

**Assessment is for Learning through
digital technologies**
aka
escape-scotland
(e-solutions for creative assessment in
portfolio environments)

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Assessment issues as we know them.....

- ❧ over-worked retrospective 'neat nonsense' recording of ideas - on paper - flat - dimensionless
- ❧ overly directed, not authentic & unnatural designing
- ❧ working solo
- ❧ thought of as boring (by learners and teachers !)
- ❧ designing = writing?
- ❧ learner doing what learner thinks teacher wants to see and read
- ❧ not very useful for formative assessment
- ❧ focus on product not process
- ❧ design project portfolio becomes a product too



Synopsis

Summary of previous- story so far..

- ❧ TERU innovative approaches to assessment of creativity and innovation
- ❧ U of S CAPITALL-DT (2004-2005)

TERU 2003-2009 →

- ❧ **summative assessment** of performance using '**e-scape**' approaches
- ❧ unobtrusive mobile digital devices
- ❧ make thinking visible through a range of expression in image, sound and text form.
- ❧ Subsequent and complimentary developments of '**e-scape**' in Scotland
- ❧ funded by BECTA, LTS, and SQA, working with TERU & TAGlearning
- ❧ aims to develop effective **sustainable formative assessment** by incorporating aspects of **teacher**, **self** and **peer** assessment with a view to aiding progression.



Overview of background- CAPITALL- DT

Build on summative assessment work by TERU for a methodology for dynamic, performance based assessment: the 'unpickled portfolio to

- ❧ explore the links between deriving assessment data and supporting learning and teaching- focus on AifL
- ❧ ... in the context of a project researching issues of creativity, assessment and transition in design and technology:
- ❧ Creativity and Progression in Transition through Assessment for Learning in Design and Technology (CAPITALL- DT) Project



Why the research?

- ⌚ Concerns in Scotland over **confidence** of **primary teachers** to teach design&technology
- ⌚ Concerns over **transition** issues
- ⌚ Tendency for focus to be on production of product
- ⌚ Opportunities to support '*Ambitious Excellent Schools*'
'Assessment is for learning', 'Curriculum for Excellence', 'Determined to Succeed'
- ⌚ Emphasis on **creativity** and **enterprising thinking** as ways forward
- ⌚ Opportunity to take *Assessing Design Innovation* into a new research setting

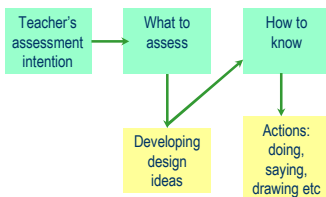


Framework for CAPITAL-DT research questions

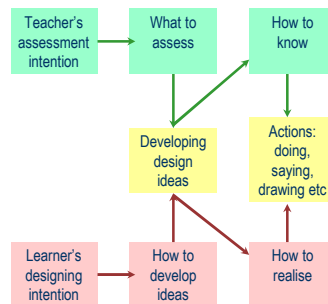
- ⌚ values and attitudes towards creativity
- ⌚ self and peer evaluation
- ⌚ learners progress in performance
- ⌚ correlation – attitudes, evaluation (self and peer) and performance

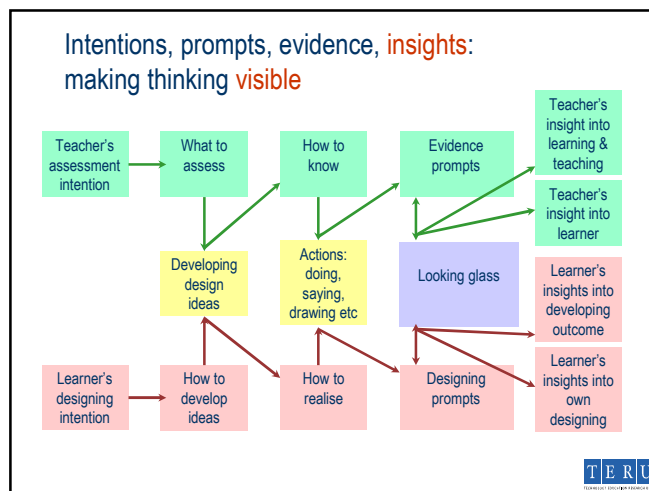
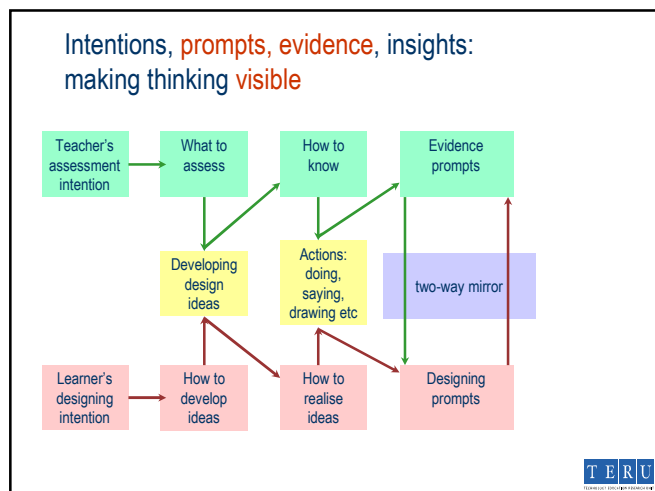


Intentions, prompts, evidence, insights: making thinking **visible**



Intentions, prompts, evidence, insights: making thinking **visible**





CAPITTAL-DT

The underlying question ...

Were we merely exposing levels of capability

Or developing capability at the same time?

Can an assessment activity be a good learning activity too?

What did creative performance look like?

Assessed holistically

WOW <--> YAWN

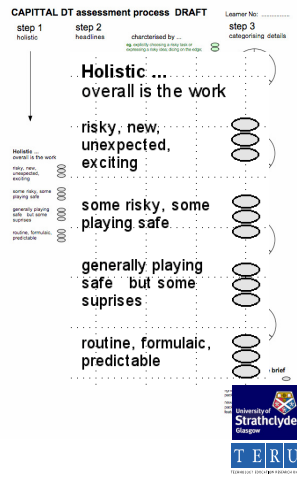
and then

having ideas

growing ideas: modelling

growing ideas: optimising

proving ideas



Assessing creativity

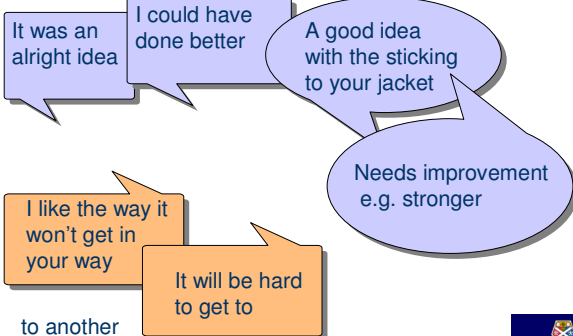


having ideas (sparkiness)	eg. explicitly choosing a risky task or expressing a risky idea; 'dicing on the edge', suspending reality, bending rules; courting failure
looking for starting points;... risk/comfort zone getting outside conventional constraints	eg. suspends reality & take on challenge; running with risky ideas towards unknown, but under cautious
	eg. plays at the edge of a safe task or idea sets them on the path to achieve something new, dipping toes in
	eg. plays safe; works within existing experience/reality / repertoire; needs a 'kick start'
growing ideas (modelling)	eg. ideas grow through a rich web of thought & action - using a range of modelling techniques in dynamic and unconventional ways
experimenting, exploring, looking forward towards a solution, ...	eg. some idea growth through the integration of thought->action with appropriate techniques used and dynamic development as a result
growing and developing ideas	eg. ideas or parts of ideas being explored through modelling and this impacts on development
	eg. ideas largely static and unmoving

University of Strathclyde
TERU

CAPITTAL-DT

Improved performer to self



CAPITTAL-DT

Extending the self-reflection after the task

Using the learner evaluation questionnaire to help them identify ...

"I was best at..."

"the easiest thing was ..."

"The most difficult thing was ..."

"Today I learned ..."

"I want to get better at ..."

Links between performance and self reflection

For example

11. I was best at designing
12. The easiest thing was choosing the idea
13. The most difficult thing was pulling it together
14. Today I learned
1. how to make my ideas into objects
 2. how to make it easier to plan it
 3. how to make a packaging which can be reused
15. I want to get better at
1. making it look real
 2. making it fit together properly
 3. choosing the right equipment



11. I was best at thinking up my ideas and planning them
12. The easiest thing was thinking up my ideas
13. The most difficult thing was getting adjustable stop to stay on
14. Today I learned
1. I can think up ideas
 2. that can make up just about most limited resources
 3. I can make models
15. I want to get better at
1. containing my ideas
 2. guiding things
 3. getting things to stick



CAPITTAL-DT

CAPITTAL-DT

Indicators & Discriminators

- Self awareness
- Reflection on learning
- Target setting
- Holistic overview and detail r.e. achievement / performance in domains of D&T
- Lower performers more interested in product only
- Improving / Higher performers interested in overall capability , process and product



CAPITTAL-DT

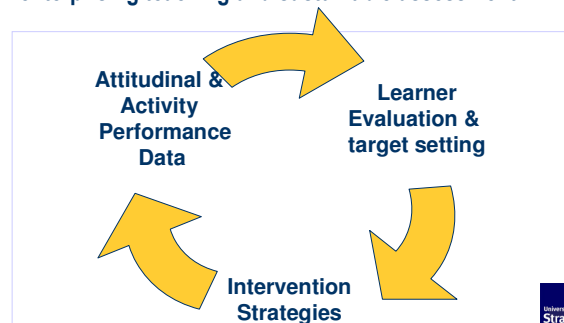
Interventions identified as needed

by learners and teachers

- Strategies for creative thinking and making connections
- Techniques for communicating
- Thinking about requirements/ specification
- Support in providing comment/ peer / self evaluation
- Developing 'I can' attitude



Negotiated - partnership for sustainable learning, enterprising teaching and sustainable assessment



In summary : Successful learning

- Ω 'Successful learning takes place when the pupils are highly motivated, interest and curiosity is aroused' (HMIE ,2000)
- Ω range of approaches and range of subtasks
- Ω all learning preferences catered for
- Ω ownership, pace, framework
- Ω time for reflection on achievement and performance
- Ω assessment not perceived as driver, purpose & by teacher
- Ω meaningful intervention and facilitation
- Ω practice for mastery



In summary: teachers response

- Ω Displayed a willingness to adopt some of the approaches
- Ω Appreciated the underpinning concepts
- Ω Noted how much the learners 'loved it were focussed and concentrated for long spells'
- Ω Were 'surprised the learners didn't question more'
- Ω Recognised the personal qualities and attitudes displayed by learners that had opportunity to come to the fore
- Ω AifL in practice throughout creative and enterprising design task in Technology Education



CAPITAL-DT In conclusion ...

- Ω Capability exposed or developed? - a bit of both
- Ω Learners 'forgot' these were assessment activities
- Ω The activities provoked insights in the learners into their own learning and capability
- Ω Provided teachers (potentially) with good formative material to work with
- Ω Performance AND learning become visible to learners AND teachers

"by making the dancers visible, we are making it much easier to learn to dance" Perkins 2003

- Ω Of value to other curriculum areas???



e-scape scotland : aims & objectives

- Ω to grow research from CAPITAL-DT
- Ω develop and extend an adaptation of the 'e-scape' project
- Ω to capture performance, thinking, creativity, self reflection and review in real time
- Ω to trial and appraise the opportunities 'e-scape' offers for supporting Assessment FOR, OF and AS Learning.
- Ω to embed formative assessment strategies as learners undertake design challenges
- Ω begin explore a range of digital devices available in schools
- Ω to provide proof of the 'e-scape' concept in practice- iterative learning and assessing process
- Ω develop learning experiences in spirit of CfE



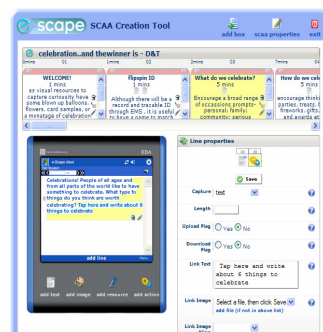
e-scape scotland

- e-portfolios evolve in real time in school workshops and studios over a period of time
- Evidence captured in range of modes- voice, text, photo, video, sketch, drawing, mind-maps
- teachers can view and access e-portfolio to add feedback and comment at anytime
- learners can view and access feedback and prompts on portfolio
- teachers can author learning activities, experiences and tasks



Introducing the authoring tools & flipspins

MAPS: Managed Assessment Portfolio System task Mozilla Firefox



Assessment is for learning

- teacher & learner, learning and teaching, at heart of assessment
- personalised learning information for teacher and learner to manage
- digital systems to help out?

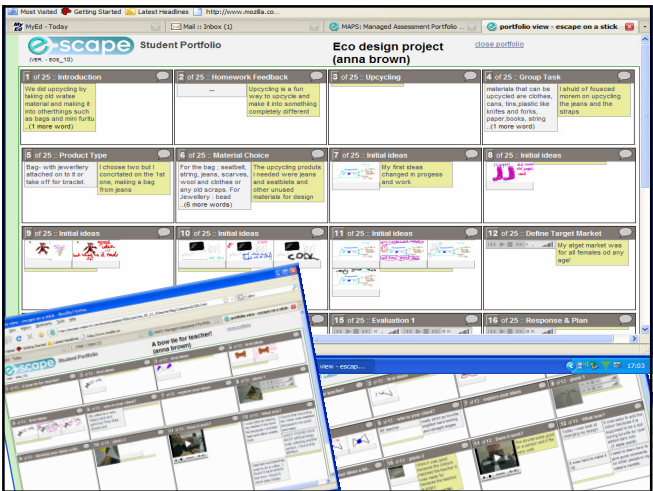
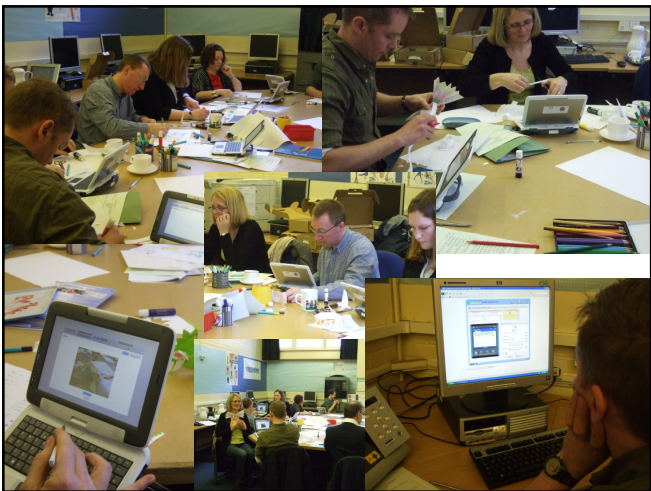
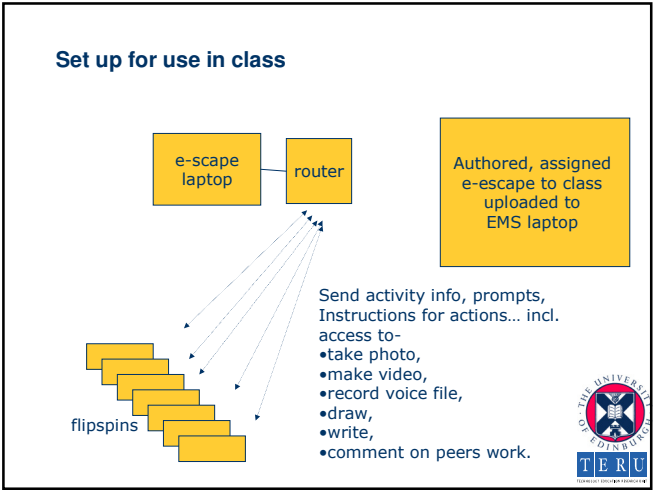
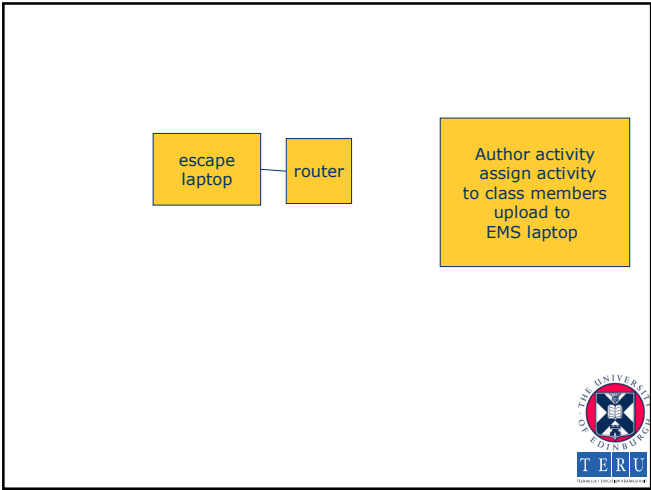


preliminary engagement

professional development and project preparation meeting to

- focus on the rationale of learning through design, creativity and innovation
- revisit *Assessment is for Learning* strategies and consider applicability for inclusion in the trial activities;
- provide hands-on experience of the handheld devices to be adopted;
- Experience in authoring of activities and management of the handheld devices;
- introduce on-line learning log book / reflective e-journals and digital sharing of experience through GLOW.





Sample of Learner response given below- ***in their own words& spellings:***

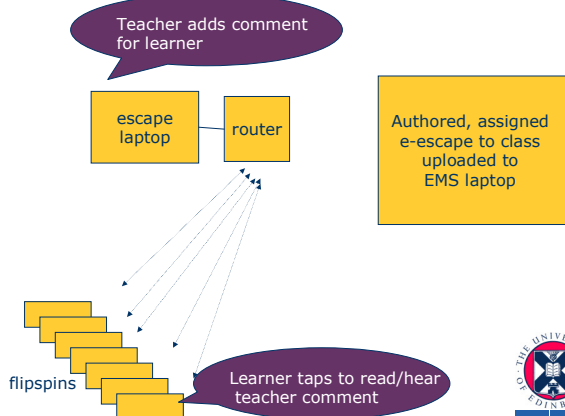
'my favourite part about them is using the camera for taking photos and videos and I also really liked sending comments to other people and then receiving them about the bow ties.'

'I really enjoyed taking pictures it helped show your design in different stages once you had finished creating the bow tie you could see how you improved the idea.'



What are we looking for?

- 🔗 analysis skills;
- 🔗 decision making and justifying;
- 🔗 imagination/ innovation/ creativity in ideas;
- 🔗 ability to communicate fuzzy ideas
- 🔗 developing ideas through synthesis and iteration;
- 🔗 keeping scenario and task in focus;
- 🔗 identifying the requirements of task / design/ brief;
- 🔗 supporting to others;
- 🔗 critical thinking in response to prompting;
- 🔗 literacy & numeracy in context
- 🔗 setting personal learning targets
- 🔗 self evaluation reflection on learning, performance & outcome;
- 🔗 peer evaluation;
- 🔗 outcome;



Evidence

- 🔗 Sample e-portfolios from learners in PS and HS
- 🔗 Teacher logs on GLOW note their own professional and personal responses.
- 🔗 Class Learner logs on GLOW note their personal responses.
- 🔗 Non-participant observers from EU, SQA and LTS sample the classroom experience whilst learners are engaged in task.



How we look for performance & thinking



Peer assessment

[E-scape Project - Mozilla Firefox](#)
[File](#) [Edit](#) [View](#) [History](#) [Bookmarks](#) [Tools](#) [Help](#)
[Go](#) [Back](#) [Forward](#) [Home](#) [https://portal.glowscotland.nhs.uk/establishments/erourladyoftheemissionsprimary/P7/E-scape Project,Us](#)
[Most Visited](#) [Getting Started](#) [Latest Headlines](#) [http://www.mozilla...](#)
[MailBox: morayhouse](#) [E-scape Project](#) [portfolio view - escape on a stick](#)

John with our first PDA

[Add picture](#)

Bowie for teacher

Our Comments

Subject

Comments
 Please give comments on each others bow tie. Please remember to be positive and give helpful feedback.

Comments
 I think nick's bowtie is very colourful, the fasteners are good.
 Aisha's bowtie has lots of pictures and words which helped me workout who it was for.

Nick's bow tie.
 I think that Nick's bow tie is Very bright
 colourful. It has spots on it which really shows Ms.Shawna's personality and character as she loves spots. I think that Nick could add in a few words and pictures to improve his bow tie further.

Learner comments on e-scape project

Any comments on the PDAs now that you've had a go at using them?			
I think it was fun. The best part was making the model. We had a show at the end of it.	0	John Le Combre	18/03/2009 11:26
Any comments on the PDAs now that you've had a go at using them?	0	Helen Hesketh	18/03/2009 11:29
I think it was fun using new equipment and making models of bow tie/recording photos, videos and drawing them.	0	Jennifer Ryan	18/03/2009 11:31
Any comments on the PDAs now that you've had a go at using them?	0	Rohan Buchanan	18/03/2009 11:38
It was very fun because you got to write on the screen, take pictures and record videos. My bow tie was good and was fun to make. The activities were alsofun because you got to work in a team. The only problem was trying to record your voice on to the PDA.	0	Caitlin Cassidy	18/03/2009 11:39
Any comments on the PDAs now that you've had a go at using them?	0	Matthew Kemmitt	18/03/2009 11:44
I like the PDAs because there are lots of things to do on them. I liked the bow tie activity because I enjoyed doing the designing and making the model.I also enjoyed taking the pictures and recording your voice. It was very excited and I enjoyed it very much.	0	Caitlin Ryan	18/03/2009 11:48

portal.glowscotland.org.uk/establishments/erouradofthetensionsprimary/P7/E-scape Project/Lists/Pa

Latest Headlines

http://www.mozila.co...

Post Visited Getting Started Latest Headlines

18/03/2009 11:48

18/03/2009 11:53

18/03/2009 12:05

18/03/2009 12:14

18/03/2009 12:17

18/03/2009 12:27

portal.glowscotland.org.uk

Learner comments invited through teacher's blog

mozilla Firefox

http://st-ninians.blogspot.com/

Post Visited Getting Started Latest Headlines

http://www.mozila.co...

Portfolio view - escape on a stick

Create Blog | Sign In

e-scape@st-ninian's

This blog aims to track progress of the exciting e-scape Scotland project being undertaken in St Ninian's High School, Giffnock, Glasgow. The project builds on the e-scape project phases that have taken place south of the border by Goldsmiths University of London.

MONDAY, 27 APRIL 2009

Feedback from 2G

2G tried the Spins out with the Bow Tie activity. What did you think, 2G?

- What was it like using the Spins?
- What features did you like best?
- What didn't work so well?

When you post a comment remember to put your number at the end!

Posted by Mr Blair at 09:29 2 comments

FRIDAY, 24 APRIL 2009

Feedback from 2F

2F tried the Spins out with the Bow Tie activity. What did you

Followers

Follow

Followers (1)

Blog Archive

2009 (6)

April (2)

Feedback from 2G

Feedback from 2F

18/03/09 14:32 on GLOW

THE UNIVERSITY OF EDINBURGH

TERU

In their own words....

- Q I like the camera, voice recorder and that you can take videos the best because you don't have to type anything which makes it easier and you can show your model in a picture or video so people can see what it looks like. No.20 24 April 2009 17:23
- Q I liked taking pictures and recording your voice because it helped you change your design along the way and also you could and if you forgot what you wanted to change you could go back and see what you said. number 15 27 April 2009 19:07
- Q One thing I enjoyed best was reviewing I enjoyed typing up what I thought of my idea and seeing what my class mates thought of my idea. Number 11 27 April 2009 20:23



In their own words....

- Q I think the PDAs are amazing devices. I loved using them because your classmates could comment on your work and you on theirs.
- Q The best part about them would probably have to be the pen and how you get to draw on your PDA with it. I also enjoyed taking pictures of my gorgeous bow tie!!!
- Q The thing I found difficult was having to make the bow tie for someone to actually wear, but in the end I got it

18/03/09 14:32 on GLOW



Analysis and Interim Review

- 🔗 All participants reflect on and seek to tease out the key messages for e-scape-style methodologies in terms of 'Assessment is for Learning'
- 🔗 focus on the data set and illuminate learners' performance portfolios
- 🔗 Identify what evidence is useful for sharing between teachers (including across sectors at transition) and omissions
- 🔗 Critique against CfE principles and purposes
- 🔗 draw diagnostic and formative feedback to aid next steps for individualised learning plan.
- 🔗 Discuss approaches to, and changes in, pedagogy and preferences regarding *AiFL* strategies
- 🔗 Identify further opportunities for authoring CfE experiences and activities to gain more authentic insights into learning



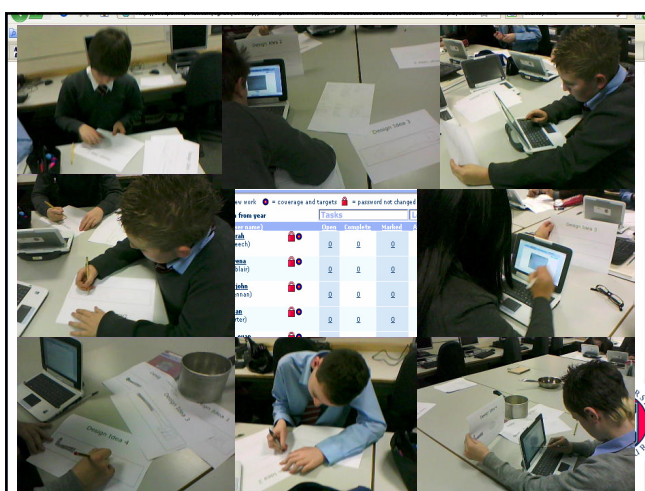
Initial Teacher responses

- 🔗 *learned they can be great aid to learning*
- 🔗 *fun exciting way to learn*
- 🔗 *question own assessment strategies*
- 🔗 *am thinking more about alternative assessment and feedback methods*
- 🔗 *different ways pupils learn*
- 🔗 *allowing pupils/ providing pupils with contexts and tools to enable them to thrive and show their ideas and creativity*
- 🔗 *project should help widen my perspective on teaching / learning*
- *how can I embed this, rather than use as standalone projects?*



design of activities / design challenges

- 🔗 developed in conjunction with the teachers and develop the purposes, principles and aims of Technologies experiences in CfE.
- 🔗 specific phases and stages are signposted in the activity for peer, self and for teacher feedback.
- 🔗 range of tasks which engage the learners in next steps decisions, quality of thinking, review, reflection, feedback and target setting for themselves and for others.
- 🔗 teacher to view/ hear and further prompt or confirm or suggest (feedback/feedforward) using a range of digital approaches.



Project Deliverables:

A complete set of activity materials for trials

- 🔗 Examples of CPD teacher activities
- 🔗 Sample of responses on Glow
- 🔗 Examples of AiFL strategies to be incorporated
- 🔗 Example of literacy in action in design challenges and Technologies experiences.
- 🔗 Activity programme of work and lesson outlines referenced to CfE Technologies.
- 🔗 Software authored as adopted to meet requirement of the programme / assessment and intermittent access and input for learner by teachers.
- 🔗 Sample of survey and observation instruments



Intentions, prompts, evidence, **insights**: making thinking **visible**

