland City Libraries. Annie is also involved with Storylines: The Children's Literature Charitable Trust of New Zealand.

"I learned how to search properly, like what key words to use, what words, and websites, not just going to Google, but going on government websites, that sort of stuff"

Every afternoon AnyQuestions.co.nz/
UiaNgaPatai.co.nz librarians help school students to find the information they need for their inquiry-based topics. CORE Education Ltd has just completed an independent evaluation to show evidence that working with librarians on AnyQuestions.co.nz/UiaNgaPatai.co.nz service is developing students' information fluency. This presentation will show you how the AnyQuestions.co.nz librarians develop students' skills in the investigating, finding out and researching stages of the inquiry process.

The research follows the 2006 investigation of the impact of the service on users, teachers, schools and the service providers themselves.

The purpose of this study was to:
- Understand how teachers, parents, and students respectively view the purpose, use and, potential benefits of the AnyQuestions.co.nz service

- Determine what aspects of information literacy 'develop' over time in students' online interactions and enquiries using the AnyQuestions.co.nz / UiaNgaPatai.co.nz service

- Determine what specific contributions the AnyQuestions.co.nz / UiaNgaPatai.co.nz service makes to their information literacy development

CORE researchers interviewed:
- 2 students selected from among the highest users of the service
- Teachers of the students
- Teachers from other schools identified as being high users
- AnyQuestions.co.nz librarians

What is AnyQuestions.co.nz/UiaNgaPatai.co.nz?

Background
AnyQuestions.co.nz is a collaborative project between libraries and those in the information and education sectors.

AnyQuestions.co.nz / UiaNgaPatai.co.nz is a free bilingual online reference service for New Zealand school students. Designed for both primary and secondary students,AnyQuestions.co.nz / UiaNgaPatai.co.nz puts them in touch with a skilled and friendly online librarian. Using interactive software and an agreed information literacy approach these librarians are able to help school students identify the information they need then guide them to quality online resources.

AnyQuestions.co.nz focuses on supporting the New Zealand curriculum. It is accessible from any internet connected computer anywhere; school, library or home.

The service is an additional resource, to work alongside and complement, (but not replace) existing school and public library services - a 'guide on the side' at the point and time of need.

The key benefits of the service lie in its safety and the help it provides for students in finding quality assured information that's right for their need and level.

Participation and Funding

Supporting the Curriculum

AnyQuestions.co.nz / UiaNgaPatai.co.nz collaborates with the Ministry of Education and libraries to support student inquiry learning by teaching students the skills to select appropriate electronic materials by using a consistent approach to information literacy

AnyQuestions.co.nz / UiaNgaPatai.co.nz specifically relates to the English curriculum strand, "making meaning of ideas or information they receive" and helps them to develop processes and strategies to "Acquire and begin to use sources of information, processes, and strategies to identify, form, and express ideas."

The AnyQuestions.co.nz / UiaNgaPatai.co.nz agreed approach aims to contribute to student learning under the following indicators:
- thinks critically about texts with increasing understanding and confidence;
- identifies particular points of view and recognises that texts can position a reader;
- evaluates the reliability and usefulness of texts with increasing confidence.

Key Findings from the Research

Purposes and Benefits:
- AnyQuestions.co.nz / UiaNgaPatai.co.nz assists students to find the information they need in the investigating, finding out and researching stages of the inquiry process
- Students have a clear view of AnyQuestions.co.nz / UiaNgaPatai.co.nz as more than a search service
- Teachers perceive a main benefit as contributing to the 'saturation' phase of inquiry learning

Information Literacy Development:
- AnyQuestions.co.nz / UiaNgaPatai.co.nz librarians provide effective guidance, advice and support as they take students through information searches
- The process of 'unpacking the question' is the critical step in any librarian / student transaction. A significant amount of time is spent clarifying exactly what students need to find out, in order to enable the operators to guide the students to relevant sources of information.

Student Perspectives:

AnyQuestions.co.nz / UiaNgaPatai.co.nz librarians provide assistance in helping students:
- to understand the inquiry
- use keywords
- improve search techniques

> "I learned that it was really good for finding out information about what you're trying to study, and help with your questions, and doing all that sort of stuff"
>
> "I learned how to search properly, like what key words to use, what words, and website, not just going to Google, but going on to government websites, that sort of stuff."
>
> "We kind of talked together about the key words to use. Like to go in the search box. They told us keywords like, I wanted to find out about wind power, and they told us words we could use like, turbine, that contain wind power, or solar power."

Teachers understood the inquiry process and recognised the need to teach students the process. The secondary student had been provided with a sheet outlining the inquiry process, and three other students had been guided by their teacher through an inquiry learning process while undertaking the unit of work.

Although all students recognized that they were using some form of inquiry approach in their classroom, not one of them was able to break inquiry (or research) down into a series of activities, steps, stages or some kind of process other than "it's something you're working on" or "finding information to put on my PowerPoint."

Student Case Study:

A case study of a student in a classroom engaged in an inquiry learning topic and using AnyQuestions.co.nz, shows a progression in information literacy skills over the course of eight transactions. The progression is specifically focused on the clarification of information needs, and the refining of search techniques. The social studies topic was 'environmental impact'. Students were required to make a decision on a local issue related to environmental impact that they would explore both in school, and as a homework task. The teacher used an 'inquiry approach', providing the students with a guide sheet, and encouraging them to consult a range of experts. Although she had guided the students through the research process and she was confident that the student in this case study had a clear idea of his information needs and the research process, the student was unable to describe this process in the interview.

Teacher Perspectives:

Teachers understood the value of AnyQuestions.co.nz / UiaNgaPatai.co.nz in assisting students to find information. Examples of the approaches in incorporating AnyQuestions.co.nz / UiaNgaPatai.co.nz in their teaching and learning are:
- librarians in an 'ask an expert' role
- using AnyQuestions.co.nz / UiaNgaPatai.co.nz for the saturation phase of inquiry learning
- relying on librarians skills to help students access age appropriate information

> "…it was a way for the children to find answers that they researched, so if they had questions they were required to contact an expert who could give them either the answer, or a way of finding the answer."
>
> "AnyQuestions was used around the saturation stage; to saturate themselves with information, and look around, and getting interested, and generate that kind of interest, before asking their rich questions."
>
> "So AnyQuestions is…certainly allowing them to go to a place where the nature of the information they're getting is relevant to the children in terms of the conceptual understanding of their age."

How the AnyQuestions.co.nz/ UiaNgaPatai.co.nz librarians develop students' skills in the investigating, finding out and researching stages of the inquiry process.

All librarians use an agreed approach incorporating reference skills, information literacy and a knowledge of the inquiry learning process:
1. Gives a friendly greeting
2. Unpacks the question, ie a reference interview
3. engages the student in the search process
4. advocates quality e-resources
5. checks their information need has been met

1. Gives a friendly greeting

Being friendly is the most important aspect and sets the tone of the session and establishes a rapport. As a result students are more likely to engage in the research process with the librarian. . Research[1] investigating the reason why teens don't use virtual reference identified their concerns regarding their privacy and security. One student said: "I'm not going to go get tutored on the Internet by somebody who I personally don't know who might be some psycho serial killer out there when I could get personal help from my home and people in my community."

2. Unpacks the Question

Many students using AnyQuestions.co.nz / UiaNgaPatai.co.nz are starting an inquiry and have little or no knowledge of the subject, therefore are often uncertain and vague about the information they need. Unpacking the question is important in establishing exactly what information the student needs.

The following case study is an example of a student's progress over several weeks in defining and understanding his information needs. He moves from a position, having little or no sense of the information gathering process to an awareness of relationships between the aspects of the inquiry.

---

[1] Connaway, Lynn Silipigni, and Marie L. Radford. 2007. "Service sea change: clicking with screenagers through virtual reference." Presented by Lynn Silipigni Connaway and Marie L. Radford a the Association of College and Research Librarians 13th National Conference, "Sailing into the Future – charing our destiny," 29 March - 1 April 2007, Baltimore, Maryland (USA), http://www.oclc.org/research/publications/archive/2007/connaway-acrl.pdf

Session 1:
The operator clarifies the question somewhat

Student: Water quality in the Wairarapa…
Operator: Can you tell me a little bit more about your question? So I can figure out the best way to help you find the answers you need.
Student: Well for school we have to do an assignment on resource management and I thought water quality would be a good one.
Operator: Ok. Are you looking at the resource management act? Or resource management in general?
Student: Umm, I'm not sure.

Session 2:
Student begins with the search string suggested to him on the previous day, he gives a general area of investigation, then he lists the three focus areas of his inquiry topic

Student: Water conservation Wairarapa.
Operator: Welcome to AnyQuestions.co.nz.
Operator: Kia Ora Student, how can I help you?
Student: Hi. Umm I need to find stuff about water conservation in the Wairarapa.
Operator: Sure what type of information are you looking for?
Student: Like the social impacts of what conservation.
Student: And the causes humans have on water quantity and stuff.
Student: And environmental impacts.
Operator: All to do with the wairarapa right?
Student: Yea.

Session 3:
The student states his information need more explicitly from the start

Operator: Kia ora Student - what's your homework question?
Student: Water conservation in the Wairarapa.
Operator: OK - we need to break your question down a bit is that all right?
Student: Yea sure.
Operator: What exactly do you need to know about water conservation?
Student: I need to know like the social impacts on water quality, environmental impacts and the causes humans have on water quality.
Operator: And it needs to be in your area, is that correct?
Student: Yes in the Wairarapa

Session 4 and 5:
In these two interactions, a few minutes apart, the student is making a number of connections between several pieces of information

Operator : It also has tips on how to conserve water.
Operator: Info on how much water the average person uses.
….
Student: I got a question is water quantity an issue?
Operator: What do you mean by water quantity? How much people use?
Operator: Do you mean quantity - as in how much? Or quality?
Student: Yea, as in how much.

….
Operator: If you think about that then that sort of means that how much water we use IS an issue.
Operator: Read the paragraph very carefully - see the part where it states that 'water consumption almost doubles'?
Student: Hmm yea great.
Student: How does this affect people though?

Final Session:
Student is able to articulate an answer that he has constructed from his research, and acknowledges the assistance provided by the AnyQuestions service.

Operator: Have you got your assignment there? What does it say?
Student: Wait a sec it says.
Student: Environmental impacts: These are the impacts the rmi is having on the natural environment specifically.
Student: And the rmi is another question that I have all ready answered it stands for resource management issue.
Student: And the resource management is water quantity of course.
Operator: How did you answer the rmi question?
Student: And the issue is people are using up to much of it.
Student: People are using water like it's never going to run out, but clean water will become more scarce, and with the impact of global warming and climate change, the next 50 years will be drier than the last 50 and if we don't look after our supplies of fresh, clean water, one day we could run out.
Student: That's how I answered it.
Operator: Sounds good, where did you find that info?
Student: Some1 on here helped me find it.

Examples Teaching skills

The use of keywords

Operator: By narrowing our keywords to: water conservation wairarapa it will show what local information is available in your area.
Student: Sweet.

Explaining search techniques

Operator: ….a tip – if we put works we want to find together in double speech marks, Google will search for them as a phrase
Operator: So we could search for: "water quality" Wairarapa.
Student: OK
Student: Yea cool

Explaining terms to assist student to navigate sites

Operator: or you can click the tab to agencies.
Operator: Agnecies means you can look for results by council, or the department of conservation
Student: OK

The importance of valid data

Operator: searching government sites is good, because you know the info is generally pretty reliable and trustworth
Student: yea

"I used different words and stuff to get different information. Like if I'd just used one I'd get the same information from each person. I was giving them a range of different information."

"AnyQuestions is really good. I've shown my mum and dad and they really like it."