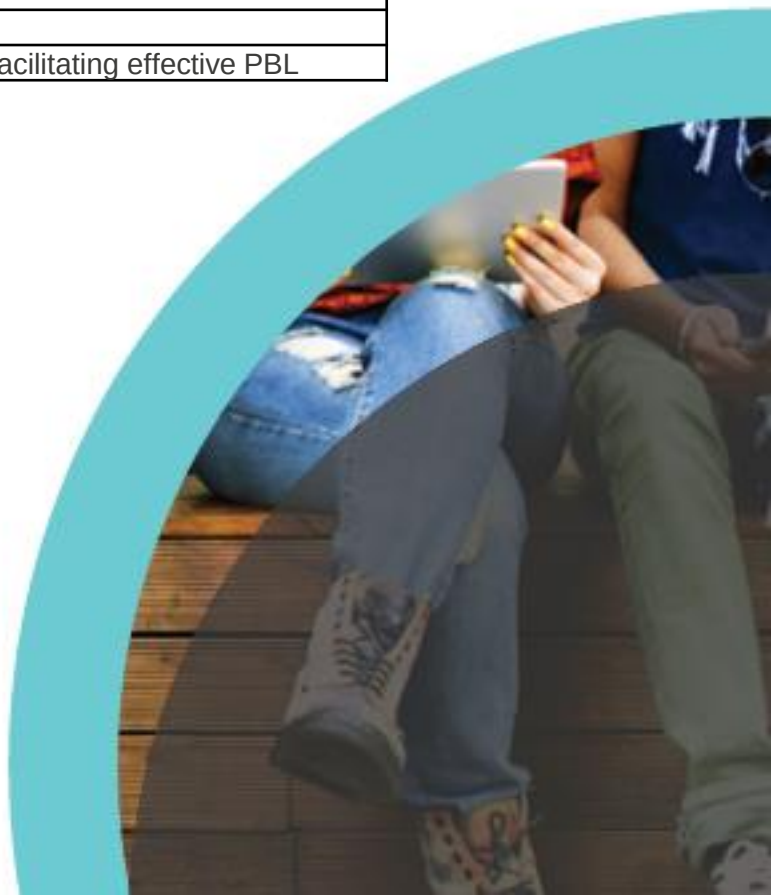
ASSOCIATION OF COLLEGES

EDUCATION & TRAINING FOUNDATION

In partnership with emfec

This resource is intended to be read in conjunction with the case study on the project led by Derby College and Output 8	
This is what this resource is	a slideshow that shares, analyses and evaluates findings from problem-based learning trials with students
This is what it is for	A practitioner tool for planning effective PBL
This is how it could be used	as a source of information on planning and facilitating effective PBL

Outstanding Teaching, Learning and Assessment (OTLA) Technical Skills National Programme: sharing and developing effective practice



Partner Dissemination Event (Melanie Lanser)
16/11/2017
Output 7

From Factories to Communities of Discovery

A study of how Problem-Based Learning can be used to develop students' behaviours, skills and knowledge to be excellent technical professionals

DERBY college

New College Stamford
All round excellence

Leicester College

NOTTINGHAM COLLEGE

Welcome

- Context setting
- Case studies
- Student voice
- Findings
- what makes this outstanding teaching, learning and assessment?
- Next steps

Our Aims

- To use problem-based learning (PBL) to create a future workforce with higher-level skills, knowledge and behaviours who can drive and respond to rapidly changing industry needs;
- To trial a totally different approach to longitudinal development of fledgling engineers, in partnership with employers with a view to using this approach in the forthcoming T-Levels as a way of forming highly skilled professionals for students undertaking study programmes

Our Hypotheses

1. PBL is an effective pedagogical model to support students to develop into technical professionals progressing to skills employment and higher level learning
2. JPD is an effective model to support the development of employer relationships for T-Level delivery

We need to move beyond the tyrannies of improvement, efficiency and standards, to recover a language of and for education articulated in terms of ethics, moral obligations and values (Ball, 2007: 191)

Stenhouse: ‘the central problem of curriculum study is the gap between our ideas and aspirations and our attempts to operationalise them…The gap can only be closed by adopting a research and development approach…whether alone or in a group.’

…through our assumptions and choice of method we largely create the world we later discover (Cooperrider and Srivastva, 1987: 129)

It is only by talking about trust, and trusting, that trust can be created, maintained and restored
(Solomon and Flores, quoted in Hargreaves, 2012: 15)

Features of PBL

- Complex, real world situations that have no one “right” answer are the organising focus for learning;
- Problems weave theory to practice;
- Students work in teams to confront the problem, to identify learning gaps and to develop viable solutions;
- It focuses on communication and interpersonal skills, skills that go beyond the area of technical expertise;
- Students gain new information through self-directed learning;
- Teachers act as ‘facilitators’;
- The focus is on the processes rather than the products of knowledge acquisition.

Barrows and Tamblyn (1980); Boud (1985)

What we did

- We ran five full days CPD, over six months for practitioners, employers and students;
- Seven PBL episodes created and
- Facilitated in four FE colleges by 9 practitioners and one student
- .....reaching over 130 students.
- Student feedback gained;
- Foci group feedback collected; and
- Practitioner and employer reflections shared.

Case Studies

- Derby College
- Stamford College
- Nottingham College
- Leicester College

- Student voice

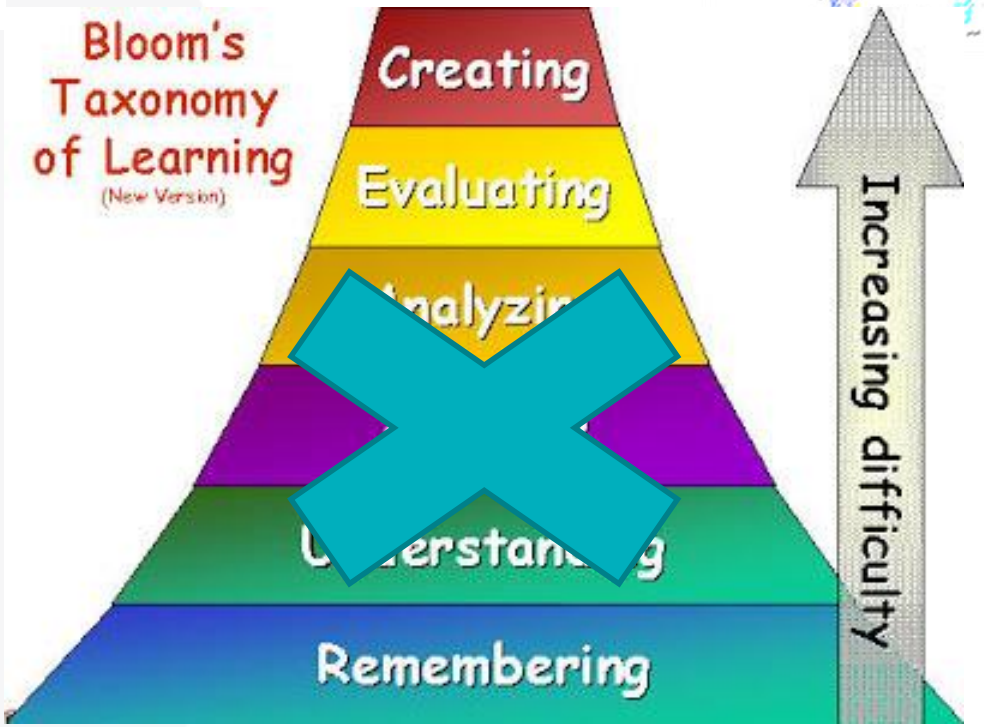
- Employer voice

Tentative conclusions

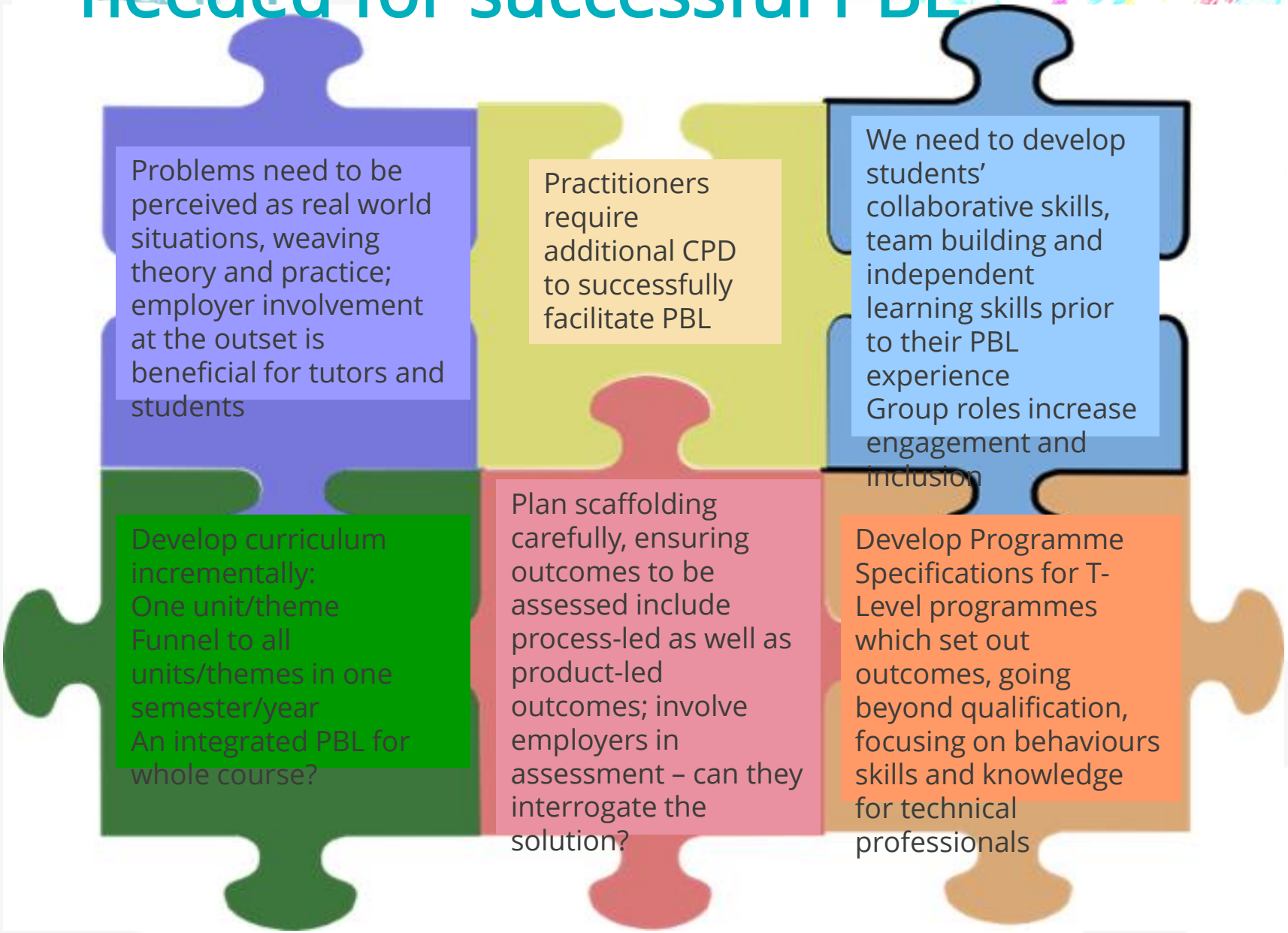
- Communicate WHY to students
- Communicate WHY to employers
- Visible employers – we need to practice employer engagement
  - Working in partnership for developing meaningful work placement learning
  - Employers seeing beyond immediate needs
  - Apprentices – a bridge between employers and educators?
- Articulate employer roles
  - At “launch” of PBL episode?
  - During PBL episode (eg visits, email surgery..)?
  - Triangulating assessment – interrogating the solution? And the processes students have engaged in

Tentative conclusions

- Issues of accountability - how can these be resolved
  - Articulating what is to be weighed and measured in the delivery of T Levels?
- The importance of educating educational leaders in this pedagogical approach
- Can we change our teaching methods and not change our built environment?
- Can we change our teaching methods if 14-16 education and qualification focus does not change?


Bloom's Taxonomy of Learning
(New Version)
Creating
Evaluating
Remembering
Increasing difficulty

Some Findings – characteristic needed for successful PBL



Outstanding teaching, learning and assessment because……

- We are rethinking technical education as T Levels emerge
- We have trialled a new pedagogy, we have experimented, we have taken risks
- We have reflected and systematically analysed findings
- We have worked collaboratively to develop our own professional skills
- We have contributed to developing and evidence-based pedagogy
- We have embraced being a research-informed profession
- We are disseminating to the sector

Next steps?

- Disseminate across the sector – practitioners and employers
- Increase CPD for practitioners delivering technical education within our own organisations and beyond
- Do more PBL in these sectors
- Get better at it
- Trial in different technical pathways
- Reflect and improve PBL for students