Supplementary File 1-Student Survey

Student and Facilitator experiences of Enquiry/ Problem-based learning in digital spaces.

Introduction

FACiLiTATE, the National Enquiry/Problem Based Learning network, are seeking your experiences in participating in Enquiry Based Learning (EBL) / Problem Based Learning (PBL) in digital spaces.

This refers to E/PBL undertaken online synchronously on digital platforms.
E/PBL is a student-centred approach to learning in which student knowledge is developed through the process of studying problems or real-life scenarios through group discussion.

The **purpose** of this study is to **explore student and staff perspectives** of how **individuals engage in E/PBL online** and their **overall perception.**

The survey will explore:
1. Your overall experience of engaging in E/PBL online during the **2020/2021 academic year.**
2. How technology supported the experience.
3. Your future plans for E/PBL online.

The survey will take 15 minutes of your time and you can withdraw at any stage during the survey. Note participation is entirely voluntary and all responses are anonymous.

What will we use it for?

The data from the survey will be combined with that of the other participants in this study and used to form the findings section of this research, thus individual participant or institutional data will not be revealed. The research may be published in journals or disseminated at conferences. Individual quotes from open-ended questions may be used in reporting of data.

However, no participant will be identifiable from this data whereby anonymity will be assured.

Ethical clearance has been granted and all ethical procedures will be adhered to. If you have any questions or concerns with regards to the ethical issues about this survey, click on the logo of your institution below.

Consent Form

Please select all options to continue with the survey.

☐ I have read and understood the participant information sheet

☐ I understand what the project is about, and what the results will be used for.

☐ I know my participation is voluntary and I can withdraw from survey at any stage without giving any reason.

☐ I am aware that my data will be kept confidential, and that anonymity will be guaranteed in the generation of data pertaining to me personally or my institution in this study.

Section 1: Background information

1. Please select which University, College, or Institute of Technology you are currently enrolled in.

    [Select from standard dropdown list of higher education institutions in Ireland.

(a) University College Cork
(b) Dundalk Institute of Technology
(c) University of Limerick
(d) Mary Immaculate College
(e) Maynooth University

2. Please select which discipline is applicable to you.

    [Participants will select from a standard dropdown list of higher education subject areas]

(a) Art & Design
(b) Business/Finance
(c) Computing/IT
(d) Education
(e) Engineering
(f) Medical/ Health
(g) Health & Social Care
(h) Humanities
(i) Science

3. Please identify your present level of study

a) Undergraduate

b) Postgraduate

4. Please indicate your mode of study

a) Part-time

b) Full-time

5. Please indicate your year of study.

a) 1st Year   b) 2nd Year   c) 3rd Year

d) 4th Year   e) 5th Year   f) Other (please specify)

Section 2: Experience of E/PBL

6. Prior to the 2020/2021 academic year, what was your experience of E/PBL?

a) No experience of E/PBL

b) E/PBL in face-to-face learning only

c) E/PBL online only

d) E/PBL both face-to-face and online

7. What form of E/PBL have you experienced?

a) Integrated (lectures/workshops are aligned with E/PBL tutorials)

b) No modules

c) One module

d) Two modules

e) Three or more modules

f) My entire programme is implemented through E/PBL

8. What was your experience of the transition to E/PBL online during the 2020/2021 academic year? (where 1= 'not difficult at all' and 5 = 'very difficult')

Not difficult at all 1   2   3   4   5 Very difficult

Section 3: The use of technology in supporting E/PBL

9.What learning platform is currently being used to deliver E/PBL online at your university/ Institute of Technology?

[Select from standard dropdown list of platforms]

(a) Blackboard ®
(b) Canvas ®
(c) Microsoft Teams ®
(d) Moodle ®
(e) Zoom ®
(f) Other (please specify)

9. What do you think of the applications that make up the learning platform you use?

10. What digital tools of online E/PBL were most helpful for your learning?

[Select from standard dropdown list of digital tools]

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(a) Breakout rooms
(b) Chat function
(c) Discussion forum
(d) Hands-up function
(e) Live polls
(f) Recording
(g) Screenshare
(h) Sharepoint
(i) Other (please specify)
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11. What digital tools of online E/PBL were least helpful for your learning?

[Select from standard dropdown list of digital tools]

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(a) Breakout rooms
(b) Chat function
(c) Discussion forum
(d) Hands-up function
(e) Live polls
(f) Recording
(g) Screenshare
(h) Sharepoint
(i) Other (please specify)
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12. How could this online platform be used more effectively to promote your learning during E/PBL online?

13. Please comment on the suitability of the platform to support your learning during E/PBL online.

Section 3: Engagement with E/PBL

When responding to the questions in this section of the survey, please consider your experience of Enquiry/Problem Based Learning online during the academic year 2020/2021.

Please drag and drop the mouse to your selected answer. Each question has a response scale numbered from 1 to 7, where 1=Not at all or none, and 7=Very much or very often.

To answer the questions, chose a number on the scale, corresponding to how much you feel the statement applies to your experience of E/PBL during the 2020/2021 academic year. For example, if you did not enjoy the scenarios at all, you choose 1. If you enjoyed them very much, you choose 7. If it applies to you to some degree, you choose an appropriate number between 1 and 7.

Problems/Tutorials

Think back to how you acted and how **you felt** during these tutorials.

15. How often did you offer suggestions or answers in the tutorials?

Not at all 1   2   3   4   5   6   7 Very often

16. How much preparation did you do for these tutorials between sessions?

Not at all 1   2   3   4   5   6   7 Very much

17. How much did you collaborate with your team members?

Not at all 1   2   3   4   5   6   7 Very much

18. In the tutorials, how much information did you need to find out as a group?

Not at all 1   2   3   4   5   6   7 Very much

19. In preparation for the tutorials, how much information did you find out as an individual?

Not at all 1   2   3   4   5   6   7 Very much

20. How often did you ask questions in the tutorial?

Not at all 1   2   3   4   5   6   7 Very often

21. How carefully did you listen to what your team members were saying?

Not at all 1   2   3   4   5   6   7 Very carefully

22. How much of the tutorial content was driven by you?

Not at all 1   2   3   4   5   6   7 Very much

23. How much opportunity did you have to lead the team?

Not at all 1   2   3   4   5   6   7 Very much

24. How much responsibility did you feel for your learning?

Not at all 1   2   3   4   5   6   7 Very much

25. How much were you involved in selecting the area / topic for investigation?

Not at all 1   2   3   4   5   6   7 Very much

26. How much have you felt like you were finding out new information for yourself, rather than being given it to memorise?

Not at all 1   2   3   4   5   6   7 Very much

27. If you have any particular comment you would like to make regarding engagement in the online tutorial sessions, please add them here.

Learning

Think about the ways in which you went about **learning** in the tutorials during the 2020/2021 academic year.

28. How much have you learned of new strategies to communicate effectively with other people?

Not at all 1   2   3   4   5   6   7 Very much

29. How much better have the problems/ tutorials made you at finding information from different sources?

Not at all 1   2   3   4   5   6   7 Very much

30. How much have the problems/tutorials helped you to feel confident in your ability to establish your own research questions?

Not at all 1   2   3   4   5   6   7 Very much

31. How much have the problems/ tutorials helped you develop your presentation skills?

Not at all 1   2   3   4   5   6   7 Very much

32. How much have the problems/ tutorials helped you learn to analyse and interpret information?

Not at all 1   2   3   4   5   6   7 Very much

33. How much have the problems/ tutorials helped you learn to develop shared goals within a team?

Not at all 1   2   3   4   5   6   7 Very much

34. How much have the problems/triggers/tutorials helped you feel more in charge of your learning?

Not at all 1 2 3 4 5 6 7 Very much

35. How much have the problems/ tutorials helped you improve your ability to communicate effectively with other people?

Not at all 1 2 3 4 5 6 7 Very much

36. How much have the problems/ tutorials helped you develop your team working skills?

Not at all 1 2 3 4 5 6 7 Very much

37. How much have the problems/ tutorials helped you find new ways to analyse and evaluate information?

Not at all 1 2 3 4 5 6 7 Very much

38. How much have the problems/ tutorials helped you become more confident in your ability to find information on a particular topic?

Not at all 1 2 3 4 5 6 7 Very much

39. How much have the problems/ tutorials helped you learn how to plan your learning?

Not at all 1 2 3 4 5 6 7 Very much

40. If you have any comments you would like to make about your learning from your experience of E/PBL during the 2020/2021 academic year, please add them here.

Teaching Support and Resources

Think about the **teaching support and resources** you received during these tutorials in the 2020/2021 academic year.

41. Have you been able to access enough information and resources in these tutorials?

Not at all 1   2   3   4   5   6   7 Very much

42. Have you been given the opportunity to meet with the teaching staff?

Not at all 1   2   3   4   5   6   7 Very much

43. Have you been given feedback from the teaching staff?

Not at all 1   2   3   4   5   6   7 Very much

44. Have the teaching staff facilitated communication within your team?

Not at all 1   2   3   4   5   6   7 Very much

45. Have the teaching staff been supportive?

Not at all 1   2   3   4   5   6   7 Very much

46. Have the teaching staff encouraged you to find out your own information?

Not at all 1   2   3   4   5   6   7 Very much

47. If you have any comments you would like to make in regard to teaching support and learning resources in your experience of E/PBL during the 2020/2021 academic year please add it here.

The Learning Experience

Finally, overall, when you look back over these tutorials how do you **feel about them as a learning experience.**

48. Have you found the problems/ tutorials enjoyable?

Not at all 1   2   3   4   5   6   7 Very much

49. Have you enjoyed learning in a smaller group?

Not at all 1   2   3   4   5   6   7 Very much

50. Have you liked the approach used in the problems?

Not at all 1   2   3   4   5   6   7 Very much

51.Have you enjoyed working as part of a team?

Not at all 1   2   3   4   5   6   7 Very much

52. Have you enjoyed finding out new information for yourself?

Not at all 1   2   3   4   5   6   7 Very much

53. Have you enjoyed finding out new information for your team?

Not at all 1   2   3   4   5   6   7 Very much

54. Having had your experience of **online E/PBL** in 2020/2021, (a) what did you enjoy?

 (b) what would you keep the same if you were to engage in this type of learning in future?

55. Having had your experience of **online E/PBL** in 2020/2021, (a) what did you not enjoy and (b) what would you change or do differently if you were to engage in this type of learning in future?

56. Having had your experience of **online E/PBL** in 2020/2021, what advice would you give to another student who was about to participate in this kind of learning?

57. Please select your preference

a. E/PBL face-to-face
b. E/PBL online
c. E/PBL in blended format

58. Please add any other comments you would wish to make regarding your experience of E/PBL here.

This survey is the first phase of a mixed methods study and will be followed up with interviews to further explore Higher Education staff experiences delivering E/PBL online. You are invited to participate in focus group interviews to be conducted shortly. **Please enter your email address if you are interested in partaking in the interviews.**

Thank you for partaking in the survey. Your response has been recorded.