Constructing an online collaborative learning space for Adult Basic Education

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Agenda

- The aim of this study
- CSCL – what is it, who uses it and what are the benefits associated with it?
- Why use CSCL for ABE?
- Methodology used for study - Design Based Research (DBR)
- Designing CSCL for ABE
- Data Gathering
- Findings
- Implications for Practice

Computer Supported Collaborative Learning (CSCL)

'Learning collaboratively with the support of computers' (Kirschner & van Bruggen 2004)….

- Pedagogical approach combining collaboration and technology to facilitate learning and knowledge creation through social interaction online
- Used by Higher Education, Mainstream Education eg Moodle, Blackboard

CSCL effectively enables..

On an online platform, learners express opinions, defend, challenge and compare, pursue lines of inquiry, listen and see others' perspectives …leading to new lines of inquiry

- Opportunity to gain other perspectives
- Embedded negotiation and meaning-making
- Collaboration
- Co-construction of knowledge

Characterised by:

- Iterative group interaction and analysis
- Synchronous and/or asynchronous communication
- Use of authentic activities based on real-world scenarios

Outcomes reported for effective CSCL

'Learners understand how they can become creators and co-creators rather than consumers of knowledge

- Deeper and higher order learning
- Equalising effect* - more equal participation than face-to face
- Self regulation
- Shift in beliefs about learning

All outcomes are relevant to ABE learners …..but are these outcomes achievable for ABE learners?

*Hollingshead, 1996

Is CSCL a realistic approach for ABE?

From a theoretical, practical and equality perspective

…yes

- Both share theoretical roots
- CSCL expands on existing social learning approaches already popular within ABE – reconfigure existing practice
- Equalising effect may enhance learner participation – help address issues of power/identity
- Focus is on the learning and how it is being achieved (metacognition) – learning to learn
- Facilitates development of skills essential for 'new work order' (Gee, 1996)

There are challenges for ABE

But, there are no records of CSCL use for ABE in existing research…….why?

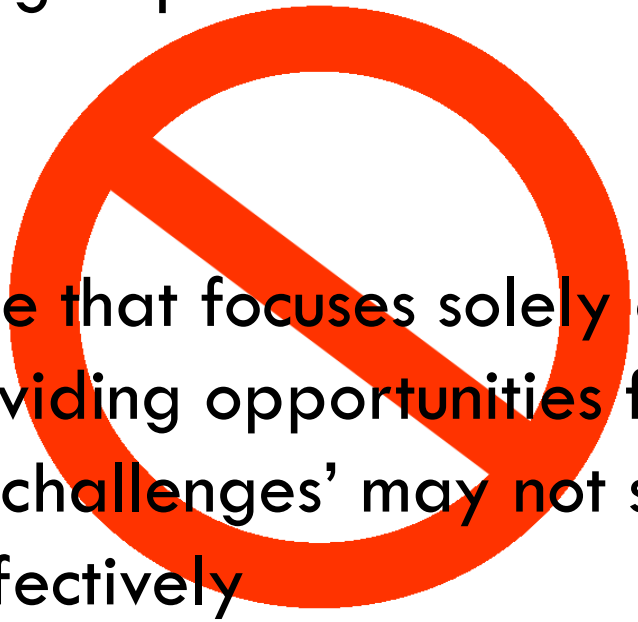
- IT access and competence required
- Team-work and negotiation skills required
- Learners have a predisposition to 'banking model' of learning
- May set responsibilities for learners too high
- Tutor role changes to moderator
- May provoke too great a shift in existing roles and power relations

There are challenges ….**BUT**

Access to this learning opportunity should not be a privileged practice

And..

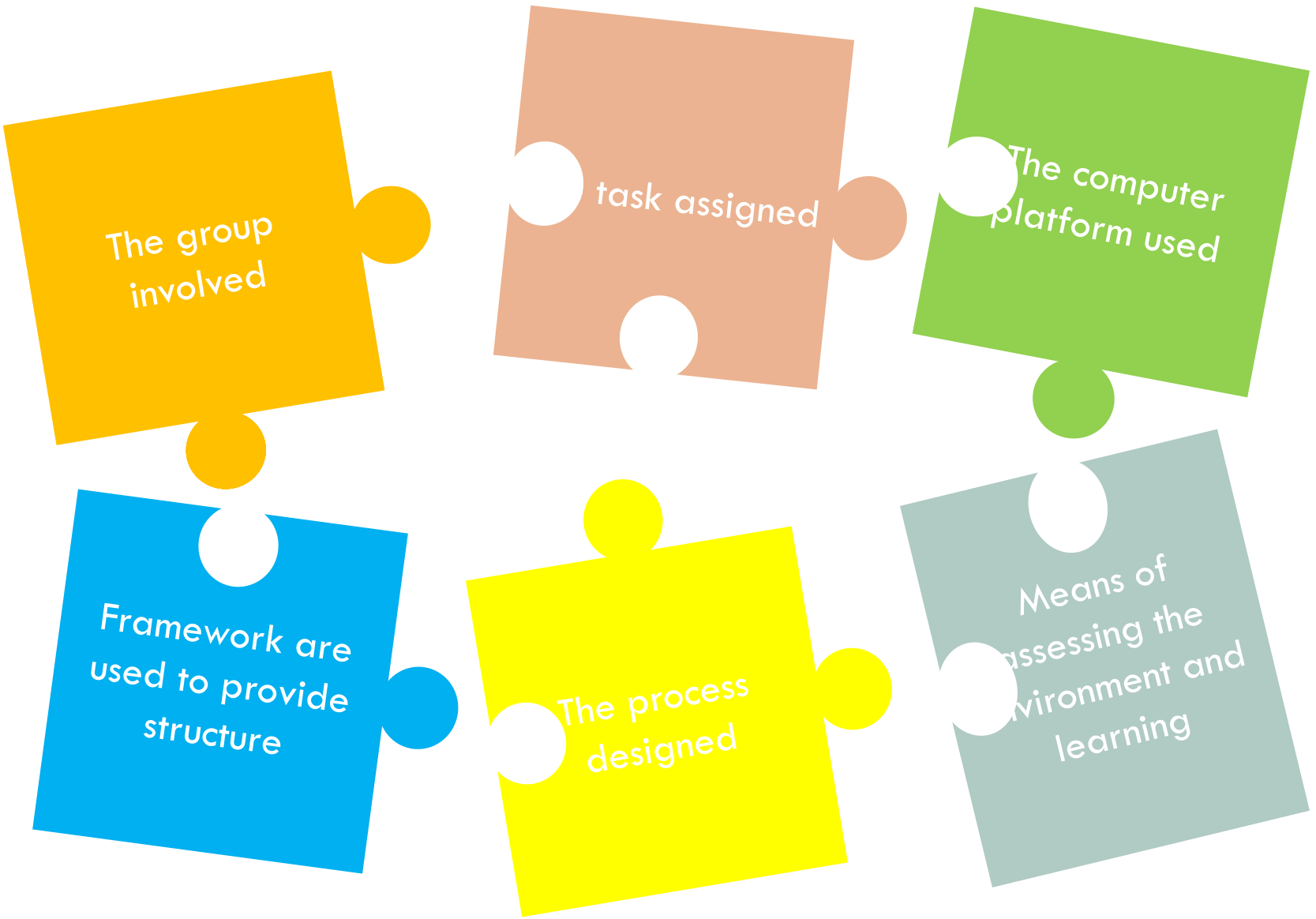
ABE practice that focuses solely on basic skills without providing opportunities for 'authentic intellectual challenges' may not serve ABE learners effectively



CSCL design

Design goal must be set, this then informs elements of CSCL design

- Difficult yet critical to the achievement of the expected learning outcomes
- Requires skilful planning, design, coordination and implementation of content, pedagogy and technology
- Involves multiple variables


The group involved
task assigned
The computer platform used
Framework are used to provide structure
The process designed
Means of assessing the environment and learning

Design Based Research

What methodology can cope with this range of variables, which are difficult to separate from their context?

Means of studying learning *in context*

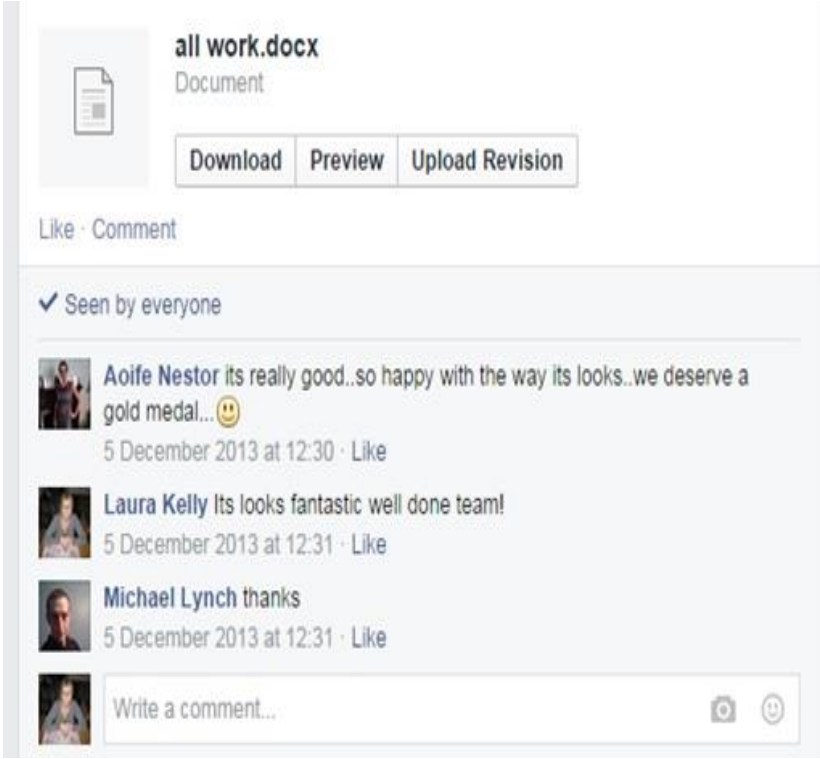
- Systematic methodology which:
  - Copes with multiple dependent variables
  - Involves **iterative** design revision enabling try and try again approach

- **Limitations**- rich data, too much? when to stop iterations? cannot generalise findings

The computer platform used

Computer Platform: **Facebook**

- Free, easy to use, requires little IT support, secure and accessible 24/7
- Many learners already comfortable with it
- Social environment
- Provides most of the functionality of the usual platforms, facilitating…
  - Discussion with real time comments
  - Collaboration – can work, edit and upload changes to files that are shared with all
  - Files, images and links can be uploaded
  - Control – can see who has read/worked on any posting, comments can be monitored
  - Surveys/poles can be easily conducted



The tasks assigned

Based on existing research recommendations:

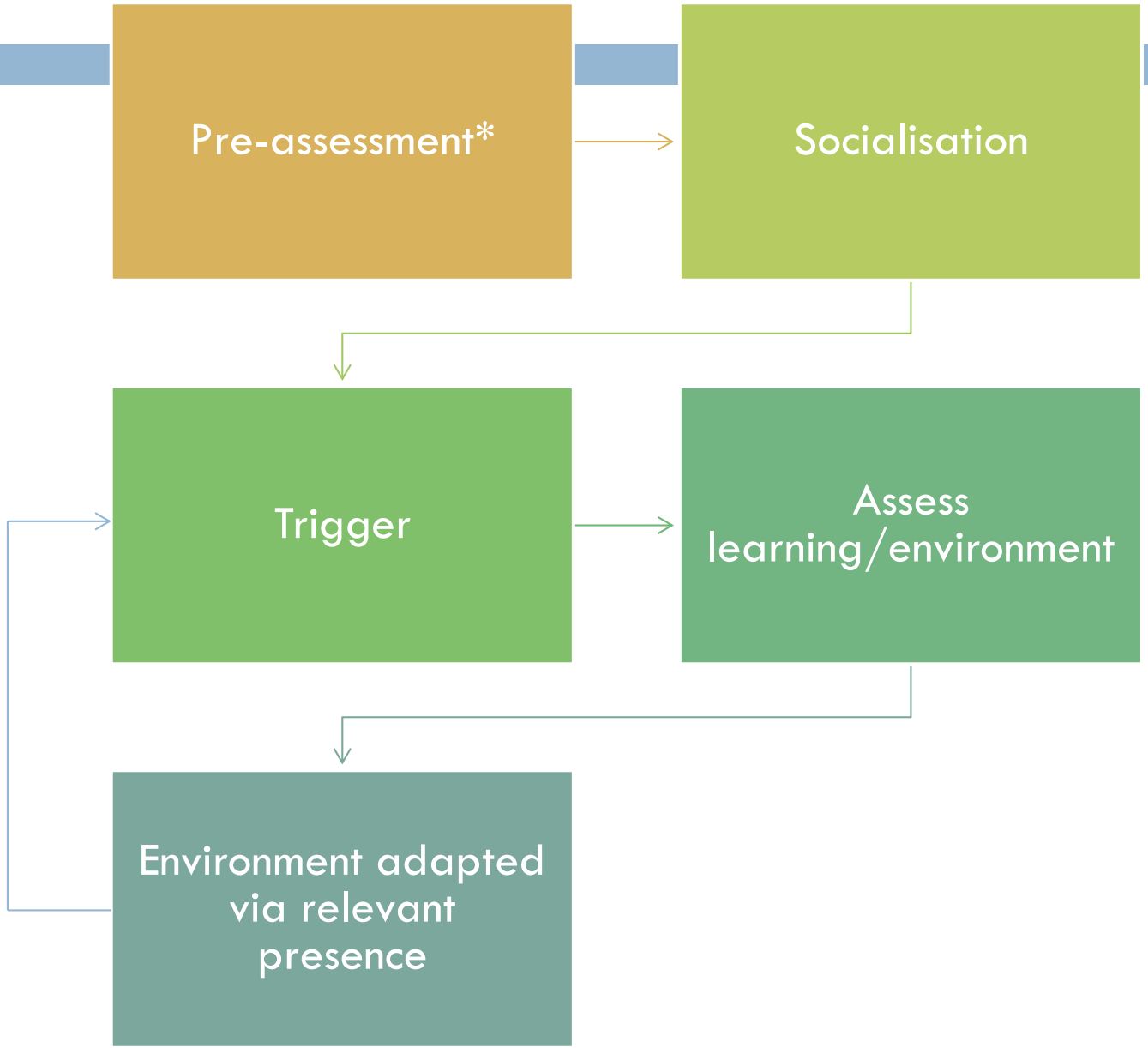
- based on real-world scenarios or problems 'authentic assessment'
- must elicit several possible solutions to discuss, challenge, defend thereby providing opportunity for higher order learning
- meets definite course assessment outcomes towards accreditation
- enables both individual and group work through division of labour
- facilitates the participants to take responsibility for own and group tasks
- situated within the zone of proximal development of all participants

Task 1: Select a holiday for a couple with 10 criteria(including health issues), explain reasons for selection

Task 2:Design a 4 page brochure according to spec, to promote Christmas products for a local retailer

The process designed

The Process

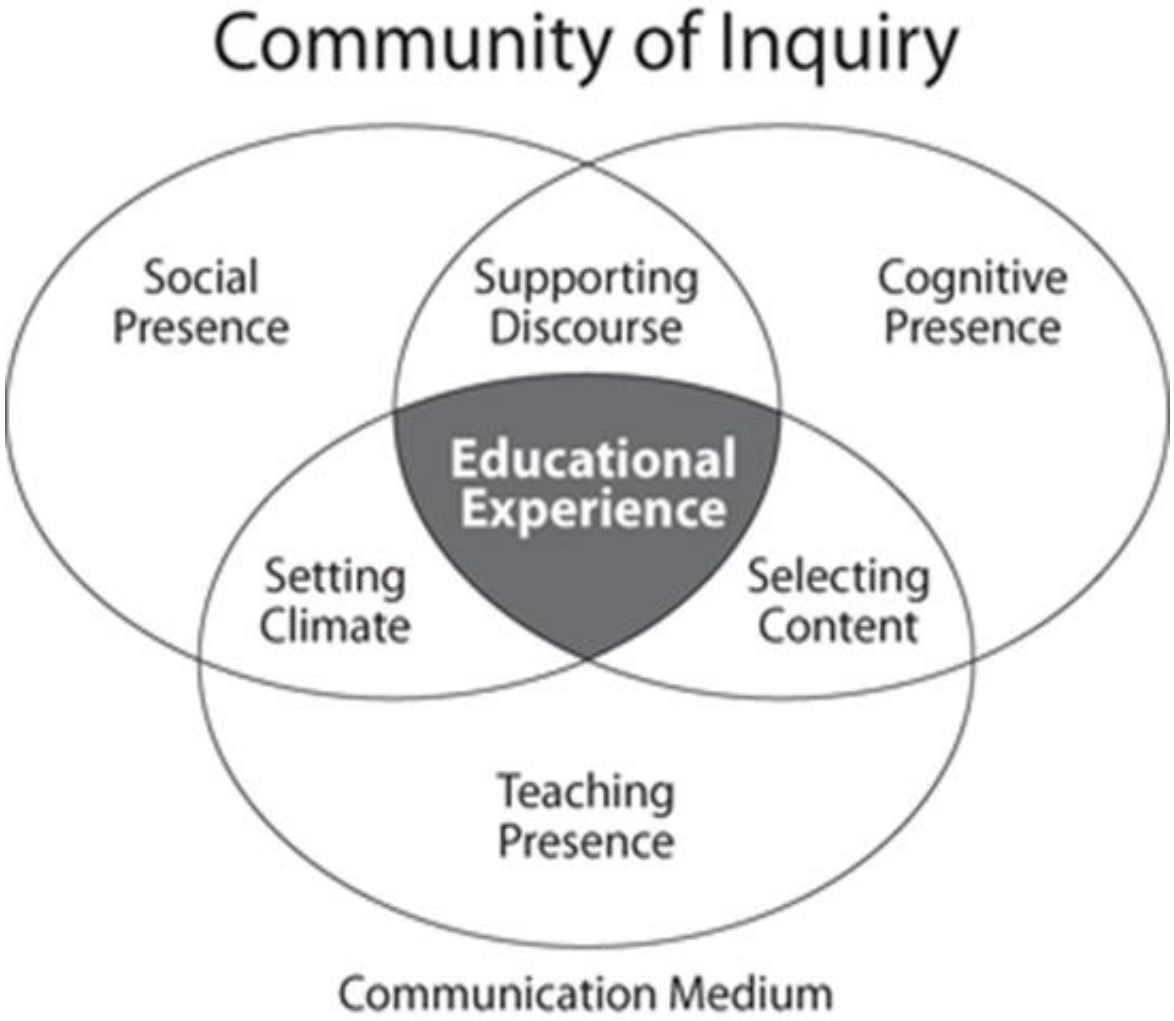


*** CABES Framework (Greene, 2015)**

The Framework used to provide structure

Framework for structure

Salmons (2003) popular model states that online learning moves through 5 connected linear phases but….



Creating Social, Teaching &Cognitive Presences

Combined 2 face-to-face socialisation sessions with ongoing monitoring of the environment and learning

- practiced various types of interaction, checked security, agreed ground-rules, discussed expectations, anxieties
- explored shifting role of receivers of knowledge to co-constructors
- discussed higher order learning – definition, indications of, uses and importance (made explicit)
- Invited participants to be the teacher - substantial, valuable existing knowledge

The Framework used to provide structure

Means of assessing the environment and learning

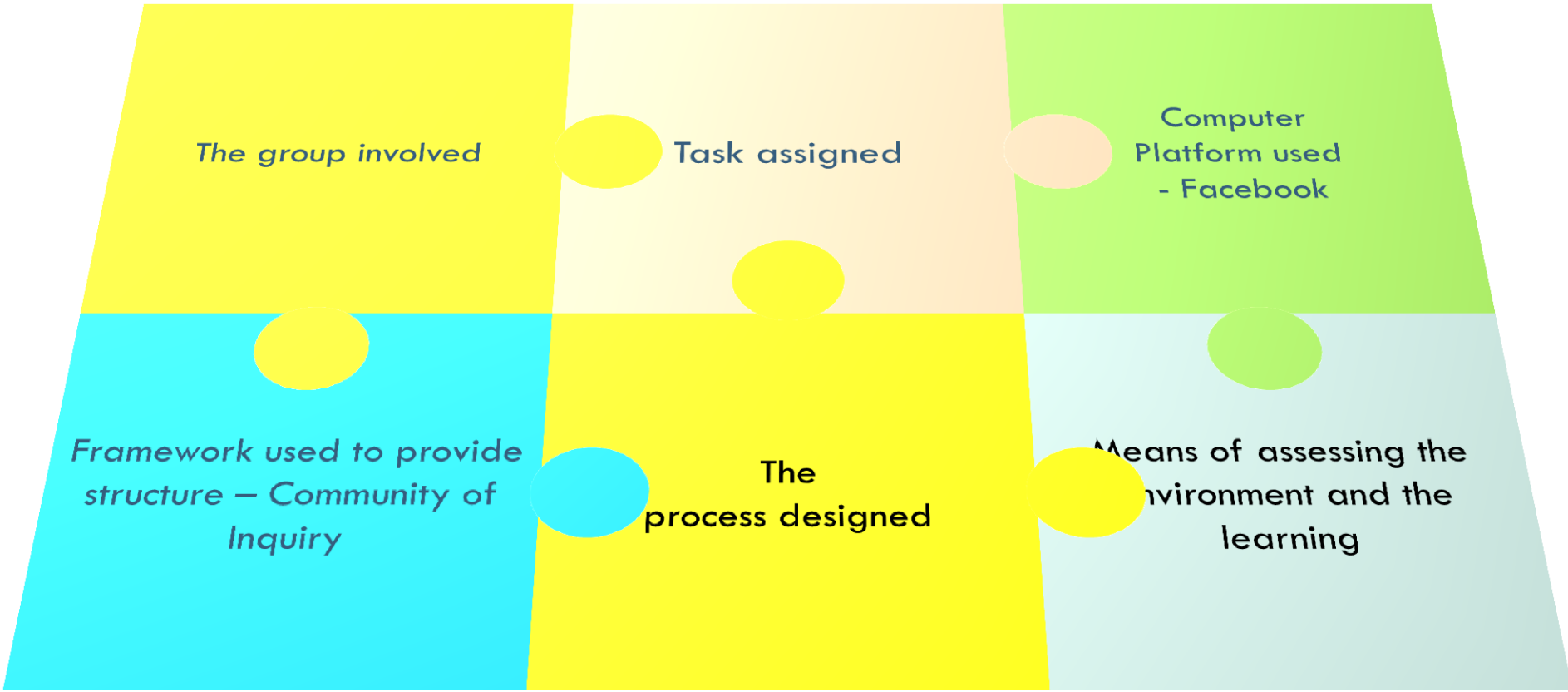
Assessment of learning & the environment created

Used mixed methodology – (1) quantitative and (2) qualitative interaction analysis and (3) survey

1. Quantified interactions* – level of engagement in the environment
2. Analysed interactions qualitatively** – to assess <u>type</u> of learning for indications of higher order learning.
3. Survey ** used to gather participants perception of
   - the learning
   - the environment
   - distribution of power within the environment

* Ma 2013; **Garrison & Anderson 2003

The ‘Facebook Project’



The findings – general overview

- Both groups were very positive, enjoyed the pilots
- High levels of participant engagement
- Evidence of growing confidence
- Participants took responsibility for their own and others work
- Leaders emerged early

The findings – general overview

Evidence of sharing of teaching

- participants provided an equal number of instruction/advice postings as the tutor - several examples of giving instruction, encouragement, checking for updates

Participants felt 'in control'

- when asked to estimate the perceived division of power within the learning space, all participants selected a ratio of 50:50 between participants and tutor.
- similarly when asked about the extent of their input into the final product, participants selected a ratio of 85:15; 85% of their final report was contributed by themselves with 15% contributed by the tutor.

Both findings were as a result of the **equalising effect** and represent a significant **shift in thinking about learning,** moving away from the traditional banking model

1.Quantitative:
participant engagement figures

Group	Total posts	participant posts (%)	Tutor posts (%)	Average thread length (posts)	Average number posts/day
1	332	10-36	18	3.96	21
2	305	15-26.5	26	2	27.7
3rd level (from Ma, 2013)	162			3	

What kind of interactions were evident?

- Social messages to start – security, instructions
- Task uploaded- the trigger
- Exploration - links to information, suggestions for consideration, information exchanges
- Later started qualifying why information posted was relevant
- Work plan decided and division of work (leader emerged)
- Requesting feedback, offering updates on progress
- Beginning to hold each other accountable
- Integration – comparing, assessing, combining information; new triggers emerged to start further rounds of inquiry
- Resolution – indications of solution testing and defending. Comparisons of solutions with requirements of the task, evaluating and final agreement made.

2. Qualitative interaction analysis

Cognitive Presence	Iteration 1(%)	Iteration 2 (%)	Akyol & Garrison (2011)
Trigger	6.6	7	4
Exploration	24.8	16.4	14
Integration	21.7	16.4	52
Resolution	12.4	17.4	6
Other	34.5	43	24

3. Survey - participants' perceptions

Presence	Feature	Average Score Iteration 1	Average Score Iteration 2
Teaching	Design & organisation	5 (strongly agree)	4.75
	Facilitation	5	4.64
	Direct instruction	4.67	4.67
Social	Affective expression	5	4.44
	Open communication	5	4.33
	Group cohesion	5	4.22 (agree)
Cognitive	Triggering event	5	4.56
	Exploration	5	4.56
	Integration	4.67	4.56
	Resolution	5	4.67

This is Ann

Implications for practice

1. **Community of Inquiry** framework helps to bring into focus practical factors for successful CSCL
   - Social presence ensured sound space where participants felt comfortable to learn – participants began contributing to teaching presence and eventually cognitive presence
   - Tutor adapted usual approach – she modelled, challenged and encouraged and waited for other participants to respond to requests for advice

Implications for practice

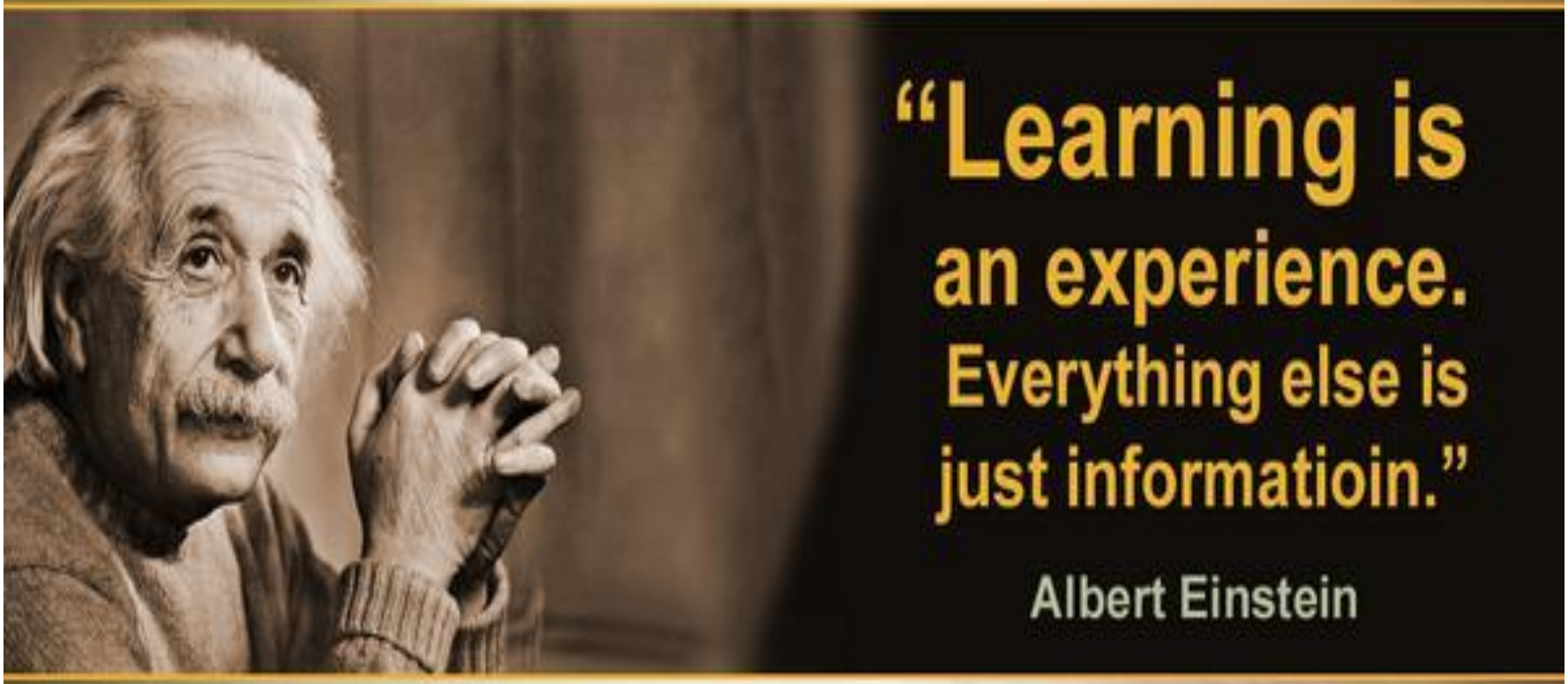
2. Higher order learning is feasible through **effective design** of the learning environment/process.
3. **Facebook** provided a social learning environment for effective collaboration, including 24/7access and space to think more deeply about, draft/redraft posts.
4. **Task design** is essential to creating opportunities for higher order learning.

Recommendations

- Tutor CPD
- Pre-assessment of participants
- Include socialisation weeks (3-4 weeks) to develop necessary skills for effective participation: eg using Facebook, develop IT skills, group-work competences
- Further study – these results are specific to this project, small group, not generalisable

To summarise…

1. CSCL **is** feasible for ABE
2. Learning outcomes as reported for Higher Ed **are** realistic and achievable objectives for ABE:
   - Higher order learning
   - Self regulation
   - Increased confidence
   - Equalisation effect
   - Shift in thinking about learning
   - Sharing of power within the learning environment
3. Participants' perception was positive



Thank you, any questions?

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