

ePortfolios as Catalysts for Lifelong Learning in Science and Technology Education

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Project Goals

Make construction and maintenance of an ePortfolio an integral part of studying at the College of Sciences

Enrich communication between employers and students

Maintain contact with alumni to mutual benefit

Showcase the quality of education at CoS to students, employers and the general public

Set and fulfill educational goals for our students

Educational Goals

Explicit exposure to lifelong learning skills

Discipline instead of paper focus

Integration of learning from formal and informal education

...

Well-rounded students, secure about their knowledge and skills, ready for cooperation in the workplace and for ongoing learning

Project Steps

Timeframe for initial phase

November 2005 – June 2006

Conceptual considerations

Content and structure

Development vs. showcase portfolios

Guidance and support environment

Technical considerations

e-platform

Industry requirements

Technical considerations

OSP – Open Source Portfolio Software (<http://www.osportfolio.org/>)

Developed by Sakai Foundation in the US

80+ Educational partners

12 Commercial affiliates

Important for us

Good match for our requirements

No license fees

Customisable

Strong grouping behind it

Issues

Not always transparent how it works internally

Some features missing, e.g., users cannot change their passwords

Conceptual considerations

Content and structure

- Focus on lifelong learning skills

- Sections for graduate profile, personal profile, skills

Development vs. showcase portfolios

- Elements of both

- Repository of evidence with reflections – longterm





- Generation of targeted presentations – at any point of time

Guidance and support environment

- Opportunity to grant access and invite feedback

- A chat environment

Lifelong Learning & Places of Learning

Generic Matrix	Undergraduate Studies	Postgraduate Studies	Employment	Outside Activities
Foundation Knowledge				
Problem Solving				
Independent Work				
Team Work				
Communication	Ability to cooperate with others and contribute to a task			
Self Management				

OSP worksite instructions - Microsoft Internet Explorer

Team Work

In most environments working in a team is essential. Besides your subject skills your ability to work in a team is important. There are a range of aspects in regard to team work:

- Teams come in a wide variety of character and size. Have you experienced or observed? What did work well? What would you do about it?
- Are you aware of the roles in a team? What are they? What type of people would you need to fill these roles?
- What management structures are required for a team? What communication structures and tools do you use? How do you conduct successful meetings?
- Have you experienced situations of conflict in a team? Were these conflicts with peers or group leaders? How do you resolve conflicts? Can you employ any techniques to resolve conflicts?

Nathan's Portfolio

[Introduction](#) | [Graduate Profile](#) | [Personal Profile](#) | [Skills](#)

Personal Profile

[Personal Introduction](#)
[Personal Goals](#)
[Personal Philosophy](#)

Personal Goals

Programming

Improve my design pattern vocabulary. Be able to implement more design patterns and understand when they are best utilised. Know when to use a particular design pattern to solve a problem.

Improve my skills related to web programming. Areas of interest to improve are Java Servlets, JSPs, and Javascripting as well as configuration of a server to run web applications.

Gain experience in Java programming and become an employable programmer.

Become an experienced and valuable programmer.

Web Technology

Learn more about XML-related technologies rdf, owl, and swrl.

Improve my understanding of semantic web technology.

Create a personal website which uses a web application I have created. At some stage when I have a useful web application running, I would like get hosting to make the website publicly accessible.

Justin Stephen Grayson (1983 -)

[Introduction](#) | [Graduate Profile](#) | [Personal Profile](#) | [Skills](#)

Personal Profile

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Personal Philosophy

Priorities

Everyone should realise that they have a priority list in their brain. This is the key decision making factor. Knowing, reviewing, and maintaining this list improves the quality and speed of our decisions.

Purpose

Men need purpose. King Solomon was a very wise man. He said "So I saw that there is nothing better for a man than to enjoy his work, because that is his lot." (Ecclesiastes 3:22). We need tasks, and projects, and goals. People with purpose are satisfied. I think if people had purpose, criminals would become scarce. I have decided that God created me to make him happy. He wants me to enjoy life and be satisfied. I will be satisfied when I use my body and mind to the best of my ability, doing things that make him happy. (Who says I'm vain?! :-)

Placement

You need to know your place in the "grand scheme of things". Every creature has its place in the food chain. They are part of a great hierarchy. This helps maintain order and balance in our environment. Humans are the greatest predators on this planet. We control the balance. If people understand their responsibilities, they make more thoughtful decisions.

Vision

When you know your place and purpose, you can create a realistic vision for yourself. This vision is what guides your work. Your priority list is inspired by your vision. Your unique vision gives your life meaning. Satisfaction is obtained as you achieve your vision.

Involvement of industry representatives

Interviews with six industry representatives

All involved in hiring of graduates and/or in project work

IT, engineering, policy analysis areas

Public and private sector

Small and large

Interview questions

Do we address the skills you are looking for?

Would an applicant increase their chances by having an ePortfolio?

Would you read an ePortfolio?

Which features would be most important?

Would you give feedback to our students?

Feedback from industry representatives

What employers are looking for

Initiative & Interest .



Commitment

Personality.

Creativity & Problem Solving

Ability to Learn.

Ability to Work with Others

Ability to Communicate

Ability to Organise Yourself

"And in particular those students, any student that shows signs that they do, they enjoy what they do enough to actually do it over and above what they have to for Massey. And any student that shows you that, you instantly know, wow they might actually be picking this as something they want to do as a career."

Feedback from industry representatives

What employers are looking for

Initiative & Interest.

Commitment

Personality.

Creativity & Problem Solving

Ability to Learn.

Ability to Work with Others

Ability to Communicate

Ability to Organise Yourself

"So rightly or wrongly we make our cut, in terms of who we offer based on how they go under those behaviour based questions."

Feedback from industry representatives

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Ability to Organise Yourself

"Current knowledge is not as important as the ability that learning ability that ability to pick up acquire new knowledge."

"We very much look for people who have had that capability that potential to evolve and pick up new skills."

"The subject areas we deal with are vast, no one person can ever hope to be on top of everything you have to go and learn and get something out of other people."

Feedback from industry representatives

What employers regard as important

Ease of Understanding. \longleftrightarrow

Outside activities.

Value of Examples

Selection of Examples

Importance of Reflection.

Importance of Feedback

Personal development.

"... you have shown me the most important stuff first, and I'm interested then I will go further"

Feedback from industry representatives

What employers regard as important

Ease of Understanding.

Outside activities.

Value of Examples

Selection of Examples

Importance of Reflection.

Importance of Feedback

Personal development.

"Invaluable, absolutely invaluable"

"It's those classic old things [e.g., sports club] that people used to hammer into me and I used to ignore, that now as an employer I see how incredibly relevant it is"

Feedback from industry representatives

What employers regard as important

Ease of Understanding.

Outside activities.

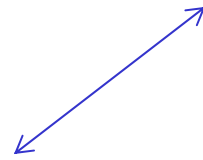
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Personal development.



"It could be useful as well for just in one of these profiles here someone talked about some painful learning's they had"

"Some of the people we have interviewed have been simply pathetic, when asking them to try and describe good examples of teamwork and why it was a good team they worked on. ... [they are] not aware of the human dynamics that are going on, they just haven't grown up enough."

Feedback from industry representatives

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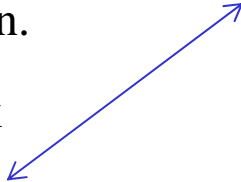
Selection of Examples

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Personal development.

[Employers don't want someone who has] "spent their whole youth in front of a Playstation or playing war games over the internet"



Feedback from industry representatives

"A huge, huge step up on what on information that I currently see when I go out to interview potential recruits"

"Someone who has put something together like this has done themselves a great favour"

"It definitely gives them an edge, a definite edge in getting to an interview"

What we have achieved

Content and structure

Happy with that

Industry support

Happy with that

e-platform

Largely fulfills requirements

Export of portfolios? Better user interface? Import of students details from WebCT?

But, always need for checking future developments

What we have not achieved

Student participation!

What we have not achieved

Student participation

But

Buy-in from the head of our College of Sciences!

The way forward

Move from individual lecturer initiative to College-wide programme

Bind the portfolios into degree structures

Link to assessment components at various points throughout the degrees

Create overall requirements for graduation

Involve academics throughout the College

Provide resources, pedagogical and technical help