

OUTSTANDING TEACHING, LEARNING AND ASSESSMENT TECHNICAL SKILLS NATIONAL PROGRAMME

Output 11: Problem Based Learning Final analysis at Gateshead College
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Problem Based Learning

Our Approach

We decided to merge two different curriculum areas; Business and Computing to encourage collaboration between the learners from both areas to solve a problem given to us by Andrew James, an on-line retailer.

The problem:

To develop a solution for their loss of social media engagement due to changes in Facebook algorithms.

We felt that having both Business and Computing learners work on this together would maximise the quality of solutions presented.

We kicked off the new approach by holding a session with both groups of learners – about 70 in total. Learners were sat on mixed curriculum tables and given a problem to solve. We asked for their opinions on this task at the beginning, middle and end of the session and found some surprising results. Some felt the task would be too difficult to do and as they worked with their teams on it, they reported that they enjoyed the challenge.

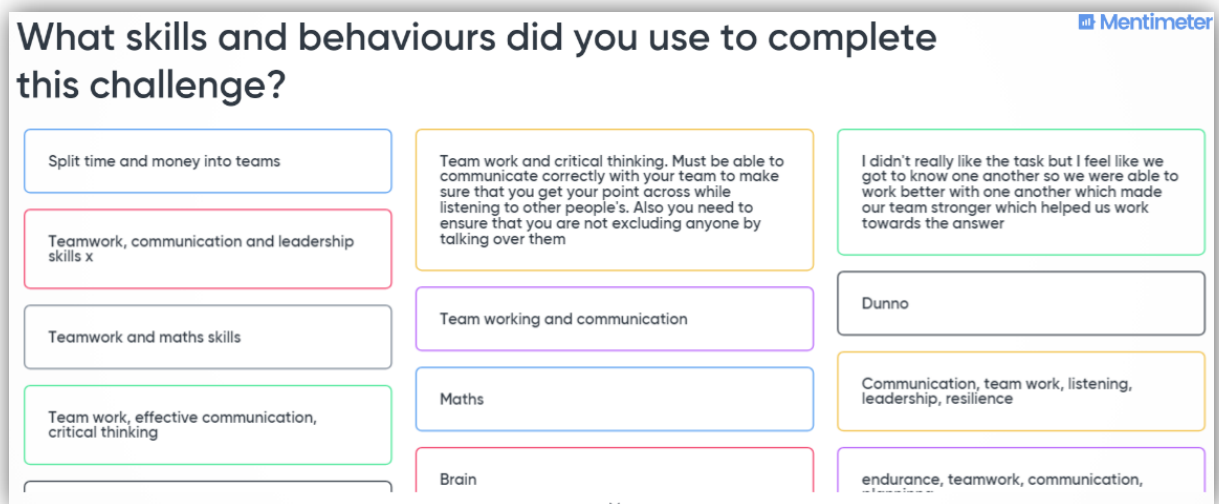
Below is a snap-shot of feedback received at the end of the challenge.

Final thoughts - assessment centre Mentimeter

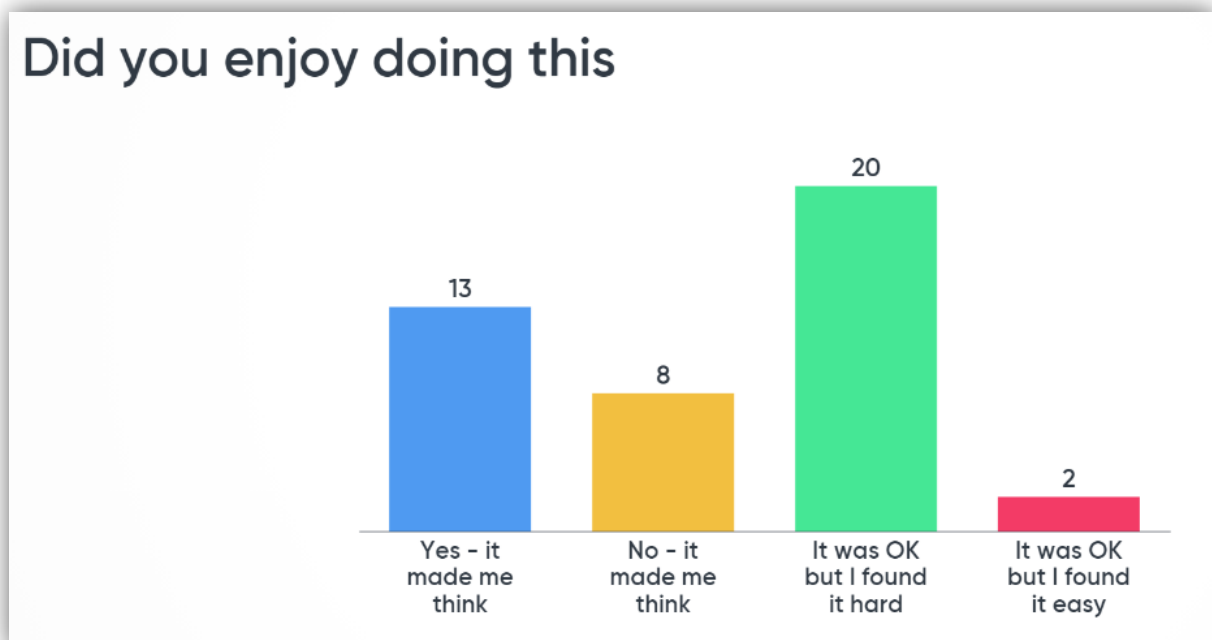
Challenging but found an answer	Challenging	What's the answer?
Don't like it at all not sure about this at all	Very challenging but well built team working challenge.	Dunno
We got £14,216	Mint mate	Communication mostly helped us work towards an answer
Glad we finally got there as a team	Overall it was hard to work out	It was very challenging but workin as a team helped us to get an answer
I felt that the task was challeging	I found it difficult and challenging but working as a team we got answers for all of the questions	Learned some stuff and anything can show up at anytime in employment

Skills Development

We asked the learners what skills and behaviours they used during this challenge – they provided us with an interesting list:



Overall, did they enjoy it? Well again, it was a mixed set of results. Some clearly loved the challenge and some didn't.



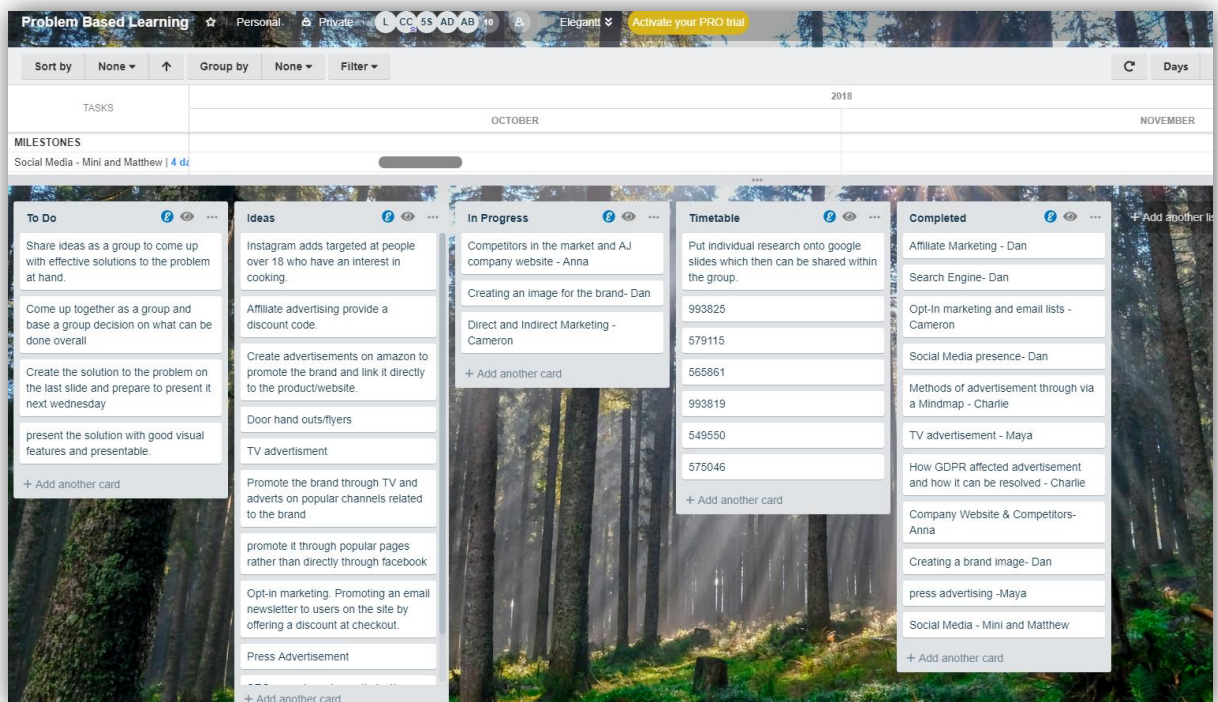
After the initial session, the learners were then introduced to Andrew James and the problem explained.

They were put into mixed curriculum groups and this was mainly based on trying to get equal numbers of business and computing learners in each group.

The Learning Environment

Learners were given the freedom to decide where they would work; in the classroom or in a designated collaborative study areas in the library. Learners were encouraged to apply 'agile' culture to their teamwork, holding scrums at the beginning of each session and tracking progress with the use of a Kanban board and chose to do this on Trello.

Trello boards were shared with teachers and provided an element of progress checking which we felt was important.



Teachers leading the sessions also designed their own methods of recording progress, namely through an observation sheet.

JUDGING THE SUCCESS OF PBL

OBSERVATION RECORD (FOR TUTORS)

Use from time-to-time to gauge student engagement. Note what you see

1. Are students engaged?
2. Are students communicating?
3. Are students taking on different roles?
4. Do all students in the group have a voice?
5. Are students asking/answering questions?
6. Are students working with others positively?
7. Are students taking the lead?

Learner Journey

Learners were given a reflective diary to fill in after every week (see separate output). This has helped us to measure their progress on key areas that employers want. The following is a snapshot of skills measures.

Student	Punctuality	Participation in discussions	Bringing relevant information to the discussion	Using a variety of sources to bring information	Communicating ideas clearly	Demonstrating positive behaviours	Justifying comments made	Accepting and giving constructive criticism.	
Chloe	8	6	6	4	3	5	0	0	
Ellishia	8	6	5	4	3	5	0	0	
Aaron	9	7	6	4	3	5	6	0	
Sam	8	7	6	4	3	5	6	0	
Mohamed	4	5	4	4	3	5	5	0	
Harvey	9	5	4	4	3	5	6	0	
Connor	8	5	5	4	3	5	6	0	
Courtney	8	6	6	4	6	6	7	0	
Sophie	8	6	6	4	6	7	7	0	
Cole	8	6	6	4	6	6	5	0	
Molly	8	6	6	4	6	6	5	0	
Hasan	8	6	6	5	6	6	5	0	
Victor	7	7	4	4	6	7	2	2	
<u>Ronuk</u>	5	3	4	4	4	4	2	2	
Luke	9	6	8	5	6	7	7	0	

Feedback

Here's some feedback from Joanne and Rebecca, two opposing views of problem based learning. Joanne loved it and can't wait to do more, Rebecca didn't like it and has given us some useful guidance on what would make it better; smaller groups, build them based on the personalities of the individuals (we think finding a person's Belbin team role would help this) and offering master classes when needed.

Outcomes

Vicky Cross, one of the teachers on this project was concerned that the knowledge the students were getting from self-discovery would be weak. Although she was checking this via weekly updates with each team using Q&A and checking trello boards, she was still concerned this was an issue. After the presentations were delivered, Vicky reported that in most groups the depth of knowledge they displayed went above and beyond her expectations and that learners had 'dug deeper' to get a real understanding of the topics.

What we'd do next time:

- Consider Belbin team roles and spend more time deciding the groups – this would be a major consideration within business.
- Limit team size to no more than 5 (some of our teams had 7 due to the cross curricular approach)
- Spend more time on the individual reflections after the session.
 - What's going well
 - What are the challenges – perhaps this will inform a masterclass for next session.

- Anticipate masterclasses that may be needed and allow learners to sign-up to them.
 - Masterclasses may be academic or focus on developing a particular skill or behavior.

Questions we have:

1. How can we better measure progress both academically and behaviorally
2. How do we know every learner is progressing in a team situation such as this? This is something we feel can be linked to the masterclasses with worksheets available for assessment.