

## **A Universal e-Portfolio?**

This paper is based on a presentation prepared for the EifEL-Paris 2008 conference. It explores some of the hindrances to 21<sup>st</sup> century thinking in terms of the e-Portfolio not only as a tool for e-learning but also as a flexible and easy-to-use tool for 'Personal Representation'. Is the e-Portfolio to be seen as just a didactic tool? Is the e-Portfolio the place for formal and summative assessment? Is the emphasis on PDP appropriate for the 5yr-old? Is Lifelong Lifewide Learning really about credentialism?

Having raised some of these issues and the reasons for the present confusion of definitions, this paper then attempts to clarify some of the 'Prime Directives' that could re-define our thinking on this whole matter.

The soon-to-be-released UK version of e-Folio is given as an example of a 'universal e-Portfolio' and is briefly illustrated as a possible solution for all 'ages, aptitudes, abilities, accessibilities and attitudes'.



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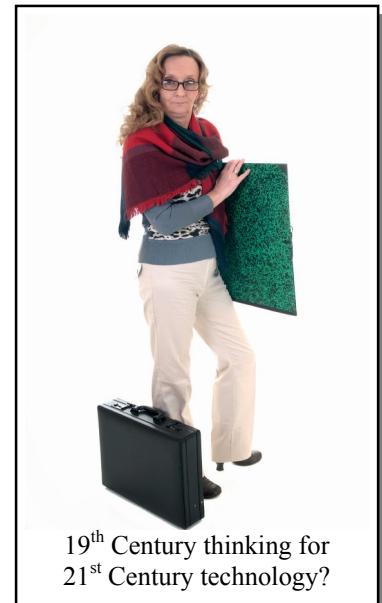
# A Universal e-Portfolio?

Ray Tolley – Maximise ICT

## The present scenario:

It was Humpty Dumpty who said, “When I use a word, it means just what I choose it to mean - neither more nor less.” And in reply to Alice, “The question is: which is to be master - that's all.”<sup>ii</sup> – In other words ‘He who shouts loudest and longest, wins!’ This, I believe, is where we are at with e-Portfolios – many different opinions and for different purposes.

Although JISC<sup>ii</sup> in the UK may have published good clear outlines of what an e-Portfolio should be, the practice in the universities is very different<sup>iii</sup>. Almost every example I have seen is no more than a very specific Learning Environment for a particular course of study.<sup>iv</sup> Having recently studied the various VLEs available to schools a number of them offer some form of e-Portfolio and there is at least one ‘free-standing’ e-Portfolio – and all very different to each other. Some schools are still using a PowerPoint shell as their e-Portfolio and others a collection of web-pages presented on a CD or DVD. In other schools and colleges, particularly in the USA, things are done very differently. Some in Australia claim that the e-Portfolio is the school’s formal learning platform and that the PLE is the ‘personalised bit’. Here in the UK the QCA presently view the e-Portfolio as the mechanism for e-assessment, whilst in Europe Serge Ravet suggests that the e-Portfolio could be used as a political/state tool: “*ePortfolios are now major tools in the hands of policy makers at local and national level*” and points to Wales as a ‘Learning Country’.



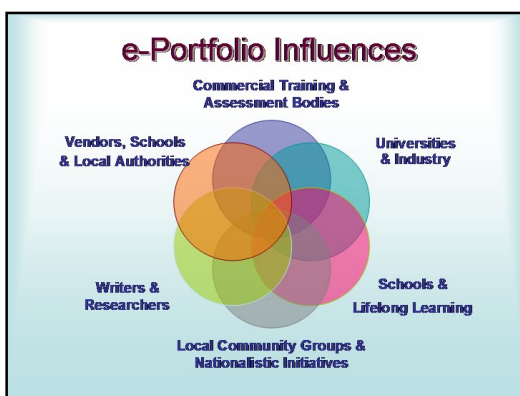
In the UK, for several years now, schools have been converting their previous Learning Platforms or Intranets into VLEs and in many cases the commercial VLE suppliers have claimed to provide some sort of e-Portfolio – all very different and with little chance of interoperability within the foreseeable future. Predictions by some, for any real solution to the problems of ‘interoperability’, are suggested at between five and ten years!

Quaintly enough, the bottom line of all these various versions is that these so-called e-Portfolios are NOT ‘portable’ – ie from one institution to another or to support ‘transition’ from one phase to another. Again, desired aspects of an e-Portfolio such as ‘ownership’, privacy, reflection and collaboration are not addressed as one might expect.

Finally, the dramatic emergence of MySpace, FlickrR, YouTube and thousands of different blogs and fora, the popularity of MSN, texting, iPhones etc rest raises questions about why we need an e-Portfolio at all?

## An analysis of influential voices:

There are a variety of strong voices all having opinions about what is the definitive format and function of the e-Portfolio. However, it would appear that of the very different groups illustrated, few appear to be talking to each other and the chance of coming to some consensus on interoperability looks bleak:



### Writers and Researchers:

Over a year ago I became fascinated by the depth of research and creative writing of several well-known authorities on e-portfolios. Their analyses came to different conclusions and it soon became obvious to me that somewhere between all the various views lay ‘the truth’. Researchers, particularly in the UK have made brief forays into this jungle. The authors of several research papers admit little previous knowledge of the subject, demonstrate even less knowledge of present educational thinking and little if any acknowledgement of the forthcoming impact of emergent technologies on Teaching & Learning.

## Universities and Industry:



Where universities offer an e-Portfolio within their learning environment it is either a content laden structure with an optional PDP element or a mandatory element of ICT training for students. Few students apparently see any real benefit in using an e-Portfolio or any reason to continue its use beyond their present course of study. An examination of the leading university arguments for e-Portfolios would suggest that their offerings are little more than a structured Learning Platform for a specific course of study as typified by ePet from Newcastle University. Where a PDP element exists it would appear to be little more than a tool to help students in their job-search. None of the e-Portfolio offerings appear designed for continued independent use after entering into the real world of employment, being completely institutionally based. However, the idea has been suggested that students could maintain their e-Portfolio accounts as alumni and counsellors for undergraduates.

The Problem of e-Portfolios and industry is quite simple. Many industries may not have a generally available learning platform for all of their workers particularly at a time when issues like PDP and worker re-location need urgent attention. Where workers do have access to their company's network it is probably a purpose-designed system with limited usability for anything other than work purposes. It is therefore a natural solution to establish a separate subject-specific e-Portfolio as a common learning platform (with all the links to content that one would expect of an LP) available to everyone. Specific to their company's needs and tailored to provide primarily what may be considered good for their workers, an 'institutional e-portfolio' of this type can be a logical and well designed product.



## Commercial Training, Assessment Bodies and Lifelong Learning



Here, there are very finely structured courses of study and assessment all designed for specific purposes and of very differing formats. In the UK there is a strongly held view by the AQA (The Assessment and Qualifications Authority) that the e-Portfolio should be *the* tool for assessment exclusively and does not appear to recognise any of the other functions of an e-Portfolio as defined by the classic authors. Again when I contacted training institutions which have the mandate for lifelong learning I was repeatedly and firmly informed that they "do not use e-Portfolios" in their delivery – full stop. Little attention appears to have been given as to how any e-Portfolio can be adopted as having Lifelong ownership.

## Local Community Groups and Nationalistic Initiatives

There are worthy desires in some quarters which hope that e-Portfolios will enable the hard-to-reach and the travelling communities to access study skills and community projects through the somewhat undefined e-Portfolio. Who will fund the upkeep of such resources has not been quantified, nor has the training provision been defined. There are strong reasons for suggesting that e-Portfolios can help individuals and communities particularly in the more geographically remote areas. But if this is to happen my concern is that the e-Portfolio must be sufficiently simple and robust for any user to become quickly and comfortably acquainted. Certainly I look forward to the e-Portfolio as being the next stage in inter-school and inter-personal relations – and much cheaper and more convenient than video-conferencing.

There are also national initiatives, particularly in Europe where e-Portfolios are viewed as a potential tool to identify state-wide inequalities of learning or skills shortages. At face-value this might be a good idea. However, it has been suggested that a state-wide e-Portfolio system would allow for socio-political engineering, identifying skills-shortages and providing targeted training and support for workers and potentially new industrial programmes. As good as all this may seem, I am not sure if the e-Portfolio is the appropriate medium for the state access of personal data. The MOSEP Summary Report<sup>v</sup> is a well written research document but again focuses on a narrow section of society. How real 'ownership', personalisation and portability can occur does not appear to be addressed.



## ***Vendors, Schools and Local Education Authorities***

An analysis of the products of the main vendors of VLEs for schools in the UK indicates a variety of e-Portfolio solutions, again everyone different, some with a few good features, several quite weak in terms of meeting the whole range of potential functionalities, and generally completely institutionally based. The biggest obstacle, that of interoperability, will take ages to resolve. Despite authors like Helen Barrett who laid the ground-rules in 1994, the take-up in schools, at this stage, is significantly poor.

Some effort has been made to establish the e-Portfolio concept, by the recently introduced Diploma in Digital Applications (DiDA), building upon the need for students to present a portfolio of evidence of coursework. This, however, has been left to individual institutions to decide how that body of evidence is presented, sometimes via a PowerPoint presentation or a set of web pages. The forthcoming 14-19 initiatives, starting Sept 2008, to encourage more students into skills training will require an e-Portfolio of some sort but has not been defined at this point in time.

## **But what of the teachers, pupils and parents?**



At the present time very few teachers, pupils or parents have any idea about the potential of an e-Portfolio to enhance teaching and learning. The real danger is that the few teachers who have experienced any form of e-Portfolio are those newly qualified teachers (NQTs) who probably had a poor introduction to the e-Portfolio concept through their university education. It is very doubtful, therefore, that the vision of a fully developed e-Portfolio system would be promoted by their experiences, despite the fact that these young teachers are the very ones who would have the energy and initiative to develop meaningful e-Portfolio activities for children, their teachers and other permitted viewers.

The primary target of the e-Portfolio, our children, will be totally failed if this present mish-mash of theories, introspection, technical squabbling and lack of understanding by the e-Portfolio designers is allowed to continue.

The bottom line is simple, the influential voices as identified above appear to be crowding out any realistic understanding of the e-Portfolio as a universal tool for lifelong learning, starting in our primary schools and extending throughout all bands of the spectra of both Teaching and Learning and Personal Representation.

Before proposing an illustrative solution, and stepping away from all the hype and arguments about practicability, a consideration of the design criteria for an e-Portfolio must be defined:

## **An identification of the Prime Directives for any e-Portfolio**

1. *It is Portable:* *It cannot be located in any one institution or embedded within a proprietary VLE.*

The fundamental purpose of having an e-Portfolio is that the owner can 'take it from place to place', using the metaphor of an old 'paper' portfolio. In terms of 'portability' we should really be talking of access from any location such as a new school, as a replacement for the UCAS forms or for a job interview for instance.

We can therefore consider portability as being 'horizontal' as when a pupil whilst within a Key Stage changes school or where, in the 14-19 curriculum, a student needs to share the portfolio across the curricula of two or more institutions at the same time.

Secondly, the e-Portfolio must be considered as moving 'vertically' eg from Primary school to Secondary, and on to FE/HE, job-seeking, employments and retirement. This raises another issue, that of progression or maturity. Obviously the interface for a 5yr-old needs to be very different to that of an adult – see section entitled 'lifelong' below.

2. *It is Personal:* *It is 'owned' by the user and is customisable to the user's age, stage and style.*

It is essential that the e-Portfolio is seen as 'owned' by the owner and not just viewed as a compulsory or academic exercise as a substitute for a UCAS application or a short-term 'Burgundy File'. Ideally, if established at KS1/2 ownership can more easily be established as a place of proud celebration of a child's

work. By KS3 the pupils will have learnt to personalise it using colours and templates which reflect the projected image of the young student. The young student is able to select their own group of contacts for e-safe blogging and links to external repositories can be established.

3. *It is Generic:* *It is not modelled on any particular curriculum delivery system nor content.*

Most of the e-Portfolios established by universities, employers, adult learning institutions or work-placement agencies are structured for a single purpose or a limited number of related purposes. Some of the best are designed as a curriculum delivery scaffold with guidance notes and even structured CV outlines and CPD formats. Not so for a generic system. Teachers do not all expect the same layouts or styles of presentation. Different subjects produce different output formats and any group of students could produce myriad combinations of subjects. Not all students learn in the same way nor choose to present their artefacts in similar formats. It is essential, therefore, that the e-Portfolio is flexible enough to meet all these differing forms of presentation.

4. *It is Web2.0:* *It should be compliant with all generic formats within the application.*

Perhaps an over-simplification of terms. Suffice it to say that the e-Portfolio should be capable of using any Web2.0 tools and content and, furthermore, be readily accommodating of the 'Symphonic' or Web3.0 intuitive tools. Already we are seeing examples such as 'Autology' which are creating a whole new dimension to study skills. By ensuring that the e-Portfolio is Web2.0 compliant we should at least be ready for the new generation of intuitive software. Another aspect of Web2.0 is the increasing use of open source and freeware recognising standard file formats. This, of course, is essential if we are to encourage the potential for multiple home users (siblings) accessing VLE files from the school's network, notes on their own e-Portfolio and using 'freeware' on the new range of sub-£200 laptops whilst at home.

5. *It is MIS-free:* *It is not 'hard-wired' to any institution's MIS infrastructure.*

The successful take-up of VLEs in schools is probably due to the requirements of LAs to both collect and disseminate pupil data from and to schools. The topology for the effective transmission of such data has therefore been in place, now, for some years and administrators are well used to the technology which has been steadily improving during that time. Similarly, on-line UCAS applications processing has been accepted for almost as many years.

On to this existing infrastructure, many schools and LAs appear to have 'bolted on' their school's VLE and, naturally enough, portions of the whole data-set have therefore been readily available for linkage to a VLE's internal e-Portfolio system. There are obvious advantages to such a symbiotic arrangement, principally the concept of 'write once, read many' or WORM. And such a setup is the essential basis for a well constructed school's Personal Learning Environment or PLE. However, the functionality of a close-coupled arrangement of an institution-based e-Portfolio can immediately break down when a child moves from one school to another unless very sophisticated interoperability connections have been developed within both platforms.

If the e-Portfolio is to be truly 'owned' by the pupil, the setup or layout of the e-Portfolio will vary from child to child, no two e-portfolios having the same format, page structure or content. The connectivity of data, therefore, with potentially multiple 'null' pages, would be impossible to configure by any technician for every separate individual in a school. The choice appears to be simple, either a sterile and formally structured system as seen in many university configurations or a child-friendly 'private space' where the pupil feels in charge of the whole presentational format.

6. *It is 'light':* *It is not a permanent repository of all of a user's files, rather a 'transit camp'.*

The e-Portfolio has several purposes: to celebrate, to inform, to share and reflect etc. However, it should not be used as the total storage space for all of one's artefacts. The great mass of a pupil's schoolwork will, inevitably, be held on the school's server and, according to how good the school's archiving system is and how well students are taught about 'good housekeeping', half-finished essays or spelling tests may remain on the system for many years. Other more valuable artefacts may be stored on a PC at home, on DVDs, flash-drives or USB sticks. Yet other storage facilities might include YouTube or Flickr etc.

Obviously, as the whole of society is becoming more digitally aware, vast amounts of material, academic, social, familial and sentimental are being generated and people need to educate themselves in regard to storage principles. Independent repositories may come and go, YouTube might be made unavailable, even blogging servers may be closed down if (at the present time) the Italian government has its way. And, of course, we are well aware that certain governments maintain rigid controls over what people may say or think. The e-Portfolio, therefore, should not be the prime centre for data storage but, like a shop window, should be changed or updated regularly from products available in the stock-room. Old stock, past its sell-by

date should be removed, new features to be displayed may need a totally new background or layout – all of which can be easily updated within the e-Portfolio.

7. *It is Lifelong: Ownership must be maintainable as a continuity, '5-95'.*

Although written about by some for many years (cf Helen Barrett) it seems strange that few e-Portfolio developers have understood the principle that the e-Portfolio is intended to last the owner for their lifetime. Far too many products available at the moment are restricted to the institution providing the service. Even in schools it is not appreciated how much mobility actually takes place. (I, myself, attended 6 different schools in the first 5 years of my education.) Certainly, as the child moves upward through the various Key Stages and on to FE/VET/HE or apprenticeship schemes, the e-Portfolio needs to move with the student.

We are also repeatedly warned that 'a job for life' will become increasingly less common and that workers will have to understand the need for re-training or updating skills on a regular basis. Governments are well aware of the need to educate a national underclass of the 'sub-literate'. Employers, too, are more and more recognising their responsibilities to provide CPD and even preparation for redeployment. The breaking down of national barriers, the opening up of Europe and increased access to transport have all created a fluidity in the employment marketplace. And lastly, but not less significantly, there is a steadily growing body of post full-time workers or those enjoying the freedoms of retirement who still have many years of active leisure time before them. At every stage the e-Portfolio can assist the owner to display differing images or share with different groups or communities.

In all of the above scenarios, the one common factor, in this digital age, is the ability of an e-Portfolio to enhance the presentation of one's self to others. Instead of owning multiple e-Portfolios for different purposes, in different configurations and at different times, the obvious solution is to maintain one portfolio throughout life, '5-95'.

8. *It is Lifewide: It is capable of being used by all ages and abilities through a wide range of assistive templates.*

In the UK at the moment, the e-Portfolio concept is firmly driven by the needs and extensive research of the university community. This totality, if all were using e-Portfolios, still only numbers 5% of the population for only 5% of their lifetimes. So, what of the vast majority of people of school age, not in higher education and those beyond the age of 18? Should the academic community really be the main drivers for the use of e-Portfolios?

I am well aware of the significant body of students and adults who have a whole range of special needs and who need a communication system that allows the socially disadvantaged, the lonely or even those who choose home-schooling to represent themselves through the medium of an e-Portfolio. This may be for social collaboration, school activities, in order to assist self-esteem, for training programs or job applications etc.

The e-Portfolio can be accessed using the simplest of templates providing enhanced readability and simple language in order to meet the needs of many, both youngsters, people in work and the elderly who cannot manage the maintenance of their own website or blogs.

9. *It is Accessible: It must recognise common standards of accessibility in terms of both outputs and inputs.*

As noted above, appropriate fonts and colour schemes are essential and need to be adjusted to an individual's requirements. Where special needs clients already use a computer there are probably in place the peripherals to negotiate, view and listen to simple web pages.

10. *It is Credible: Evidence of any Summative Assessment must be linked to a secure repository ie the awarding body or a central MIAP/Minerva archive.*

One of the primary functions of the e-Portfolio has always been that of presenting one's CV or academic credentials on-line. However, the real potential for forgery must not be ignored. Even a bright 10-yr old could scan in an impressive certificate and change the name or grades. It is therefore necessary to provide a secure system of credible evidences.

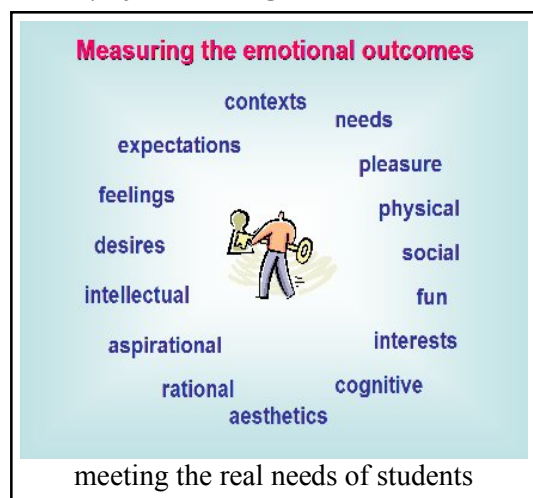
Since the Bologna Process was established in 1999 there has been only moderate progress in establishing levels of digital security which requires compliance with Europass decision 2241/2004/EC which indicates the need for Diploma Supplements to be issued electronically and in a manner that is capable of being authenticated, and also compliance with EU Digital Signature Directive governing electronically signed documents.

In the UK the MIAP/Minerva archive has been held up as a central register of all awarding bodies and is presently involved in providing such for the emerging 14-19 diplomas. However, an alternative scheme which enables the awarding body to provide a digitally secure certificate is provided by the Dublin-based company, Digitary. Whether this system would adapt to every GCSE or C&G certificate is another matter beyond the immediate scope of e-Portfolios.

### Why use an e-Portfolio in Teaching and Learning?

Even a cursory review of Helen Barrett's list of Metaphors<sup>vi</sup> reflects a very different working atmosphere to that of a conventional school environment. In the UK, where the pressure is to install VLEs in all schools by the spring of 2008, mechanisms to deliver teaching and learning are well underway. However, the VLE environment for the pupil is invariably formal and certainly not easily configurable to be 'owned' by the user. The Personal Learning Environment or PLE, as provided by the school's VLE, does not reflect the flexibility and style of ownership that the 'Prime Directives' above would require. The following list is not exhaustive but illustrates some of the features of an e-Portfolio not easily developed within a VLE.

#### *The Joy of e-Learning:*



Eva de Lera, in a recent paper<sup>vii</sup>, identified the most significant aspect of any e-learning environment as that of the willingness of the user to actually log on and participate. In her presentation she spoke passionately about the need to provide students with an interface appropriate not only to their academic needs but, more importantly, appropriate to their situation and emotional state. This is where the e-Portfolio can so easily compensate for the otherwise formal and possibly sterile interface of the official VLE. Not only should the working environment match the age, aptitude, ability and accessibility of each student, it should also meet their style and language preferences. Here is where the e-Portfolio immediately identifies with the needs for 'ownership' by each individual and can supplement the functionality of the VLE.

#### *A Personal Home-School Notebook:*

It seems clear, therefore, that an obviously different tool should be used to provide the personal and confidential things that any learner might want to share beyond the confines of the school or workplace. In the UK most schools provide their children with a relatively expensive annual 'Planner' or 'Home-School Notebook' – most functions of which could easily be served more efficiently by an on-line version, ie the e-Portfolio. Thus many of the home-school functions such as a personal diary, special information about sports kit, uniform, school meals or medical arrangements etc could be recorded in one place far more simply and securely than parents and teachers bombarding each other with disconnected e-mails.

#### *A Place for Planning:*

Far too often the place for reflection or planning in the classroom situation is a rushed and unsettling experience – certainly not the environment in which I would want to work. At one time we were taught to always keep a 'Rough Book' for such activities – but sadly not so in today's classrooms! Students need to develop the art of remodelling their thoughts or planning future events, using diaries, Gantt charts, flow diagrams or concept maps. Again the e-Portfolio is that perfect place to jot down, reflect upon and re-model those scraps of inspiration that can be worked upon at a later date – as I call it, 'My Constant Companion'.

#### *Collaboration:*

Following on from the rough jottings as above, the art of sharing ideas with a group of fellow workers or peers is not new to school children. However, the ability to evaluate or contribute to each other's often incomplete ideas can be so dramatically and synergistically accelerated through the ability to share within the confines of an e-safe collaborative environment. Perhaps one of the strengths of the dreaded MSN, that teachers must understand, is its synchronicity. Whether synchronous or asynchronous, conversations that have instant or near-instant feedback are far more satisfying than waiting for a week or two before getting a response. Where teachers are able to set scenarios which encourage groups to work together and produce

compiled answers to a set task more learning takes place and students feel that they have ownership of the eventual result of their endeavour.

**Mentoring:**

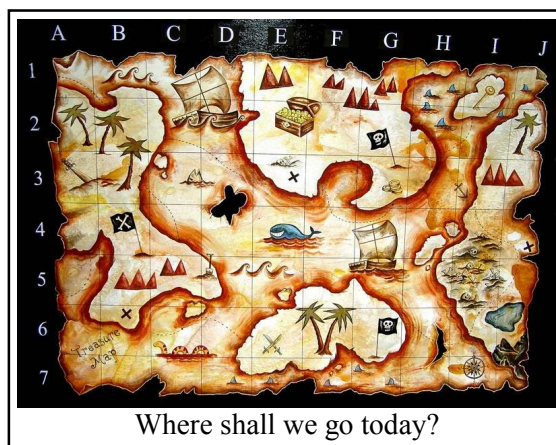
Something not well-developed in the UK is that sense of guardianship of a child’s learning. It is a sad reflection of our society that many parents are far too busy to take a serious interest in their children’s academic progress. Is it something that we have lost – or did we ever really have it in the first place? Yes, mentoring in schools does take place – to a very limited degree – perhaps once a month a tutor might find time to counsel a child but even then with very little real understanding or rapport. However, the e-Portfolio can support the personal mentor who volunteers as an ‘academic god-parent’, particularly where the help is welcomed, willing to take the responsibility of the regular interest and oversight of a child’s progress. This would include testimony as to the established relationship and the ability to maintain the mutual dialogue of the two parties.

**Feedback:**

VLEs or PLEs may be good at providing summative assessments of acquired knowledge and, particularly with short-term tests, this may be of some help. But, as we all know, far too often the marks and even constructive comments on coursework come back far too late to be of any real value – particularly when the student is then involved with the next assignment! However, the privacy of the e-Portfolio makes it an ideal medium for the informal comment or constructive feedback from tutors or peers. The ability to receive feedback on ‘work in progress’ gives a sense of support and reassurance to the student. Added to this are the added benefits of immediacy and convenience which allows the tutor to respond constructively before the student goes completely ‘off-track’. Students have commented that there is an increased sense that the tutors care about the students’ efforts – no longer is a student just a string of numbers in a private marks book – the student ‘owns’ an e-Portfolio record of ‘conversations’ and comments upon which to reflect.

**Mapping a new Learning Environment:**

Given the potential for students to develop their own scholarship based not only on personal feedback as identified above but also on an e-Portfolio environment that supports individual learning styles, teachers will need to reformat their own organisational skills. No longer will a linear control of the imposition of knowledge be possible. On-line resources will increasingly allow students to investigate their own interests far beyond the bounds of an ordinary textbook or a teacher’s knowledge and experience. Children, from an early age will need to adjust to being aware not only of a particular lesson’s learning outcomes but of a whole landscape or ‘treasure map’ of learning. Optional experiential approaches will need to be outlined and the mapping of curriculum areas visited will form part of a multi-directional route-map of learning.

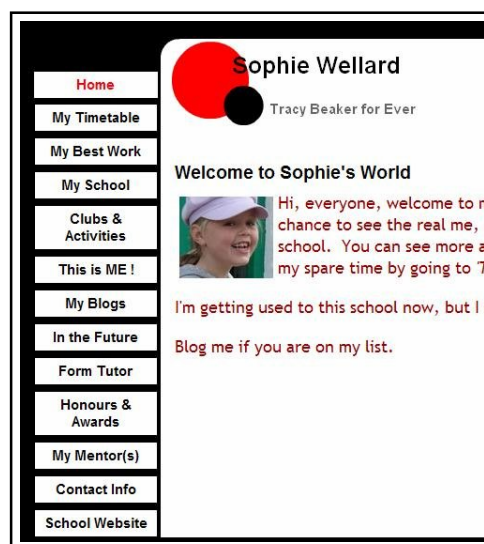


**e-Folio – a possible solution?**



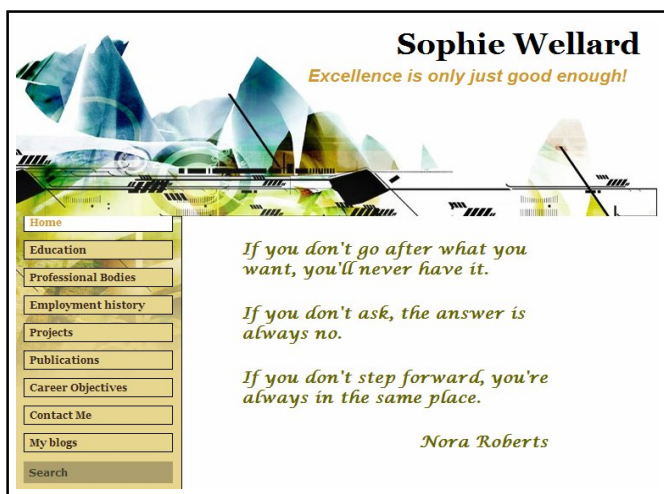
Understanding such a list of criteria as above is not that impossible even if a bit of a challenge at first sight. Quite simply it should be user-friendly and appropriate

whatever the age of the student, it should be adaptable to their needs and independent of any institution or VLE supplier.



However, the challenge was to find a well-versed user-base and a software house that was willing to listen to my demanding list of modifications. To find that meeting of minds and also a people who were already thinking through the necessary modifications to meet the needs of both younger and senior groups of users was almost a miracle.

Having researched the existing options and such research and documentation as was available it was a pleasant surprise to find that the people at Minnesota State University were willing and possibly intrigued by my repeated questions and suggestions.



Perhaps the most fundamental aspect of a good e-Portfolio is the ability to change templates and skins as and when the student feels the need to express a different image for showcasing or the need to add other menu items or control or add new permissions for viewing.

However, this example is not just a tool for children, as a plaything. Apart from meeting the needs of all spectra of education, it is also a fully functional e-Portfolio capable of delivering all the exacting high-end requirements of professionals in all walks of life, particularly those who don't want to run their own websites or blogs. It is equally



appropriate for those who may be seeking re-deployment or the 'silver-brigade' with their time to collate a thousand memories. – As I used to say, *'If it works for my mother-in-law, it can work for you.'* – It works for all, '5 to 95'.

### In Reprise:



At a time when VLEs and PLEs in schools are making good progress, the e-Portfolio can find its own unique and personalised place in the toolkit of every student, whatever their age. Added to this, the emergence of good quality 'free' software such as 'Open Office' and the arrival of the 'sub-£200' PC will at last make access to home computing for all a reality. The arrival of ubiquitous computing is here. A good low-cost and simply portable e-Portfolio solution is the perfect tool to enrich that experience. Just think of some of the metaphors: A Showcase, a Mirror, a Dashboard, a Constant Companion, a Confessional, a Window, the place for Fireside Stories, a Celebration of Learning Across the Lifespan, a Gatekeeper, a Festival, and more. Perhaps I should add, 'No student – or rather nobody – should be without one'. The e-Portfolio should be nothing but 'Universal'.

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