ESTICT@Bath Technology Fair: In-class technologies brochure

Task:

1. Think of some classroom situations where the learning might be enhanced by the use of technology.
2. At the technology fair, have a look at the different tools available together with the descriptions and suggested uses in this 4 page brochure. Would any of them work in the scenarios you are considering? How? What would the challenges be in implementing your idea?
3. At the end, please write a description of a technologically enhanced activity with a brief SWOT analysis on the flip chart paper provided. What are the strengths, weaknesses, opportunities and threats associated with chosen approaches and technologies?

	Teacher Centric		**Student centred**			
	Present	Capture and share	Student-teacher live Communication	Individual activity	Group activity	Whole class activity
Flipcam		✓	?		?	?
Visualiser	✓					?
Sympodium	✓	✓				
Livescribe Pen		✓		?	?	
Paper Show	✓	✓	✓		✓	?
iPad		✓	?	✓	✓	
Voting systems		✓	✓		✓	✓

Technology	Features	Suggested pedagogic uses
Flip Cam (or similar) 	• Easy-to-use, pocket-sized one-touch video cameras • USB plugs directly into your PC or Mac • Built-In software lets you edit, email or upload video to sharing sites like YouTube and MySpace	• Ask students to record the lecture • Record student presentations, performances (e.g. Law students practicing advocacy) to watch back in class and feedback on performance • Ask students to produce a video capturing the output of a discussion or group activity
Visualiser 	• Visualisers display images of books, calculators or any 3-dimensional objects, for example items which normally would be passed around a class can instead be seen simultaneously by all students. • They can also be used in conjunction with interactive whiteboards so the visualiser can be turned into a fully interactive presentation tool, displaying and demonstrating objects, books, documents and slides.	• To show subject-specific physical artifacts, such as x-ray radiographs, gel electrophoresis patterns, microchip processors, historical relics etc. Images of these artifacts can be fed through to a connected PC for capture and annotation • To show small-scale demonstrations to the whole class, e.g. wound suturing, DNA extractions, wave motion in a sealed water vessel etc • Some visualiser cameras can record video and audio – video recordings of in-class demonstrations can be uploaded onto a virtual learning environment for students to review as and when they wish • Some visualisers enable you to split the screen – displaying the image of a saved object with the image of a current object placed on the visualiser. So you could for example use the visualiser to show an example student's assessment in comparison to the marking scheme for that work, explaining how the work met various assessment criteria.
Livescribe Pen 	• Records over everything you write and hear • Share your notes and recordings as a pencast, PDF or audio files • Embed your pencasts in a webpage • Customise your Smartpen with downloadable apps – including dictionaries, translators, productivity tools, games and more	• Ask students to record notes during a presentation and share them • Provide for students with a disability that affects their ability to listen and take copious notes • Record discussions and outcomes of group work to be shared later

Technology	Features	Suggested pedagogic uses
Sympodium tablet 	• Sympodiums are tablet monitors with a Pen attached and are normally connected to a data projector for all students to see. • The attached Pen can be used in Pen-mode or Mouse-mode. • In Pen-mode you can annotate content on the Sympodium screen and write notes. • Capture your work: Save your notes directly into several software applications, including Windows versions of Microsoft PowerPoint, Word and Excel, or AutoCAD software.	• The problem with blackboards and whiteboards is that you have your back facing the students whilst you are writing on the board, and you don't always know how well your students are following you (this is particularly true if you are teaching quantitative subjects where working out is required). With the Sympodium you can face your students whilst explaining /writing on the screen. • Mark up and highlight prepared teaching content such as PowerPoint presentations, where it works particularly well in turning a static presentation into a more dynamic one. You can stress key points to enhance your overall message. • The software that comes with the Sympodium (called Notebook) effectively turns your screen into a digital flip chart that never runs out of paper! Unlike blackboards and whiteboards where you would have to rub out your writing and potentially lose track of what you had covered, Notebook software enables you to keep a running progress of all the 'on the fly' teaching you have done in class.... • ...and you can then export all the pages you create in Notebook into a nice neat PDF to email to your students or post onto the virtual learning environment. That way you can be sure that your students have an accurate copy of everything you covered in the lecture to consolidate with their own notes. • You can record the annotations you make on the Sympodium in addition to your voiceover – the recording can help to serve as a reminder for your students following the lecture / class.
Papershow 	• What you write on the paper appears in real time on the screen • Writing with a proper pen and paper is more natural • Can be passed around the class • The electronic alternative to flipcharts • Brings your Power Point presentations to life • Save and Email files • Ease of use: Plug and Play	• Ask students to take notes, solve equations, annotate documents or diagrams and share live with the class • Anything where a pen and paper are more natural than an electronic interface - for example building up diagrams, musical notation, etc.

Technology	Features	Suggested pedagogic uses
iPad 	• Multi-Touch enabled tablet • Wi-Fi and Bluetooth connectivity • Surf the web, write email, enjoy photos, films, Youtube videos, and more • Up to 10 hours of surfing the web on Wi-Fi, watching video, or listening to music • iPad will run almost 140,000 apps from the App Store	• Reference and connectivity tool for group work, e.g. watch a Youtube video and discuss. Find information about a chosen topic and report back to the class • Use apps on the app store for individual or group work • As an electronic voting device that uses a web-based voting interface (e.g. TurningPoint's ResponseWare). Students can not only provide responses to multiple choice questions, but they can also provide free text answers too - this may help teachers to design questions that test at a higher level of cognitive complexity.
Electronic Voting Systems (EVS) Various companies	• Students respond to questions posed (sometimes within a PowerPoint presentation) by pressing a button on their handset / clicker. The responses are then detected wirelessly by a special receiver which is connected to the teacher's computer. Responses are instantly compiled by the computer and displayed as a histogram for all the class to see Responses from students are typically anonymous. • As the presenter, using EVS helps you gauge group-wide understanding, without depending on a select few to determine how your content is being received. They promote active learning which participants find fun, helping them to engage with your material better than if in a passive state.	• When teaching to a new group, use EVS to pose 'ice-breaker' questions to find out more about your students. • Use EVS to test pre-conceptions, uncover misconceptions and help you pitch to the right level before you start a new topic. • Although by default EVS is used to vote anonymously, you can set-up Participant Lists to track the performance of individual students over time, rather than analysing results based on the whole class. Participant lists also offer a way of monitoring attendance. • Use demographic analysis to compare the results of one interactive question with the results of another, and use any relationship that is found as a starting point for discussion. • Encourage peer-to-peer learning: ask your class to use their clicker to vote on something, display the results, then ask the class to discuss their vote with their neighbour. Re-poll the same question and see how the results have changed as a result of the discussion. • Use EVS to encourage preparation / pre-reading before class to help reduce the amount of content to get through in one lecture. • Organise your class into teams and set EVS competitions to motivate student learning and team work. • Use EVS to receive valuable course feedback throughout the duration of your teaching. • Model simulations in class with branching questions (particularly useful for Health and Law-based disciplines). • Ask 'on the fly' questions (questions that you haven't prepared in advance), with possible answers suggested by the students. • With some EVS, you can ask the students to provide free-text feedback with their choice of answer – this encourages students to think about their answer rather than opting for a random choice.