

**The participative development of blended learning activity across a higher  
education institution: Navigating potentiality in a Change Laboratory  
research-intervention**

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## **Abstract**

This thesis explores the integration of Technology-Enhanced Learning (TEL) in Higher Education focusing on the pedagogical, institutional, and practical aspects that influence or inhibit its use. It engages with strands of literature on the pedagogical foundations of TEL, the role of institutional policies, and the lived experiences of stakeholders, which highlight the need for more research on approaches to integration at an institutional level.

The thesis draws on a Change Laboratory (CL) project in which diverse academic and professional service stakeholders produced contextually adapted strategies for the integration of blended learning, a form of TEL which posed problems in the institution. Data are drawn from workshop recordings, transcripts, chat logs, and participant-related artefacts. Analysis focuses on understanding how the participants developed a new activity system in nine online workshops over 6 months, and the implications for future potentiality in the activity systems at the research site.

Participants identified key contradictions in existing activity systems, such as a disconnect between faculty's needs and available technological tools, and a lack of institutional support or pedagogical guidance. In response, participants developed the Advanced Blended Learning Environment (ABLE) model, which seeks to align educational technology, pedagogical practice and institutional support structures. The thesis analyses stakeholders' eventual rationale for this new system and then steps back to trace its development through a cycle of

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expansive learning. It is argued that this analysis provides insights into the potentiality for change within this institution, showing how a pedagogically aligned and culturally sensitive model emerged from participants' analysis of contradictions.

The findings address shortcomings in the literature around the integration of TEL in Higher Education (HE). They propose how creating a holistic approach to TEL can improve staff and student engagement. Furthermore, this thesis contributes to the literature on institutional policy on TEL in HE, highlighting the potential benefits of creating adaptable governance and context-aware policies which can lead to increased originality in teaching, learning and assessment approaches, as well as facilitating a culture of innovation and experimentation across the institution.

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## Table of Contents

<b>Abstract .....</b>	<b>i</b>
<b>List of Figures and Tables .....</b>	<b>xv</b>
<b>Acknowledgements .....</b>	<b>xx</b>
<b>Chapter 1: Introduction and Background .....</b>	<b>1</b>
<b>1.1 Motivation for the Project .....</b>	<b>1</b>
1.1.1 Research Problem .....	2
1.1.2 Practitioners and Institutions .....	3
1.1.3 Institutional Policies and Support Systems.....	5
1.1.4 Outline of the Thesis .....	6
<b>1.2 Personal Motivations .....</b>	<b>6</b>
1.2.1 Early Experiences and Influencing Factors .....	7
1.2.2 My Role at Lancaster University .....	10
1.2.3 Choosing the Change Laboratory Approach .....	13

---

---

<b>1.3 Research Context .....</b>	<b>15</b>
1.3.1 TEL Scholarship .....	16
1.3.2 Project Focus and Contributions .....	18
<b>1.4 Policy Context .....</b>	<b>19</b>
1.4.1 Global Perspective on TEL.....	19
1.4.2 Institutional Level TEL.....	22
1.4.3 Project Goals .....	23
<b>1.5 Practice Context .....</b>	<b>24</b>
1.5.1 Rationale for Research Site .....	24
1.5.2 Forming Possibility Knowledge .....	26
<b>1.6 Research Questions .....</b>	<b>27</b>
<b>1.7 Thesis Overview .....</b>	<b>27</b>

---

---

<b>Chapter 2: Literature Review .....</b>	<b>30</b>
<b>2.1 Introduction .....</b>	<b>30</b>
2.1.1 Locating the Project .....	32
<b>2.2 Process of Searching for the Literature .....</b>	<b>35</b>
2.2.1 Changing Technology Enhanced Learning Practices in Higher Education .....	36
2.2.2 Institutional Policy on Technology Enhanced Learning .....	40
2.2.3 Analysing the Literature .....	44
<b>2.3 Changing Technology Enhanced Learning Practice in Higher Education.....</b>	<b>47</b>
2.3.1 Blended Learning Initiatives to Promote Student Engagement .....	48
2.3.2 Organisational Culture and Technology Enhanced Learning Innovation.....	55
2.3.3 Impact on Teaching and Learning Practices .....	59
2.3.4 Student and Staff Perspectives .....	61
<b>2.4 Institutional Policy on Technology Enhanced Learning in Higher Education .</b>	<b>63</b>

---

---

2.4.1 Policy Development and Implementation .....	64
2.4.2 Institutional Support and Resources .....	67
2.4.3 Fostering Faculty Engagement with TEL .....	68
<b>2.5 Conclusions and Implications for the Study .....</b>	<b>70</b>
<b>Chapter 3: Theoretical Framework .....</b>	<b>72</b>
<b>3.1 Introduction .....</b>	<b>72</b>
<b>3.2 Ontological and Epistemological Assumptions .....</b>	<b>74</b>
<b>3.3 Cultural Historical Activity Theory (CHAT) and Activity Theory .....</b>	<b>76</b>
3.3.1 Activity Systems as the Unit of Analysis .....	79
3.3.2 Multi-voicedness to Provoke Change.....	81
3.3.3 Historical Development for Context Setting .....	82
3.3.4 Contradictions to Drive Change .....	83

---

3.3.5 Expansive Learning Leading to New Practices .....	84
<b>3.4 Double Stimulation for Volitional Action .....</b>	<b>87</b>
<b>3.5 Change Laboratory to Reconceptualise Activity .....</b>	<b>89</b>
<b>Chapter 4: Research Design and Methodology .....</b>	<b>92</b>
<b>4.1 Introduction .....</b>	<b>92</b>
<b>4.2 Rationale for the Change Laboratory Approach .....</b>	<b>92</b>
<b>4.3 Research Design .....</b>	<b>94</b>
4.3.1 Selecting an Intervention Unit .....	95
4.3.2 Selecting Participants .....	97
4.3.3 Scoping and Timing .....	101
4.3.4 Creating an Online Venue .....	103
4.3.5 Insiderness.....	108



---

---

4.3.6 Outlining Task Sequence .....	110
<b>4.4 Methods .....</b>	<b>114</b>
4.4.1 Task Design .....	114
4.4.2 Research Instruments .....	119
<b>4.5 Data Analysis .....</b>	<b>123</b>
4.5.1 Intersession Analysis .....	124
4.5.2 Intrasession Analysis .....	126
4.5.3 Post-intervention Analysis .....	126
<b>4.6 Limitations .....</b>	<b>128</b>
<b>4.7 Ethics .....</b>	<b>129</b>
4.7.1 Consent .....	129
4.7.2 Transparency .....	130
4.7.3 Incentives .....	130
4.7.4 Harm Arising from Participation in the Research .....	131

---

---

4.7.5 Privacy and Data Storage .....	131
<b>4.8 Conclusion.....</b>	<b>132</b>
<b>Chapter 5: Findings .....</b>	<b>133</b>
<b>5.1 Introduction.....</b>	<b>133</b>
<b>5.2 New Blended Learning Activity System.....</b>	<b>134</b>
5.2.1 Object .....	137
5.2.2 Subject .....	142
5.2.3 Community .....	145
5.2.4 Division of Labour .....	152
5.2.5 Rules .....	162
5.2.6 Artefacts .....	167
<b>5.3 Constructing the Change Laboratory .....</b>	<b>171</b>
5.3.1 Preliminary Work .....	171
5.3.2 Planning the Sessions .....	173

---

---

<b>5.4 Designing the ABLE Activity System.....</b>	<b>177</b>
5.4.1 Session 1 Context .....	178
5.4.2 Session Design .....	179
5.4.3 Session Report .....	183
5.4.4 Session Reflection .....	191
5.4.5 Session Outcomes .....	195
<b>5.5.1 Session 2 Context .....</b>	<b>197</b>
5.5.2 Session Design .....	197
5.5.3 Session Report .....	202
5.5.4 Session Reflection .....	211
5.5.5 Session Outcomes .....	212
<b>5.6.1 Session 3 Context .....</b>	<b>215</b>
5.6.2 Session Design .....	215
5.6.3 Session Report .....	220

---

5.6.4 Session reflection .....	231
5.6.5 Session Outcome .....	232
<b>5.7.1 Session 4 Context .....</b>	<b>234</b>
5.7.2 Session Design .....	234
5.7.3 Session Report .....	237
5.7.4 Session Reflection .....	244
5.7.5 Session Outcome .....	245
<b>5.8.1 Session 5 Context .....</b>	<b>248</b>
5.8.2 Session Design .....	248
5.8.3 Session Report .....	251
5.8.4 Session Reflection .....	256
5.5.6 Session Outcome .....	258
<b>5.9.1 Session 6 Context .....</b>	<b>262</b>
5.9.2 Session Design .....	262

---

5.9.3 Session Report .....	268
5.9.4 Session Reflection .....	271
5.9.5 Session Outcome .....	272
<b>5.10.1 Session 7 Context .....</b>	<b>275</b>
5.9.2 Session Design .....	275
5.10.3 Session Report .....	277
5.10.4 Session Reflection .....	284
5.10.5 Session Outcome .....	<b>284</b>
<b>5.11.1 Session 8 Context .....</b>	<b>287</b>
5.11.2 Session Design .....	287
5.11.3 Session Report .....	291
5.11.4 Session Reflection .....	298
5.11.5 Session Outcome .....	298

---



---

<b>5.12.1 Session 9 Context .....</b>	<b>301</b>
5.12.2 Session Design .....	301
5.12.3 Session Report .....	304
5.12.4 Session Reflection .....	307
5.12.5 Session Outcome .....	308
 <b>Chapter 6: Discussion .....</b>	 <b>311</b>
 <b>6.1 Introduction.....</b>	 <b>311</b>
 <b>6.2 Addressing the Research Questions.....</b>	 <b>312</b>
6.2.1 How do stakeholders perceive a culturally more advanced activity system might support the development of blended learning across a university? .....	312
6.2.2 How is this culturally more advanced activity system developed by stakeholders in a cycle of expansive learning? .....	317
6.2.3 What does this culturally more advanced activity system tell us about the potential for resolving contradictions in existing activity? .....	322
6.2.4 What is the potentiality of a stakeholder created activity system in supporting	

---



---

TEL in the institution? .....	326
<b>6.3 Contributions .....</b>	<b>330</b>
<b>6.4 Changing Technology Enhanced Learning Practice in Higher Education.....</b>	<b>331</b>
6.4.1 Addressing Strategic Potentiality of Object-oriented, Interprofessional Teams in Refining Blended Learning Practices .....	331
6.4.2 Highlighting the Importance of Environments for TEL Experimentation, Addressing Traditional Barriers to Educational Innovation .....	333
<b>6.5 Institutional Policy on Technology Enhanced Learning in Higher Education .....</b>	<b>334</b>
6.5.1 Advocating the Value of Adaptable Governance in Developing Effective Institutional Strategies for Teachers .....	334
6.5.2 Promoting Dynamic and Integrative approaches to Continuous Improvement and Evaluation .....	336
6.5.3 Promoting The Introduction of Hard and Soft Rules for the Governance or TEL .....	337

---

---

<b>Chapter 7: Conclusion .....</b>	<b>340</b>
<b>7.1 Introduction .....</b>	<b>340</b>
<b>7.2 Key Findings .....</b>	<b>340</b>
<b>7.3 Limitations .....</b>	<b>343</b>
<b>7.4 Contributions to the literature .....</b>	<b>348</b>
<b>Changing Technology Enhanced Learning Practice in Higher Education .....</b>	<b>348</b>
Blended Learning Initiatives to Promote Student Engagement .....	348
Organisational Culture and Technology Enhanced Learning Innovation .....	348
Impact on Teaching and Learning Practices .....	349
Student and Staff Perspectives .....	349
<b>Institutional Policy on Technology Enhanced Learning in Higher Education</b>	<b>349</b>
Institutional Policy Development and Implementation .....	349
Institutional Support and Resources .....	349
Fostering Faculty Engagement with TEL .....	349



---

---

<b>7.5 Implications for policy .....</b>	<b>350</b>
<b>7.6 Implications for practice .....</b>	<b>351</b>
<b>7.7 Implications for future research .....</b>	<b>353</b>
<b>Appendix One .....</b>	<b>356</b>
<b>References .....</b>	<b>361</b>

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## List of Figures and Tables

### Tables

*Table 2.1 – Detailing structured approach for conducting literature search on changing technology-enhanced learning practices in higher education. PG 62*

*Table 2.2 - Detailing structured approach for conducting literature search on institutional policy on technology enhanced learning practices in higher education. PG 68*

*Table 3.1 - Change Laboratory key principles and their uses for this project. PG 116*

*Table 4.1 - Overview of Participant Roles and Potential Contribution. PG 125*

*Table 4.2 - Summary of Change Laboratory Sessions Linked to Expansive Learning Actions. PG 138*

*Table 4.3 – CL Session Task Design Template and Example. PG 144*

*Table 4.4 - Six Types of Expressions of Transformative Agency. PG 154*

*Table 5.1 - Summary of Change Laboratory Sessions Linked to Expansive Learning Actions. PG 202*

*Table 5.2 – Table 5.2 - Summary of design for session 1. PG 207*

*Table 5.3 - Task 1.1 overview. PG 211*

*Table 5.4 - Summary of design for session two. PG 225*

*Table 5.5 - Task 2.2 overview. PG 229*

*Table 5.6 - Summary of design for session three. PG 245*

*Table 5.7 - Task 3.2 overview. PG 255*

*Table 5.8 - Task 4.1 overview. PG 267*

*Table 5.9 - Task 4.2 overview. PG 270*

---

*Table 5.10 - Task 4.3 overview and associated participant excerpts. PG 273*

*Table 5.11 - Summary of design for session five. PG 280*

*Table 5.12 - Task 5.2 overview. PG 282*

*Table 5.13 - Task 5.1 overview. PG 285*

*Table 5.14 - Summary of design for session six. PG 295*

*Table 5.15 - Task 6.1 overview. PG 300*

*Table 5.16 - Summary of design for session seven. PG 309*

*Table 5.17 - Summary of design for session eight. PG 321*

*Table 5.18 - Task 8.1 overview. PG 326*

*Table 5.19 - Task 8.2 overview. PG 329*

*Table 5.20 - Summary of design for session nine. PG 334*

*Table 5.21 - Task 9.1 overview. PG 339*

*Table 6.1 - Comparative table highlighting the shift from the existing to a culturally more advanced activity system at LU. PG353*

*Table 6.2 - Table of Contradictions and Solutions in the CAAS Development PG 362*

## **Figures**

*Figure 1.1 - Lancaster University Dual-mode Teaching Guidance 2020 PG38*

*Figure 1.2 - Screenshot from Lancaster University website explaining their commitment to innovation 2022 PG 50*

*Figure 2.1 - Venn diagram showing intersection of key aspects of literature review PG 57*

*Figure 2.2 - PRISMA flowchart detailing literature search process for Changing Technology-Enhanced Learning Practices PG 67*

- 
- Figure 2.3 - PRISMA flowchart detailing literature search process for institutional policy on technology enhanced learning PG 71*
- Figure 3.1 - Hierarchical structure of activity PG 104*
- Figure 3.2 - Engeström's (1987:78) triangular activity system explaining the structure of human activity PG 106*
- Figure 3.3 - Graphical representation of systemic contradictions PG 110*
- Figure 3.4 - Sequence of learning actions in an expansive learning cycle (Engeström & Sannino 2010:8) PG 111*
- Figure 4.1 - Prototypic Change Laboratory set up (Virkkunen & Ahonen 2011:237). PG 131*
- Figure 4.2 – Example illustration of online Change Laboratory set-up. PG 134*
- Figure 4.3 - Recording and Transcript Screenshot Example. PG 148*
- Figure 4.4 – CL Session Chat Reactions Example. PG 149*
- Figure 4.5 - Session 2 MS Whiteboard Individual Blended Learning Timeline Whiteboard Task. PG 150*
- Figure 4.6 - Intersession Analysis Example. PG 152*
- Figure 5.1 – Participant Created Blended Learning Activity System. PG 163*
- Figure 5.2 - Chat screenshot (Session 4) from breakout discussion around those involved in the process. PG 167*
- Figure 5.3 - Division of Labour highlighting the roles and levels of authority and degree of specialisation in blended learning for each group. PG 180*
- Figure 5.4 - Session 3 chat post during discussion on the future role of IT services. PG 187*
- Figure 5.5 - Individual blended learning timeline template planned for use in session 1. PG 209*
- Figure 5.6 - Session one introductions in MS Teams CL workshop. PG 214*

---

*Figure 5.7 - Participant chat message as Mentimeter poll substitute. PG 214*

*Figure 5.8 - Mentimeter participant contributions on words associated with blended learning. PG 215*

*Figure 5.9 – Mentimeter participant contributions on words associated with blended learning at Lancaster University. PG 215*

*Figure 5.10 - Shared screen view in Teams meeting session 1 (participants covered for anonymity). PG 218*

*Figure 5.11 – Anonymised session 1 chat interaction between participants. PG 220*

*Figure 5.12 - Researcher diary/session notes from session one. PG 221*

*Figure 5.13 - Session one activity system progress. PG 224*

*Figure 5.14 - Individual blended learning timeline template as shown in MS Whiteboard. PG 227*

*Figure 5.15 - PowerPoint slide recapping session one Mentimeter word clouds. PG 229*

*Figure 5.16 - Screen share image in Teams Meeting of JISC video– participants anonymised. PG 232*

*Figure 5.17 – Anonymised screenshot of session 2 chat from MS Teams meeting. PG 235*

*Figure 5.18 - History Wall Whiteboard second stimulus activity screenshot. PG 234*

*Figure 5.19 - Image of stats shared with participants in the Change Laboratory session. PG 236*

*Figure 5.20 - Anonymised notes taken during session identifying key quotes to review later. PG 238*

*Figure 5.21 - Session 2 Able Activity System Progress. PG 243*

*Figure 5.22 - Session three PowerPoint screenshot. PG 246*

---

*Figure 5.23 - Questioning participants screenshot from session three. PG 247*

*Figure 5.24 - Dual mode guidance PowerPoint screenshot from session three. PG 248*

*Figure 5.25 - PowerPoint screenshot from session four activity system focus. PG 249*

*Figure 5.26 - Screenshot from Mentimeter results in session 3. PG 253*

*Figure 5.27 - LU Education Strategy excerpts shared during session 3. PG 254*

*Figure 5.28 - Combination of session 3 Forms polls used as first stimulus. PG 258*

*Figure 5.29 - Anonymised chat discussion as the verbal discussion was unfolding in session 3. PG 258*

*Figure 5.30 - Dual mode teaching guidance shared via PowerPoint in session 3. PG 259*

*Figure 5.31 – Anonymised screenshot from Change Laboratory meeting, sharing mirror data (activity system video overview). PG 261*

*Figure 5.32 - ABLE activity system progress after session three. PG 264*

*Figure 5.33 – Anonymised screenshot of second stimulus during session 4. PG 266*

*Figure 5.34 - Snapshot of participant developed activity system in MS Whiteboard. PG 275*

*Figure 5.35 – Anonymised diary entry/session notes from session 4. PG 276*

*Figure 5.36 - Session 4 ABLE Activity System Progression. PG 278*

*Figure 5.37 - Chat screenshot from session 5. PG 288*

*Figure 5.38 – Anonymised session 5 diary/notes entry. PG 290*

*Figure 5.39 - Session 5 activity system development. PG 293*

*Figure 5.40 - Scenario one screenshot. PG298*

- 
- Figure 5.41 - Scenario two screenshot. PG 300*
- Figure 5.42 - ABLE activity system progress after session six. PG 307*
- Figure 5.43 - Screenshot of second stimuli quotes to be used in session 7. PG 310*
- Figure 5.44 - Screensharing first stimulus in session seven. PG 315*
- Figure 5.45 - Anonymised screenshots of typed chat during session seven used as mirror data. PG 317*
- Figure 5.46 – ABLE activity system progress after session seven. PG 320*
- Figure 5.47 - Diamond 9 ranking task template and associated key foci. PG 324*
- Figure 5.48 - Mirror data previous session quotes. PG 325*
- Figure 5.49 - Task 8.1 anonymised chat excerpt used at mirror data. PG 329*
- Figure 5.50 - ABLE activity system progress after session eight. PG 334*
- Figure 5.51- Screenshot from session nine planned PowerPoint slides PG 336*
- Figure 5.52 - Session nine PowerPoint slide screenshot with both diamond 9's completed. PG 338*
- Figure 5.53 - ABLE activity system progress after session nine. PG 346*
- Figure 6.1 - Simplified activity system that was developed by participants containing only essential points. PG 349*
- Figure 6.2 Comparative activity systems highlighting the shift from the existing to a culturally more advanced activity system at LU. PG 350*
- Figure 6.3 - Expansive learning cycle, which includes labelling each stage and identifying new elements introduced in the activity system. PG 355*
- Figure 6.4 - The zone of proximal development at Lancaster University. PG 366*

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**Author's declaration:** This thesis is their own work and has not been submitted in substantially the same form for the award of a higher degree elsewhere.

Signature ..... 

## Chapter 1: Introduction and Background

This thesis seeks to make contributions to the literature on TEL within higher education (HE), focusing particularly on two main areas: changing TEL practices and institutional policy on TEL. This project takes a collaborative approach to understanding the future potential of blended learning in a research-intensive university. HE institutions have been engaging in blended learning (BL) practices since the early 1990s (Mirriahi et al., 2015), yet my experience of institutional and staff engagement in these practices suggests slow progress has been made over the years.

In the context of higher education, it is essential to clearly define and differentiate key instructional modalities to provide a foundation for the discussions throughout this thesis. Blended Learning (BL), a central concept in this study, refers to the thoughtful integration of face-to-face instruction with online learning experiences (Hrastinski, 2019). This approach is distinct from TEL, which broadly encompasses the use of digital technologies to support and enhance the learning process, including various tools and resources aimed at improving educational outcomes. Closely related to BL is Hybrid Learning, which also combines in-person and online instruction, though it often implies a more balanced or proportional integration of both modalities. Meanwhile, Online Learning is fully digital, delivering educational content through platforms without in-person interaction, and may include synchronous (real-time) or asynchronous (self-paced) formats. Finally, HyFlex Learning, short for 'Hybrid-Flexible', offers students the flexibility to choose between attending sessions in person, participating synchronously online, or engaging asynchronously. These definitions establish a conceptual framework for understanding the

opportunities and challenges these modalities present within the current higher education landscape and will guide the discussion in subsequent sections.

The literature acknowledges that fostering staff engagement in BL remains a persistent challenge across educational settings (Papageorgiou & Lameris 2017; Gray & Tobin 2010; Antunes et al. 2021). In response, this project employs the Change Laboratory methodology to bring together stakeholders and collaboratively address these issues, aiming to bridge the gap between institutional aspirations and actual practice.

### **1.1 Motivation for the Project**

My interest in TEL and blended learning (BL) stems from my experience observing and participating in a range of educational settings. My previous work as an Initial Teacher Trainer (ITT) afforded me an excellent vantage point across many HE and Further Education (FE) institutions, where I was able to observe, first-hand, the practices related to TEL and BL. Here, I witnessed a disconnect between institutional policies and stakeholder engagement across most institutions. In my more recent experience as a Digital Learning Facilitator (DLF) at Lancaster University (LU), I witnessed institutional attempts to progress and develop blended learning through staff development initiatives, minimum standard expectations, institutional guidelines, and other efforts. All of these having limited impact on the ground and often working counterintuitively to the intended goal. For this reason, I became interested in developing and advocating for more adaptable and participatory models that could bridge the gap between institutional goals and the implementation of TEL practices.

For this reason, I became interested in exploring more dynamic and responsive approaches to governance and policy-making in TEL that could better align institutional strategies with the actual needs and practices of educators and learners. My aim was to investigate and develop models that not only support the technical implementation of blended learning but also foster a culture of continuous engagement and innovation among staff and students alike. Although the broader focus is on TEL, the aspect at issue at the research site was blended learning (BL). By ensuring that these policies and practices are both practical and beneficial, the research aims to create real-world educational environments that effectively integrate BL within the broader TEL framework.

### **1.1.1 Research Problem**

In Section 1.1.1, the setting and problem being examined reflect challenges that extend beyond the local context of Lancaster University. The disconnect between institutional TEL policies and their practical implementation, alongside the limited stakeholder engagement in policy development, is not unique to this institution. Similar issues have been reported in other higher education settings, where institutional aspirations for blended learning and TEL are often met with resistance or low engagement due to inadequate alignment with the needs and practices of educators and learners (Papageorgiou & Lameris, 2017; Graham et al., 2013). This broader prevalence underscores the possible transferability of the findings, as they have the potential to inform strategies for addressing similar challenges in institutions facing comparable social and structural circumstances, thereby contributing to the wider discourse on TEL integration in higher education.

This thesis is concerned with examining the dynamics of BL within HE. By focusing on BL, this research not only addresses the challenges and opportunities within this educational setting but also sheds light on broader TEL practices across other institutions. This approach allows for an understanding of how BL and TEL interact and influence each other, stressing the potential for significant improvements in how educational technologies are implemented and utilised. Investigating the integration and application of BL can provide insights into evolving TEL practices within institutions. Through an exploration of BL, this project aims to present knowledge for advancing the TEL literature around the role of stakeholder engagement, institutional policy alignment and professional development opportunities required.

The current body of knowledge on changing TEL practice in HE can serve as a useful starting point for this project as it discusses concepts related to empowerment, stakeholder participation, and ownership, which are closely aligned with the idea of agency, although usually without making specific reference to it. Scholars, amongst others, such as Garrison & Kanuka (2004), Passey (2019), Boelens et al. (2018), and Flavin & Quintero (2020) have documented various aspects of changing TEL practices in HE in Section 2.3, highlighting the need for practical implementation that engages stakeholders actively in the process. However, the literature lacks depth in focusing specifically on the development of stakeholder agency.

Furthermore, while the importance of stakeholder agency is acknowledged, there is a notable gap in how this agency can be systematically developed and sustained within HE settings. The literature around the adoption of TEL approaches often stresses barriers more

than enablers (Thanaraj & Williams 2016), highlighting a critical area this project aims to address by adding depth to the discussion around stakeholder agency.

### **1.1.2 Practitioners and Institutions**

Central to the success of this project is the conviction that practitioners themselves are best positioned to develop and refine solutions that are both innovative and practical. By employing a CL approach, this project brings together various stakeholders to collaboratively develop their solutions and strategies. This not only empowers them to tailor approaches to their specific contexts but also enhances their agency to effectively implement these solutions. This participatory approach is necessary to jointly produce the knowledge that is needed to move this area of literature forward.

Acknowledging this crucial need for strategic alignment and supportive policies (Graham et al. 2013; Xiao 2019), this project adopts an approach to examining and addressing the challenges associated with TEL integration. Choosing the Change Laboratory (CL) as a research methodology for this study is aligned with the objectives of fostering stakeholder agency, identifying challenges and contradictions within the existing activity system, and co-creating solutions (Bligh & Flood 2017; Virkkunen & Newnham 2013). My decision was grounded in several key aspects of the CL framework and its suitability for addressing specific challenges within TEL. The CL is rooted in Cultural-Historical Activity Theory (CHAT) and is differentiated by its formative, interventionist methodology (Botha 2017; Engeström & Sannino 2010). This approach facilitates a collaborative environment where participants, alongside a researcher-interventionist, actively engage in shaping their activity system. Furthermore, a fundamental outcome of the CL is the development of collective

transformative agency among participants (Virkkunen 2006; Morselli et al., 2014). This shift from individual to collective agency is crucial where changes require broad consensus and collaborative efforts among faculty, administrators, and students. The methodology supports participants in identifying and addressing systemic contradictions and tensions within their practice, which is essential for sustainable change in TEL practices.

The CL employs Engeström's theory of expansive learning, which focuses on analysing and resolving contradictions within the activity system (Engeström 2001). This aspect is particularly pertinent to TEL and my project, where technological and pedagogical elements often present multiple contradictions that need resolution for effective implementation.

Unlike traditional research methodologies where outcomes might be predetermined, the CL allows outcomes to emerge from the collaborative work of the participants (Sannino et al., 2016), again central to this project. While the CL empowers participants, it also acknowledges the real-world constraints they face, such as institutional policies and the balance between academic freedom and administrative control (Englund & Price 2018; Vähäsantanen et al., 2020). This awareness is critical in designing interventions that are feasible and effective within the specific regulatory and cultural contexts of the target institution.

The focus of the CL in this project is on a specific kind of stakeholder engagement, emphasising collaboration between academic staff, IT professionals, administrators, and students. Issues around the adoption of TEL practices within their institution unite the stakeholders and create a shared focus. The problems addressed through the CL are multifaceted, ranging from the need for more coherent institutional TEL policies and improved support structures to the enhancement of digital literacy among educators and

students. By engaging directly with those who teach, learn, and support learning, the project aims to uncover the underlying barriers to TEL adoption and to identify actionable strategies that can lead to more effective and sustainable integration of technology in education.

### **1.1.3 Institutional Policies and Support Systems**

The role of institutional policies and support systems is well-documented by scholars like Flavin & Quintero (2017) and Graham et al. (2013), who have pointed out the necessity for HE institutions to develop clear, comprehensive TEL strategies. These strategies should not only mirror the institution's vision and goals but also closely align with the actual technology practices of students and academics to ensure effectiveness and relevance. Such strategic alignment is important for fostering an environment where TEL can flourish, thus enhancing student engagement and learning outcomes. This alignment is also crucial for developing stakeholder agency, as it provides the necessary support and resources that empower stakeholders to participate actively and make impactful decisions.

### **1.1.4 Outline of the Thesis**

Subsequent sections of this chapter will address my personal motivations (Section 1.2) that led to this research; the policy context (section 1.3) setting out the international, national, and institutional context related to my research; the research context (Section 1.4) addressing the academic discourse surrounding the integration of TEL in HE; the practice context (Section 1.5) outlining the choice of institution for this research and reasons why; the research questions (Section 1.6) highlighting the overarching question



and sub-questions; and finally the thesis overview (Section 1.7) explaining the structure and chapter outline.

## **1.2 Personal Motivations**

My journey into this research project is rooted in my experiences and observations in various roles spanning Further Education (FE) to Higher Education (HE), some of which was touched on above (Section 1.1). Reflecting on my early experiences, my PGCE training at a local college introduced me to the possibilities of TEL, encouraging a broadly positive attitude toward its potential. However, the training was somewhat low on actionable detail, primarily outlining out the theoretical benefits without really exploring or supporting the practical implementation strategies or mirroring in the delivery how TEL could be effectively integrated into diverse teaching environments. This initial exposure left me wanting more and a further practical exploration of TEL applications.

### **1.2.1 Early Experiences and Influencing Factors**

During my time teaching in Her Majesty's Prison Service, I encountered a significantly different educational setting, where resources were scant, and the use of technology was severely restricted due to security concerns. This experience contrasted with the potential I saw during my PGCE training and made me aware of how resource limitations could stifle the effective use of technology in education. This made me think how different the teaching landscape could look in institutions where technology could be more freely integrated. This difference laid the groundwork for my growing interest in exploring TEL more fully in environments that were less constrained, leading me to consider the varying impacts of

TEL across different educational contexts and what could be possible with greater access to technology and resources.

As a Skills for Life Tutor at a North-West training and apprenticeship provider, I encountered limited engagement with TEL by both staff and students, which often resulted in missed opportunities for enhancing educational experiences. However, within this context of underutilisation, I also noted instances where even minimal engagement with TEL tools and methodologies showed promising potential to significantly boost both the engagement and academic attainment of a particularly disaffected group of students. For example, in one practical workshop learners were tasked with creating posters to advertise a social enterprise project they were to complete. This was meant to be with paper and pens etc. but a student asked to use the PCs and the computer room was available, so I moved the class. The behaviour, concentration and quality of work improved from the previous session I'd taught this group.

Following the above role, I moved to one of the UK's largest providers of employment and training solutions. They offered apprenticeships, key skills or functional skills, and employability programmes across England, Scotland and Wales. My role initially as an Employment Tutor, I witnessed a clear lack of appropriate skills from delivery staff to be able to engage with TEL meaningfully. Staff training and continual professional development opportunities were never TEL focused and were always more focused on business needs, such as mandatory health and safety/safeguarding training. This was surprising as the company also delivered fully online qualifications to staff in management, teacher training, and assessor awards under a subsidiary company name.

I later went to work for this subsidiary section of the wider company, which delivered online qualifications, and despite the clear necessity that technology played on the delivery of the courses, the influence on the wider organisation was limited. Delivering initial teacher training (ITT) qualifications to in-service staff gave me an insight into staff perceptions, fears and barriers to the use of technology in their roles within the company. A lack of structured TEL professional development for staff was evident, alongside no clear links between the teaching practice of employability tutors and the teaching expectations set by the company. There were no tangible policies or guidelines that informed staff the expectations when teaching, especially with technology.

Later moving to a North-West land-based and sports college and HE institution, I became Initial Teacher Training (ITT) manager and found myself in a position to become a change agent regarding TEL practice at the institution. One significant initiative I led was the development of the BSc (Hons) Farriery qualification, where I introduced the use of motion capture technology to enhance the teaching of practical farriery skills. This technology allowed for detailed analysis and feedback on students' techniques, significantly enriching the learning experience by enabling precise peer and self-assessment. Prior to this integration, opportunities for such detailed feedback were limited, often leading to slower skill development. The introduction of motion capture not only improved skill acquisition but also fostered a more self-reflective and collaborative learning environment. Here, I learned the importance of integrating technology in a way that directly enhances educational outcomes and supports pedagogical goals. The motion capture technology was not just an addition of a digital tool but a transformative practice that aligned with the specific learning needs of the students. Recognising the growing need for digital competency in education, I

successfully advocated for institutional investment in a bank of iPads for the teacher training programme. This was central to enhancing the curriculum, providing trainees with hands-on experience in utilising modern educational technologies to future-proof their skills.

Many of the limitations and barriers outlined in previous roles still existed, but the institution was keen to develop staff and focus on the innovative benefits of TEL. My role afforded the opportunity to influence institutional approaches, to a degree, sitting as a member on teaching and learning committees where strategic decisions were made. As well as this, I was able to redesign the ITT curriculum to have more of a TEL focus, with the development of a BL approach to support the growth of trainee teachers' teaching practice. I was able to witness first-hand the positive impact of the revised curriculum on student engagement, attainment, and trainee teaching practice through the observation process. Whilst here I secured external funding to research the application of the Video Enhanced Observation (VEO) App in self-evaluating teaching practices within teacher training. This project not only reinforced the importance of self-assessment and reflection in teaching but also introduced new methods for peer feedback that were previously unexplored. The success of this project highlighted the transformative potential of targeted technological integration in teacher education.

### **1.2.2 My Role at Lancaster University**

Moving onto Lancaster University (LU) as a Digital Learning Facilitator (DLF) I was enthused by the reputation of a research intensive university and felt that TEL and BL would be the cornerstone of their top 10 UK university status (at the time). However, arriving at the institution I was confronted by most of the same issues that I had

encountered throughout my teaching career. The lack of investment and engagement in TEL and BL practices was disappointing to see. Although there were policies and directives from an institutional perspective, engagement and adherence to these were sparse and sporadic. My role involved working across the whole institution across faculties in the development of new courses, improving existing courses, and providing pedagogic advice, guidance and encouragement in BL, online learning and evaluate their impact and effectiveness.

This role provided me with a vantage point to observe the multilayered challenges to the successful uptake and implementation of digital technologies in pedagogy. I was part of numerous working groups, committees and support communities within the institution that allowed me to observe a range of teaching and learning practices. I also participated and contributed to institutional strategy meetings around TEL, and engaged with a range of professional service and academic staff in relation to TEL. At the start of the global pandemic in 2021 a rapid response steering group for the 2020/21 academic delivery and the associated teaching, learning and assessment decisions was set up. I was involved due to my knowledge and understanding of educational principles, theories and pedagogic approaches for learning design and developments, as well as my TEL focused role within the institution. This groups work led to the creation of the 'minimum standards and expectations' (Session 1 – Section 5.4.2) aimed at providing a structure and benchmark for all staff to adhere to for an effective online and blended learning provision. During the implementation phase, and later the transition back to campus teaching, it became evident that there was a lack of engagement or even awareness of these minimum standards and expectations. This led me to consider the reasons why, and through conversations with

staff it was clear that they were not consulted, so failed to buy into the message being transmitted. This made me wonder how, in the future, effective TEL and BL policies could be created with the appropriate stakeholders to ensure institutional support and backing.

I also felt there was a lack of strategic vision and the absence of a cohesive and forward-thinking strategy for integrating technology into teaching and learning processes at the institution. At LU the Educational Development unit offered a range of teaching qualifications and recognition pathways, but all lacked the TEL and BL focus. They offer:

- Advance Teaching: Lancaster Accreditation Scheme (ATLAS), providing recognition and continued professional development for experienced members of staff.
- Associate Teacher Programme (ATP) which aims to provide a development framework for those with responsibility for supporting the development/delivery of learning opportunities.
- Postgraduate Certificate in Educational Practice (PGCEP) which is an in-service programme to support and accredit the academic development of staff who teach and support student learning on Lancaster University programmes.

Attempts to support the development of these programmes with the integration of TEL and BL approaches were met with resistance or avoidance, reinforcing the lack of a cohesive approach. I attended summative assessments as part of the ATLAS and PGCEP programmes and suggested developments to the course leads, which was met with limited engagement. My suggestions for a greater focus on TEL literature and the practical inclusion of such practices into the curriculum were not valued and I was told that the course outline was set and successful. I also delivered some professional development

sessions to the same course staff, where it became obvious that collectively they had limited digital literacy skills which was mirrored in their delivery and curriculum.

In my experience at LU, a top-down approach with strategic initiatives and policies were created and then disseminated down to faculties and departments. This approach often left little room for grassroots input or stakeholder collaboration in the initial stages of policy development. An example of this was where the university created 'Dual-mode teaching' guidance (Figure 1.1) without engagement and input from academics, TEL staff or students.

**Dual-mode teaching**

Dual-mode teaching is the practice of delivering a course where some students physically attend teaching sessions and others are taught online. This might involve teaching both groups of students at the same time or teaching each group separately. Lancaster is implementing dual-mode teaching primarily in response to Covid-19, with a particular focus on Michaelmas 2021, when we anticipate a significant minority of students may not be able to attend in person because they must isolate or are still in their home countries.

During summer 2021, all teaching spaces will be updated to ensure you can conduct dual-mode teaching on campus but depending on the size and configuration of the room, there are a few things to be aware of:

1. All rooms will allow remote attendees to hear the tutor, and most will have a camera so they can see the tutor too.
2. Some rooms will allow remote attendees to hear the audience using microphones embedded into the ceiling, table-top boundary microphones, or handheld roving microphones (in larger spaces). When using handheld roving microphones, please ensure a student has the microphone before they ask their question. If a room doesn't have any form of audience microphone, you should repeat the question out loud so the remote attendees can hear it, before answering.
3. You can check the configuration of all rooms on the [Room and Equipment list](#).

**Looking for help with Dual Mode teaching?** In addition to the guidance below, training videos are currently in development and ISS will be running a series of training sessions to walk you through the process of dual mode teaching (covering the three scenarios below). These are due to take place August – October.

Figure 1.1 - Lancaster University Dual-mode Teaching Guidance 2020

This caused confusion, frustration and many issues due to the lack of foresight by those who created the guidance. While certain forums and committees existed for feedback, the extent to which these inputs could influence the direction of change was often limited, making the process feel somewhat detached from the practical realities and challenges faced by educators and learners.

### **1.2.3 Choosing the Change Laboratory Approach**

Prior to my engagement with the CL methodology, my exploration of educational innovation was deeply rooted in a suite of qualitative research approaches, notably autoethnography and exploratory research. For example, I used autoethnography to address my role as a Digital Learning Facilitator at Lancaster University (LU), giving voice to my personal experience. An exploratory research framework was used on numerous other occasions. It was used to address the perceptions of digital capabilities of LU against the expected standards from internal and external stakeholders. Also, I used this methodology to address hybrid pedagogy and learning design influences of individuals in higher education. Additionally, exploratory methods were used to explore the nature of the issues surrounding effective and appropriate assessment and feedback processes, whilst maintaining a focus on the HE landscape with Covid-19 at the forefront, and whether graduate skills/21<sup>st</sup> century skills are embedded throughout these practices. While each of these methodologies offered the potential for valuable perspectives on individual or collective experiences regarding BL, they were not seen to offer the formulation of systemic change or actionable strategies within the institutional setting. This limitation led to finding a research approach that worked towards transformative institutional practices, which the CL offers. CL stood out due to its framework for collaborative change (Chapter 2) and its roots



in Cultural-Historical Activity Theory (CHAT). My own beliefs and motivations for this project stem from a conviction that harnessing the collective knowledge and experiences of stakeholders is crucial for change. I observed challenges at LU where the existing activity system struggled to align with the diverse needs of its academic community. I believed that by involving educators, IT staff, administrators, and students in a collaborative process, we could create a more inclusive, responsive, and adaptable TEL environment.

The decision to employ the CL approach for this project was driven by observations and perceived identified needs and challenges at Lancaster University. Firstly, the methodology's emphasis on stakeholder participation presented the opportunity to bridge the gap between institutional policy development and the lived experiences of educators, learners, and support staff. By facilitating a space for collaborative problem-solving, I believed the CL offered a route to address the disconnects between policy intentions and practical outcomes. Furthermore, the CL appeared to offer an approach to driving change was appealing given the slow progress in adopting BL practices at the university. The methodology's foundation in CHAT provided a strong theoretical framework to explore the interplay between individuals, tools, and the community within the educational setting, making it an ideal fit for addressing the multifaceted challenges of enhancing BL practices.

Central to this project is the ambition to generate 'potentiality for transformation' (Bligh 2024) and insights into what a future activity system for TEL might encompass. The project seeks to explore how a stakeholder-created activity system can harness the potential for institutional change by engaging participants in expansive learning cycles that uncover new ways to resolve contradictions within existing practices. By understanding how participants view the future of their activity system, which opens up new knowledge about the dynamics

of stakeholder engagement, the integration of TEL in educational settings, and the strategies necessary to foster sustainable and effective TEL practices.

### **1.3 Research Context**

The academic discourse surrounding the integration of TEL in HE reflects a growing scholarly interest in how digital technologies can be used to improve teaching and learning processes, which will be addressed further in chapter 2. This body of literature highlights the potential of TEL to enhance educational access, engagement, and outcomes, yet it also highlights the challenges associated with its effective integration. The scope of literature that I am trying to address with this project are the opportunities of TEL; the role of institutional policies in shaping TEL integration, and the lived experiences of stakeholders navigating these technological shifts (Section 2.1.1). Challenges include faculty resistance, the need for pedagogical alignment with technological tools, and the strategic implementation of educational technologies, as discussed in Section 2.3 & 2.4.

TEL encompasses a broad spectrum of practices where digital technologies are employed to support learning and teaching processes (Section 2.3). This includes, but is not limited to, online learning, blended learning, digital resource use, and gamification. Scholarly interest in TEL is driven by its potential to provide flexible learning opportunities, cater to diverse learner needs, and bridge geographical gaps (Garrison & Kanuka, 2004; Bates 2019). The significance of TEL in HE is further highlighted by its alignment with contemporary educational demands for inclusivity, adaptability, and lifelong learning (Selwyn 2016; Castañeda & Selwyn 2018).

### 1.3.1 TEL Scholarship

While the value of TEL in HE is widely recognised, scholarship in this area is not without its criticisms and identified gaps. One major criticism revolves around the overemphasis on technological solutions at the expense of pedagogical considerations (Graham et al. 2013) (Section 2.4.1). Critics argue that successful TEL integration requires more than just the deployment of digital tools; it necessitates a fundamental rethinking of teaching strategies and learner engagement (Beetham & Sharpe 2013; Laurillard 2012; Bates 2015) (Section 2.3.1 & 2.3.4). Another limitation is the limited focus on institutional policies and their impact on TEL practices, lacking comprehensive analyses that link institutional policy frameworks with TEL adoption and effectiveness are less common (Kirkwood & Price 2014) (Section 2.3.2). This gap highlights the need for research that bridges the dynamics of classroom technology use with the influences of institutional strategies and policies. Additionally, there is an ongoing debate regarding digital equity and access in TEL. Selwyn (2016) points out that the digital divide remains a significant barrier to the universal adoption of TEL, underscoring the need for more equitable technology access and digital literacy initiatives.

The progressive transformation of HE through the integration of TEL practices has been documented, highlighting a shift towards more personalised, flexible, and learner-centred educational approaches. Garrison & Kanuka (2004) (Section 2.3.4) discuss the potential of blended learning to foster a more interactive and student-centred learning environment. Their work emphasises the integration of online and traditional face-to-face teaching methods to enhance student engagement and learning outcomes. From this research, combining different teaching methods can be seen to improve the educational experience for students. Yet what seems missing is a detailed exploration of how these BL strategies

are implemented and sustained within different institutional contexts, and the specific challenges educators face in this process.

Similarly, Passey (2019) (Section 2.3.1) underlines the need for HE institutions to adopt technologies that support teaching and learning while focusing on the educator's role in this process. This research highlights that the successful integration of TEL in HE not only depends on the availability of technology but also on how educators employ these tools to enhance learning. From this research, the role of educators is seen as pivotal in ensuring that technological tools are effectively integrated into the curriculum. Yet what seems missing in this account is an examination of the specific challenges educators face when integrating these technologies along with how institutional policies can better support this integration. My project aims to address this and explore the practical challenges and opportunities educators encounter at Lancaster University, focusing on the alignment between institutional policies and the effective use of TEL in teaching and learning.

### **1.3.2 Project Focus and Contributions**

My project situates itself within these scholarly conversations by addressing some of the limitations identified in the TEL literature (Section 2.3 & 2.4), where a lack of training, access to digital tools, or contradiction between institutional policy and adherence (to name a few) are prevalent. Specifically, it seeks to explore the interplay between institutional policies and TEL practices in HE, aiming to uncover how policy frameworks can better support the effective integration of technology in teaching and learning. By focusing on Lancaster University, the project contributes new insights into how institutional strategies influence TEL adoption, and how these strategies can be enhanced to foster more

inclusive, innovative, and pedagogically sound practices. Through this research, I aim to contribute to the ongoing scholarly discourse on TEL by providing analysis that address identified gaps and challenges in the field. Furthermore, this research aims to identify positive strategies for policy development and their potential for advancing TEL practices. If policies were designed to provide more robust training and ongoing support for educators, it could lead to more effective and widespread use of TEL. In addition, the aim of the project is to create 'possibility knowledge' that offers insight into the potential for enhanced professional development, resource allocation, student feedback and engagement in TEL, and the integration of TEL in curriculum design can all be positive areas to focus on.

#### **1.4 Policy Context**

This section aims to provide context for understanding the policy environment surrounding TEL by exploring the efforts at the international, national, and institutional levels, highlighting key initiatives and the vision projected by leading organisations such as UNESCO and the European Commission. This aims to offer a wide-ranging overview, engaging with key policies from leading organisations and governments that shape TEL practices that guide institutional strategies. With a focus on the UK's Department for Education (DfE), the specific strategies they adopt to leverage technology in education will also be addressed.

##### **1.4.1 Global Perspective on TEL**

The integration of TEL within HE represents a significant focal point in the global educational policy discourse, as institutions, governments, and international organisations acknowledge its transformative potential for teaching and learning (Salmon & Wright 2014;

OECD 2016). This acknowledgment underlines the value of embedding TEL into HE systems, aiming to enhance access, engagement, and outcomes for learners across diverse contexts (UNESCO, 2019). I aim to contextualise the challenges and opportunities that LU faces in adopting TEL, offering a nuanced understanding of how global and national strategies influence institutional practices.

At the international level, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has been a vocal proponent of leveraging technology to strengthen educational quality and accessibility. UNESCO's Education 2030 Framework for Action advocates for the strategic use of information and communication technologies (ICT) to expand educational opportunity and improve learning outcomes (UNESCO 2016). By advocating for the strategic deployment of technology, UNESCO aims to make learning accessible to all and elevate learning outcomes, underscoring the critical need for educational systems to evolve alongside technological advancements. This international perspective aligns with my project's focus on integrating TEL within HE, fostering more innovative and accessible learning environments. UNESCO acknowledge that change is difficult, with social, cultural, financial, global issues, gender-based barriers and more highlighted, but express the need to work collectively to overcome these barriers:

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*'business as usual' will not bring quality education to all. If current rates of progress continue, many of the countries lagging furthest behind will not reach the new targets by 2030. This means that it is of utmost importance to change current practices and mobilize efforts and resources at an unprecedented pace. (UNESCO 2016:25)*

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From this policy, institutions should prioritise the integration of TEL to foster innovative and accessible learning environments. However, one criticism I have of UNESCO's framework is its broad scope, which occasionally lacks the specificity required to guide institutions in practical, actionable ways. It highlights the necessity but not always the practical routes for achieving these goals, particularly in diverse educational contexts with varying levels of resources and infrastructure. This criticism highlights the need for knowledge that provides specific, actionable approaches to influence institutions in effectively integrating TEL within their own contexts. This project seeks to build on UNESCO's vision by exploring specific, contextually adapted strategies for TEL and BL integration at LU, potentially offering a model for other institutions dealing with similar challenges.

Similarly, the European Commission's Digital Education Action Plan (2021-2027) sets out a vision for creating a European Education Area where digital technologies play a pivotal role in empowering educators and learners, stating 'the need to unlock the potential of digital technologies for learning and teaching and to develop digital skills for all' (European Commission 2020:1). This vision reflects an approach to utilising technology for educational empowerment, mirroring this project's goal of enhancing TEL and BL practices within higher education. The plan's focus on digital skill development is fundamental, yet it might overlook the nuanced pedagogical shifts required to fully integrate these technologies into teaching and learning processes effectively. While promoting technological competency, there is a risk of underplaying the transformation in educational culture and practices required to enact real change and progress. This project aims to address this by examining

how institutional policies and stakeholder engagement at Lancaster University can be leveraged to foster a more effective and holistic integration of TEL.

National governments have also formulated strategies to advance TEL within their educational sectors. The UK's Department for Education (DfE) released 'Realising the potential of technology in education' in 2019, outlining a plan to harness the benefits of technology in schools and universities, emphasising the development of digital infrastructure and skills as critical enablers of educational innovation (Department for Education 2019). The strategy's focus on infrastructure and skill development, while important, may not fully address the complex interplay between technology, pedagogy, and institutional culture. Challenges such as equitable access, faculty digital literacy, and the creation of engaging digital content are acknowledged but require deeper exploration of strategic, systemic approaches to overcome these hurdles. What seems missing in this account is an understanding of how institutional culture affects the implementation of TEL. This project aims to contribute to these discussions by exploring the specific context of Lancaster University, identifying actionable strategies that can support the broader goals of national TEL initiatives while addressing the nuanced challenges of TEL integration within individual institutions.

#### **1.4.2 Institutional Level TEL**

Institution-level policies can play a crucial role in the successful integration and sustainability of TEL within HE. These policies lay the foundation for how technology is adopted, utilised, and supported across campuses, directly impacting the effectiveness of TEL initiatives. Taking Lancaster University as an example, the institution has actively



pursued the development and implementation of TEL policies aimed at fostering an innovative and inclusive educational environment:

*Our innovative use of digital technologies will be critical to securing a competitive edge. We will think and act digitally, embracing digital technology in all our activities. This will support us to improve our connectivity to partners and deliver innovative digital learning environments for our students and alumni. It must also deliver efficient and highly effective digital ways of working for our staff. Embracing digital opportunities will enable us to better build communities across our global organisation. (Lancaster University Strategic Plan 2020)*

Efforts have included the adoption of minimum standards for online learning resources, and the establishment of guidelines to ensure the quality and accessibility of digital content. However, like many institutions, LU faces challenges in positioning these policies within evolving technological landscape and the diverse needs of its academic and student community. Blended learning emerges as a prominent and potentially problematic aspect of institutional change in TEL, with LU looking to ‘examine the opportunities that digital technology provides to build personalised learning, support learners using analytics, offer asynchronous delivery and connect more effectively with our global campus network and our alumni around the world’ (LU Educational Strategy 2020). This is a shift from the traditional approach to higher education (Macfarlane & Yeung 2024) that has been prevalent over the decades and a shift in approach for LU.

### **1.4.3 Project Goals**

By examining the relationship between stakeholder engagement, institutional policies, and TEL practices at LU, my project aims to offer insights for policy writers and educational leaders aiming to navigate similar challenges. It underscores the importance of developing flexible, responsive TEL policies that are informed by the experiences and needs of all stakeholders, including educators, learners, and administrative staff. By leveraging the principles of the Change Laboratory methodology, this research highlights the potential for collaborative, participatory approaches to policy development and implementation, emphasising the need for policies that support continuous learning, innovation, and adaptability.

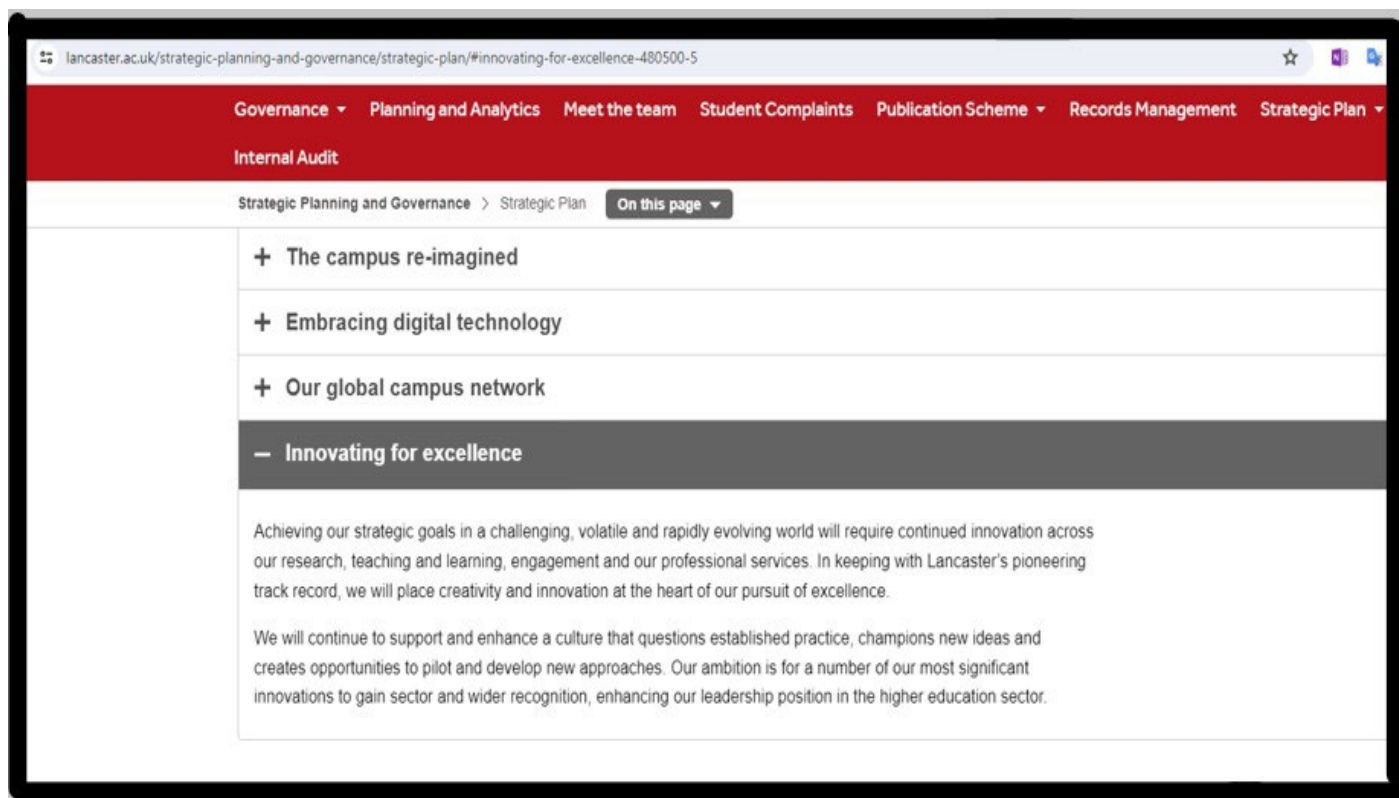
### **1.5 Practice Context**

Across various HE institutions, the integration of TEL encounters a series of common obstacles, ranging from faculty resistance to change, inadequacies in digital infrastructure, to a lack of alignment between technological tools and pedagogical objectives (Advance HE 2014; Sclater & Lally 2018). These challenges are not unique to any single institution, impacting the effectiveness of TEL across the educational landscape. My experiences at multiple institutions before joining Lancaster University echoed these findings, where the interest for TEL's potential often clashed with the reality of its implementation hurdles.

#### **1.5.1 Rationale for Research Site**

Lancaster University represents an appropriate choice for this research due to its articulated commitment to innovation and significance in the HE sector (Figure 1.2), as well as the university's strategic initiatives around TEL. Here they state '...we will develop the

principles, professional development and inclusive delivery models necessary to support our staff and students to participate to their fullest potential in online and hybrid modes of learning and knowledge transfer (LU Education Strategy 2020). Coupled with its open acknowledgment of the challenges in this domain, LU provides an effective institution for an in-depth study. Key aspects considered include the university's infrastructure for TEL, its institutional culture surrounding technology use in education, and its existing policies aimed at fostering digital literacy among staff and students. These elements make Lancaster University not only a microcosm of broader trends in higher education but also an opportunity to explore targeted strategies to overcome identified barriers to TEL integration.



*Figure 1.2 - Screenshot from Lancaster University website explaining their commitment to innovation (2022)*

At the point I started the project, I was employed as a Digital Learning Facilitator at

Lancaster University, this afforded me valuable insights into the practicalities and intricacies of TEL at the institution. This role has exposed me to the challenges of fostering widespread adoption and effective utilisation of digital learning tools, as well as the opportunities for leveraging technology to enhance educational outcomes. These firsthand experiences allowed me to witness the disconnect between institutional TEL policies and their practical application on the ground. Observations made during this time have not only informed the research focus but also highlighted the potential pathways for enhancing TEL practices within the institution. During the project I moved institutions to a new role as an Education Lecturer but continued the research project at LU with the same participants.

### **1.5.2 Forming Possibility Knowledge**

This project, by examining TEL integration within the context of Lancaster University, seeks to address the challenges of TEL adoption in higher education while also offering solutions tailored to the specific needs and context of Lancaster. By doing so, it aims to contribute actionable insights that can inform both policy formulation and the practical implementation of TEL, potentially serving as a blueprint for other institutions facing similar issues. It aims to develop a form of *possibility knowledge*, as discussed by Sannino & Engeström (2017), which refers to a form of knowledge that is not just about understanding or explaining phenomena but is about transforming them. *Possibility knowledge* is actionable and impactful, designed to open up new forms and patterns of activity in social systems or organisations. It involves the collaborative generation of new models and instruments for activities, often starting in localised, experimental settings and potentially expanding to broader implementations, which is representative of this project and its aims.

The *possibility knowledge* is developed through the engagement of participants and the insider researcher working together to identify and resolve contradictions within an activity system. Through this process, participants not only analyse current practices but also design new ones, generate new concepts and approaches that can lead to expansive learning and development within the organisation.

By highlighting actionable, local insights this project aims to emphasise the transformative potential of the research, providing a blueprint for applying the findings to enhance TEL practices effectively within the institution. The insights gained from this research will be further elaborated upon in Chapter 4 (Research Design), where I will discuss the methodological considerations of conducting this study from the dual perspective of a researcher and an insider within the institution. This approach not only adds depth to the research but also ensures an understanding of the challenges and opportunities inherent in TEL integration at Lancaster University and beyond.

## **1.6 Research Questions**

The examination of TEL within the context of Lancaster University, coupled with a recognition of the challenges and the strategic aspirations of the institution, led to the creation of specific research questions. By focusing on a stakeholder-created activity system, this research seeks to uncover the ways in which collaborative, culturally informed approaches can enhance the effectiveness and reach of blended learning across the university.

By centring the perspectives of academic staff, this research aligns with its broader objective of addressing the practical and systemic barriers faced by educators in higher

education. This focus addresses a gap in the existing literature, where academic staff voices are often underrepresented in discussions of blended learning design and implementation.

The following research questions have been created to guide this research and explore the transformative potential of such an activity system in addressing and resolving the contradictions within current TEL frameworks:

1. What is the potentiality of a stakeholder created activity system in supporting TEL in the institution?
  - 1.1. How do stakeholders perceive that a culturally more advanced activity system might support the development of blended learning across a university?
  - 1.2. How is this culturally more advanced activity system developed by stakeholders in a cycle of expansive learning?
  - 1.3. What does this culturally more advanced activity system tell us about the potential for resolving contradictions in existing activity?

## **1.7 Thesis Overview**

This thesis explores TEL within the context of higher education, specifically focusing on Lancaster University. The following overview outlines the structure and content of each chapter.

Chapter 2, the literature review, sets the foundation for this study by examining the existing body of work related to TEL in HE. It explores the challenges and opportunities associated

with integrating technology into educational practices, the role of institutional policies in shaping TEL, and the importance of stakeholder perspectives.

Chapter 3 introduces the theoretical underpinnings that guide the research, focusing on Cultural-Historical Activity Theory (CHAT) and the concept of expansive learning. It discusses how these theories provide a lens through which TEL can be understood and addressed, particularly in the development of a stakeholder-created activity system. The theoretical framework also explores how collaborative and culturally informed practices can drive systemic change in TEL.

Chapter 4, the research design chapter, outlines the methodology employed in this study, including the rationale for selecting Lancaster University as the research site and the use of the Change Laboratory. It details the data collection and analysis processes, highlighting the participatory approach taken to engage stakeholders in the exploration and potential resolution of TEL challenges.

Chapter 5 presents the findings of the research, offering insights into the development and implementation of a stakeholder-created activity system at Lancaster University. It explores how this system supports TEL, the perceptions of stakeholders regarding its potential to advance blended learning, and the processes involved in its development through cycles of expansive learning. The findings highlight the successes and challenges encountered, providing a nuanced understanding of the activity system's impact.

Chapter 6, the discussion chapter, draws together the research findings within the broader context of TEL in higher education. It considers the implications of a culturally advanced activity system for resolving contradictions in existing TEL practices and policies. This

chapter engages critically with the theoretical framework, literature, and research findings to articulate the contributions of the study to the field of TEL and to suggest avenues for future research.

The concluding chapter, chapter 7, depicts the key insights and contributions of the thesis, reflecting on the research questions and the extent to which they have been addressed. It outlines the practical implications of the study for stakeholders at Lancaster University and beyond, offering recommendations for enhancing TEL practices through collaborative, culturally informed activity systems. The conclusion also considers the limitations of the study and proposes directions for future research in the field of TEL.



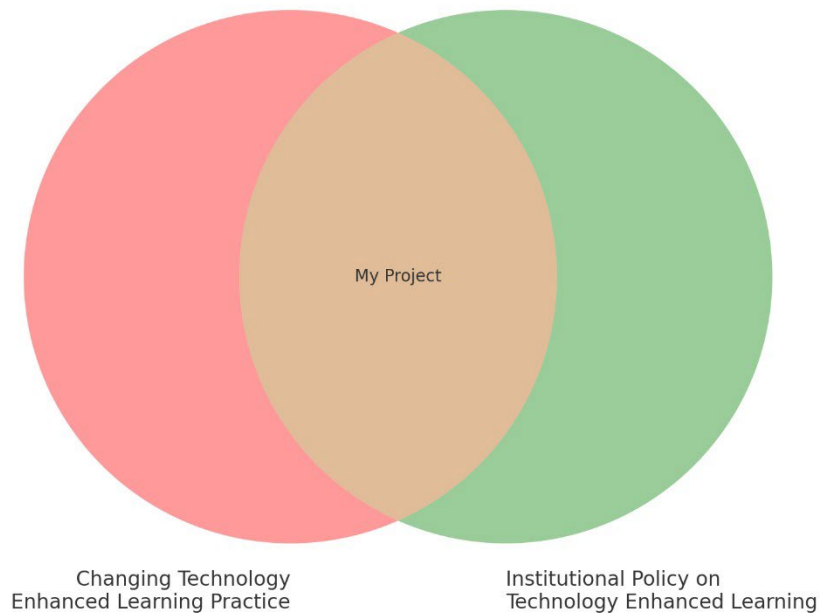
## **Chapter 2: Literature Review**

### **2.1 Introduction**

The aim of the chapter is to review the literature on two key areas; changing technology enhanced learning practice in higher education; and institutional policy on technology enhanced learning in higher education to explore how a contribution the body of knowledge might be made.

A foundation of any scholarly endeavour is the recognition that progress is built upon a strong foundation of existing literature. To this end, this literature review chapter is structured to establish the groundwork upon which the research is built. It is crucial not only to situate the study within the broader academic discourse but also to articulate a clear intent for its contribution to that discourse.

To begin, Section 2.1.1 sets the stage by positioning my project at the convergence of the two distinct areas of literature, represented by the scope of literature review illustrated in Figure 2.1. This will explain the rationale behind these choices, offering insights into the decision-making process that underpins the selection of these key domains.



*Figure 2.1 - Venn diagram showing intersection of key aspects of literature review* With the outline firmly established, I will proceed to explore each of these areas in greater detail. Section 2.2 will detail the tailored literature search strategy, informal and formal, for each area, including databases used, search terms, criteria for inclusion and rationale for these choices. Furthermore, an explanation of the process of filtering the literature, including reading abstracts, setting criteria, and selecting papers for in-depth analysis will be addressed.

Subsequently, I will analyse the literature, shedding light on their relevance to the research. This will involve an overview of the full-text analysis process for papers in each area, prioritising key information, including claims, concepts, methodologies, research settings, research questions, and evidence. This section will also present critical comments and

critiques of papers to highlight strengths, weaknesses, and their relevance to the study, ending with an emphasis on reviewing the literature and connecting it to the research aims.

Section 2.3 will present my analysis of the scholarly literature on changing technology enhanced learning practice in higher education, which will, in turn, inform the design and execution of this study. Highlighting key themes or topics within the area; the presentation of critical comments and critiques for papers within the area; structured analysis to compare clusters of papers or discuss key research contributions; discussion of the most common claims, areas of tension, and missing elements within the theme strand; the relevance of the area's key points to this research project; and a conclusion summarising the main findings within this area will all be covered.

Section 2.4 will present my analysis of the scholarly literature on institutional policy on technology enhanced learning in higher education. Similar to section 2.3, identifying key themes; critiquing existing literature; structured analysis; identifying gaps in the literature and addressing in relation to this research will all be covered.

Finally, Section 2.5 will consolidate the critical aspects of the research process, reiterating key claims, areas of tension, and literature gaps from each area. It will explain how my research builds upon or challenges these points, linking methodology, research questions, and theoretical framework to the reviewed literature, and highlighting how my project fills existing gaps and contributes to the field.

### **2.1.1 Locating the Project**

This research sits at the intersection of two bodies of knowledge: changing technology enhanced learning practice in higher education and institutional policy on technology

enhanced learning within higher education institutions. This section explores the rationale behind the selection of these areas, highlights their main messages, and exposes how they form the solid foundation upon which this doctoral-level contribution is built.

In Chapter 1, my journey began with a focus on the gap between the potential of technology enhanced learning (TEL) and its actual adoption by educators in higher education. Observing a lack of strategic integration of blended learning, my initial aim to explore this disconnect evolved. Through participant discussion and literature insights, it became clear that the core challenge lay in blended learning. Consequently, my project's scope shifted to emphasise this, where blended learning emerged as a critical aspect and focus of TEL change. My initial exploration of changing TEL practices in higher education started with searches using Google and Google Scholar. This uncovered a plethora of innovation and pedagogy intertwined with the evolving role of educators in the digital domain. Yet, I was also confronted with literature related to the resistance and barriers, mirroring the lack of engagement I had observed in my roles within higher education. The initial database searches, though broad and at times overwhelming, were instrumental in shaping my understanding and setting the stage for my research, underscoring the trajectory of TEL and the critical role of developing transformative agency and creating new knowledge.

The decision to concentrate specifically on institutional policy on TEL within higher education institutions was informed during the exploration of changing TEL practices in HE. The literature shed light on the powerful interplay between academic innovation and regulatory frameworks. My journey through the field of institutional policy on TEL emphasised a different layer of complexity. It revealed the balance between innovation and

regulation within academic institutions. This exploration focused on the administrative heartbeat of higher education, providing insights into how policies influence technology integration, and the impact they have on faculty and students alike. With a conscious decision to pinpoint the specific interplay between evolving educational practices and institutional policies, I made the deliberate choice to sidestepped broader technological trends to maintain the clarity and focus of my research.

At its core, this research project is a personal and academic journey to interpret the complexities of TEL in higher education. By exploring the complex interplay between changing practices and institutional policies, my aim is to offer substantive contributions to the scholarly discourse, insights, and recommendations that could potentially reshape higher education policy related to blended learning. Changing TEL practices encompasses the evolving nature of how TEL is being adopted and implemented in higher education settings and involves examining the pedagogical shifts, technological advancements, and adaptive teaching methodologies that characterise contemporary educational landscapes. The research aims to capture a snapshot of the current state of TEL, identify trends and patterns, and understand the factors driving these changes. The role of institutional policies in TEL focuses on the policies and frameworks that govern the adoption and implementation of TEL within higher education institutions. Institutional policies are crucial as they set the tone and create the environment within which TEL practices either succeed or fail. This aspect of the research seeks to uncover how policies are formulated, the considerations and influences that shape them, and their impact on the creation of TEL initiatives. By examining this, the research aims to highlight the facilitators and barriers

created by institutional policies, offering insights into how policies can be designed or reformed to better support the integration of technology in education.

## **2.2 Process of Searching for the Literature**

Having decided to review the literature on these two specific bodies of knowledge outlined in 2.1.1, a formal and structured literature search was conducted, building on the more informal approach discussed above (Section 2.1.1). This process was divided into two main phases: the literature search itself and the subsequent filtering process.

The literature search was conducted through a combination of informal and formal methods to ensure the inclusion of a wide range of relevant studies. For informal searching, academic websites, educational journals, and conference proceedings to identify seminal works and emerging trends were scoured. Formal searching involved using academic databases such as:

- Google Scholar
- JSTOR
- ERIC (Education Resources Information Centre)
- Scopus
- OneSearch (Institutional)

Using these search tools, I embarked on a systematic exploration of the literature. Firstly, focussing on 'Changing technology-enhanced learning practices in higher education', the initial step involved entering the title term into each database as a broad filter, capturing a wide range of literature that explicitly mentioned this key phrase. Section 2.2.1 addresses the search process in further detail.

### 2.2.1 Changing Technology Enhanced Learning Practices in Higher Education

To cast a wide net, firstly, all databases were given the title term, 'changing TEL practices in higher education', and then a more comprehensive set of search terms/keywords, search strains and additional key words were added (Table 2.1).

*Table 2.1 – Detailing structured approach for conducting literature search on changing technology-enhanced learning practices in higher education.*

Search Engine	Main Search Terms	Number of papers	Example Search Strings	Number of papers	Papers used
Google Scholar	Changing technology enhanced learning practices in higher education	97,400	'Technology-Enhanced Learning" "Higher Education" "Digital Learning" "Blended Learning" "Online Education" "E-learning" "Educational Technology" "Pedagogical Innovation" "Digital Pedagogy" "Virtual Learning Environment"	167	20

Search Engine	Main Search Terms	Number of papers	Example Search Strings	Number of papers	Papers used
Jstor	Changing TEL practices in higher education	20,655	(Technology Integration) AND (Pedagogical Strategies) AND (Educational Change) AND (Blended Learning, Teaching Practices) AND (changing TEL practices in higher education) AND (Blended learning)	124	14
ERIC	Changing technology enhanced learning practices	19	Changing technology enhanced learning practices AND higher education	19	3



Search Engine	Main Search Terms	Number of papers	Example Search Strings	Number of papers	Papers used
OneSearch	Changing technology enhanced learning practices in higher education	142	(Technology Integration) AND (Pedagogical Strategies) AND (Educational Change) AND (Blended Learning, Teaching Practices) AND (changing technology enhanced learning practices in higher education) AND (Blended learning)	37	11

An atypical strategy was employed in this search, informed by a standard literature review methodology and the specific requirements of the research topic (University of Wollongong 2023). These texts offer guidance on conducting comprehensive and systematic literature searches, including the use of databases, search terms, and the application of inclusion and exclusion criteria.

The use of search strings was considered, with synonymous terms and phrases, quotation marks, and Boolean operators like 'AND' and 'OR' utilised to balance the breadth and specificity of the search. For example, in Google Scholar, the use of quotation marks around phrases like "Technology-Enhanced Learning" and "Higher Education" helped to

narrow down results to those specifically discussing these terms in combination. Similarly, in JSTOR and OneSearch, Boolean operators were used to connect different but related terms, ensuring a comprehensive coverage of the topic. The emphasis on exclusion criteria was strategic. Given the vast amount of literature available, setting clear exclusion criteria was essential to filter out irrelevant or less rigorous studies, thereby ensuring the quality and relevance of the included studies. However, inclusion criteria were inherently considered during the search term formulation and initial database search, aiming to include studies that directly contribute to the understanding of changing TEL practices in higher education. Here, synonymous terms were used to broaden the search and uncover additionally relevant literature. For example terms like “online”, “blended”, and “digital” aimed at expanding the search net.

The PRISMA flowchart (Figure 2.2) offers a transparent method of detailing the literature review process, as well as the ability to replicate by other researchers. The PRISMA indicates how studies were identified, included, or excluded (Reasons 1-5). A substantial number of papers were excluded to ensure a focused and relevant synthesis of the literature. The exclusion criteria were applied to maintain the quality of the review. These reasons are outlined 1-5 below:

Papers that did not directly contribute to my understanding of changing TEL practices were excluded. To uphold academic integrity and ensure the credibility of our sources, I excluded non-peer-reviewed articles including opinion pieces, informal blog posts, and unpublished reports. Papers not published in English were excluded unless they were of exceptional relevance and a reliable translation was available. This criterion was applied to ensure the precision of the analysis and interpretation of the findings. Some papers were inaccessible

in full-text form due to various reasons such as paywall restrictions and were excluded as I could not conduct a comprehensive evaluation of their content.

Papers focusing predominantly up to K-12 education (US) or secondary education (UK) or other educational levels (Reason 5) that did not align with the higher education focus were excluded to maintain the targeted scope of the review. Although 48 studies were sought for retrieval, only 32 assessed were deemed eligible following the criteria outlined above. The "reports excluded" box in the PRISMA identifies 16 reasons for exclusion, but some papers applied to more than reason, hence the discrepancy in numbers.

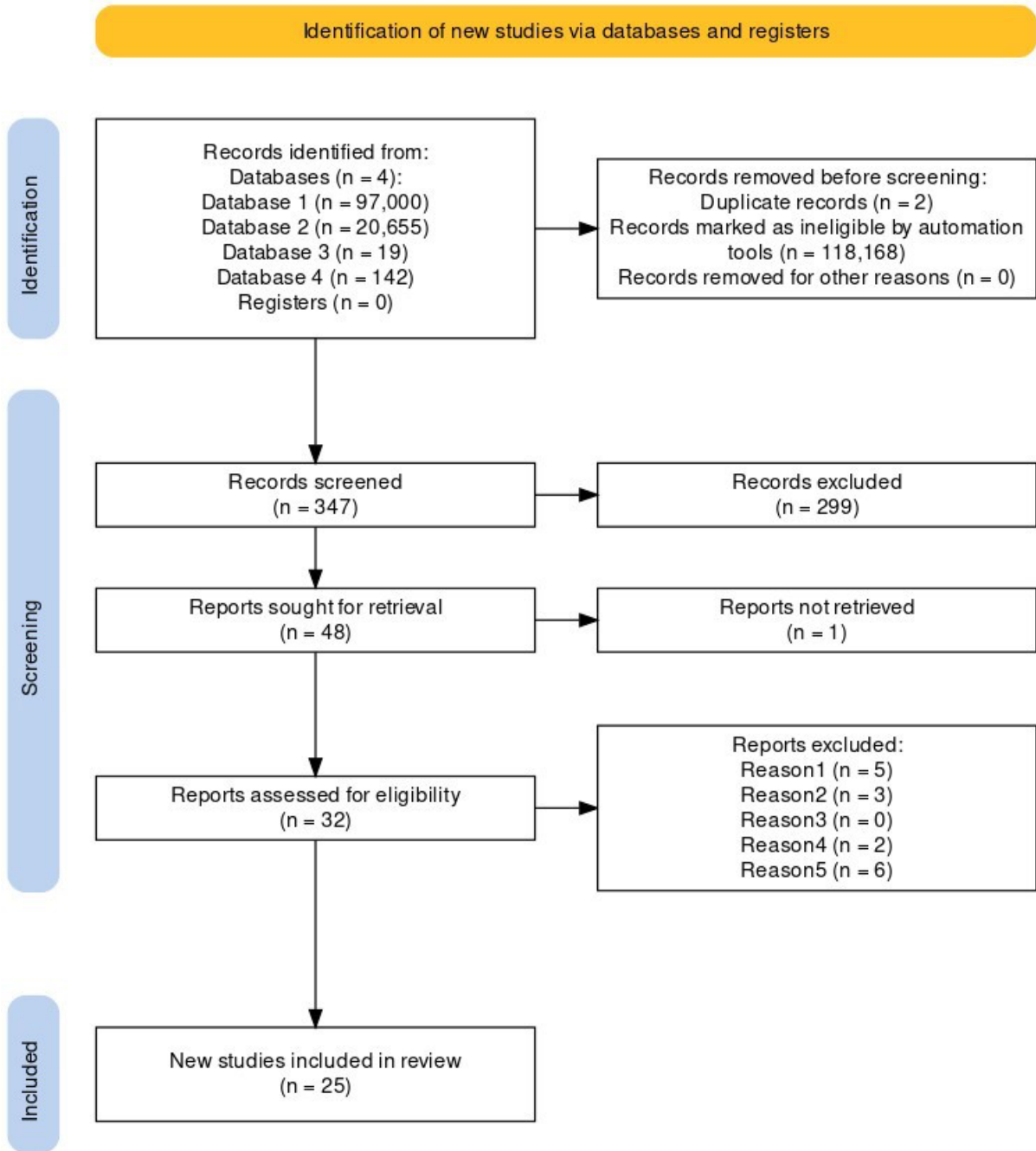


Figure 2.2 - PRISMA flowchart detailing literature search process for Changing Technology-Enhanced Learning Practices

### 2.2.2 Institutional Policy on Technology Enhanced Learning

A similar literature search process was followed to identify studies addressing institutional policy on technology-enhanced learning, using Google Scholar, JSTOR, ERIC, and

OneSearch. A similar process was followed for with all databases given the title term, followed by a more comprehensive set of search terms/keywords, search strains and additional key words were added (Table 2.2).

*Table 2.2 - Detailing structured approach for conducting literature search on institutional policy on technology enhanced learning practices in higher education.*

<b>Search Engine</b>	<b>Main Search Terms</b>	<b>Number of papers</b>	<b>Example Search Strings</b>	<b>Search within results</b>	<b>Filtering</b>	<b>Papers used</b>
Google Scholar	Institutional policy on technology enhanced learning	55,400	"E-learning Policy" AND/OR "Governance" AND/OR "Higher Education" "Policy Framework" AND/OR "Digital Strategy" AND/OR "Higher Education" "Strategic Planning" AND/OR "Higher Education"	1030	20	15

Jstor	Institutional policy on technology enhanced learning	22,525	"Institutional Policy" AND/OR "Technology-Enhanced Learning" AND/OR "Higher Education" "E-learning Policy" AND/OR "Governance" AND/OR "Higher Education" "Policy Framework" AND/OR "Digital Strategy" AND/OR "Higher Education" "Strategic Planning" AND/OR "Higher Education"	124	29	5
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Search Engine	Main Search Terms	Number of papers	Example Search Strings	Search within results	Filtering	Papers used
ERIC	Institutional policy on technology enhanced learning	7,458	"Educational Policy" AND/OR "Higher Education"  "Educational Change" AND/OR "Higher Education"  AND/OR "Governance"	106	18	6
OneSearch	Institutional policy on technology enhanced learning	57	Strategic Planning  AND/OR "Digital Strategy"	7	2	9

The PRISMA flow chart (Figure 2.3) details these criteria. Exclusions included papers not focused on institutional TEL policies in higher education, those only on technology implementation, studies on primary/secondary education, non-peer-reviewed or non-academic sources, and non-English papers. Full-text availability, geographic relevance, and the exclusion of duplicates were also vital. This approach aimed at maintaining the integrity and focus of the research.

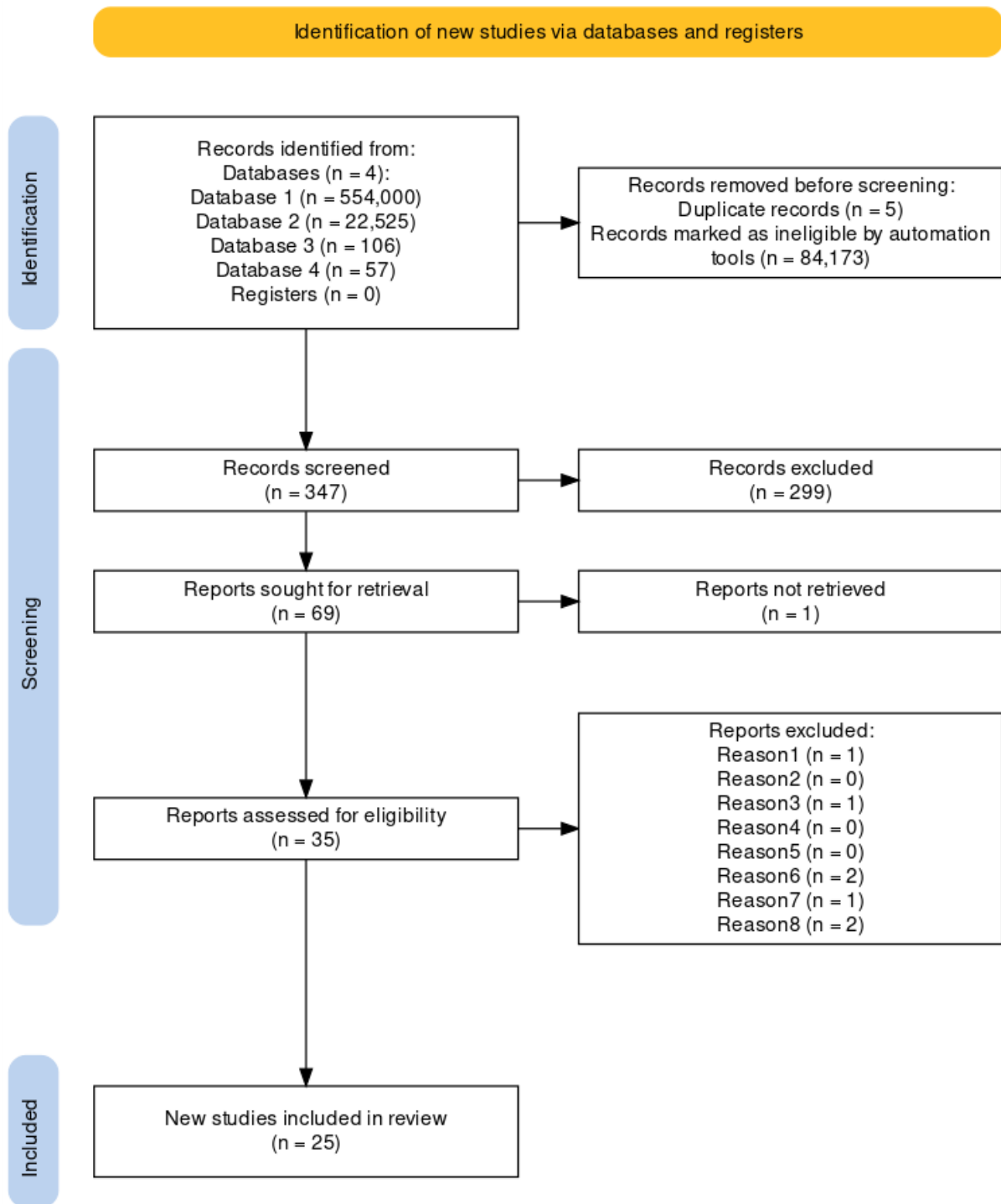


Figure 2.3 - PRISMA flowchart detailing literature search process for institutional policy on technology enhanced learning



### **2.2.3 Analysing the Literature**

The full-text analysis process in this literature review was a process aimed at extracting valuable insights from the selected papers in each of the two primary areas: changing TEL practices in higher education and institutional policy on technology-enhanced learning. This process involved several critical steps designed to prioritise key information, evaluate each paper's merits, and establish meaningful connections to the research aims.

The first step in the full-text analysis was to extract and prioritise key information from each paper. This included identifying and cataloguing the central claims made within each source, pinpointing key concepts or theoretical frameworks, understanding the methodologies employed, discerning the specific research settings or contexts under investigation, and capturing the research questions addressed by the authors. An example of this is Buchan's (2014) research. Here a regional Australian university was undergoing major organisational change, including the implementation of a number of core educational technology systems, which focusses on the adoption of TEL in higher education being influenced by both institutional rhetoric and the practical realities of implementation. The paper also challenges the traditional model of the diffusion of innovation, suggesting a shift from a focus on 'adopting' technology to 'adapting' to technological changes, introducing the concept of "Osmosis of innovation". This was to rethink how agents of change can approach innovation and the introduction of educational technology.

In the next phase of the analysis, the crucial task of critically evaluating the selected papers was undertaken. This aimed to highlight their strengths, weaknesses, and relevance to the study. This involved a comprehensive assessment of various aspects, including the rigour

of the research design, the clarity of the conceptual framework, the validity of the methodology employed, and the appropriateness of the evidence presented. Emphasis was placed on examining how each paper contributed to my understanding of changing TEL practices and institutional policies. I assessed whether the claims made by the authors aligned with my research aims and if the evidence provided robust support for those claims. Furthermore, I considered the extent to which each paper enriched my knowledge of the research contexts and the broader landscape of TEL in higher education.

Throughout this analysis process, my overarching goal was to bridge the reviewed literature with the specific aims of the research project. Each paper was analysed not only to understand its individual merits but also to identify commonalities, recurring themes, and points of contention that could inform this research. This involved a careful synthesis of the findings and insights extracted from the literature, setting the stage for how this research would build upon, challenge, or extend the existing body of knowledge. The full-text analysis process was a pivotal step in the literature review, operating as the bridge between the reviewed literature and my research objectives. It allowed for the distilling of valuable insights, assess the quality of the sources, and establish a strong foundation for my study's contribution to the discourse on TEL practices and institutional policies in higher education.

The decision on what to present, in what order, and in what format was guided by the objective to make the analysis of key points in the literature clear to the reader. The selection was based on relevance and contribution to the research aims, while the order and format were determined to construct a coherent and logical narrative that guides the reader through the intricacies of TEL practices and policies.

### **2.3 Changing Technology Enhanced Learning Practice in Higher Education**

In recent years, the higher education landscape has been transformed by the integration of digital technologies, giving rise to a diverse range of Technology Enhanced Learning (TEL) practices. This section of the literature review looks to address the multifaceted aspects of this transformation, drawing upon a specific set of research literature. The literature explores the adoption, implementation, and impact of TEL in higher education, shedding light on the challenges, opportunities, and effects of these practices.

Twenty-five research articles were reviewed, each contributing unique perspectives on the adoption, implementation, and impact of TEL in higher education. These papers collectively highlight the transformative potential of TEL, while also revealing challenges, opportunities, and implications of its integration into educational practices.

In the following subsections, I will focus on specific themes that hold particular relevance to my project, offering potential learning opportunities and areas for critique. This process opened opportunities to review a wide range of themes, but I have selected the following themes from a wider set:

**Blended Learning and Student Engagement:** This theme is crucial as it explores the transformative potential of blended learning and its impact on student engagement, providing insights that could be instrumental in enhancing the effectiveness of TEL practices in my research context.

**Organisational Culture and TEL Innovation:** Understanding how institutional culture influences TEL adoption and practices is vital, as it helps in navigating the complexities of implementing innovative learning practices within established educational structures.

**Impact on Teaching and Learning Practices:** Assessing the changes TEL brings to pedagogical practices and the roles of educators and students is key to ensuring that the integration of technology enhances learning experiences.

**Student and Staff Perspectives:** Understanding how TEL is perceived by both students and staff, and how these perceptions influence engagement and adoption.

While all themes identified in the literature hold value, some are less directly applicable to my project and as a result are not further explored. These themes include:

- Adoption and Diffusion of Innovation in TEL
- Strategies and Disruptive Innovation

### **2.3.1 Blended Learning Initiatives to Promote Student Engagement**

Blended learning was a predominant factor when researching TEL, meaning a clear distinction in the literature was required. Across the papers reviewed, blended learning is being discussed in these papers, rather than being specifically searched for or sought out.

Exploring the theme of blended learning and student engagement, this section addresses how the integration of online and traditional face-to-face teaching methods enhances student engagement in higher education. The integration of blended learning and student engagement within higher education has been a prominent theme in the literature, with this

specific intersection being discussed in 11 papers out of the 25 reviewed. Influential works by Garrison & Kanuka (2004) and Passey (2019) have been instrumental in demonstrating how blended learning can foster a flexible, interactive, and student-centred learning environment. This theme is critical as it explores how blended learning strategies can enhance the educational experience, making learning more engaging, accessible, and effective for students. A focus on the *Strategic Implementation of blended learning*, *challenges in blended learning design*, and *centrality of professional development* are all addressed below.

*Strategic Implementation of blended learning* is crucial, as evidenced by researchers like Boelens et al. (2018) and Passey (2019), who discuss the integration of online and inperson activities. This approach enhances learning by allowing pace flexibility and promoting engagement. Boelens et al. (2018) explored instructors' strategies for and beliefs about differentiated instruction in blended learning. They focused on the connection between instructors' approaches to blended learning and the organisation in which they work. The research implication of these findings is that professional support focusing on instructors' beliefs is essential to harness blended learning's full potential. They highlight the need for institutions to have a clear stance on blended learning and also pin-point how this should meet the needs of the learner first and foremost. Passey (2019) addresses how the wider and increased student population in HE institutions are prompting investment in technologies to support teaching and learning, whilst also focusing on the role of the educator in this process. A clear focus on the need for institutional initiatives is not evident in this research, allowing my project to consolidate the gaps. Flavin & Quintero (2019) focused on how TEL strategies are being formed and deployed across different

international higher education institutions, with a focus on the potential disruptive innovations, providing a comprehensive analysis of institutional strategies on TEL from a global perspective. Institutions are prioritising TEL as a means to enhance accessibility, flexibility, and quality of education. They address how embracing innovative TEL strategies can lead to enhanced educational outcomes and experiences for students. Their research provides insights into the dynamics of TEL strategy formulation and deployment, which can aid in understanding potential barriers and facilitators in my project's context.

*Challenges in blended learning design* are a significant concern, with Xiao (2019), Flavin & Quintero (2020), Serrano et al. (2019), and Garrison & Kanuka (2004) all highlighting this. They address the necessity of careful design and implementation in blended learning initiatives. Poorly structured courses can lead to confusion and reduced student engagement, stressing the need for meticulous planning and execution. They all refer to the challenge of integrating face-to-face and online components effectively. Xiao (2019) examined the role of digitalisation in the strategic development plans of 75 top universities in China. The research expressed how developing and sharing digital educational resources is the popular theme, alongside digital management system construction and application, digital infrastructure construction, and teachers' digital capacity building. The research also addressed the role of blended and flipped learning approaches to deliver innovation in the way students are taught. Linking to this, building TEL research capacity, and developing a positive ethos and ideological education were themes that warranted prominence. The study reflects on the work of Walker et al. (2016) when expressing contrasts in focus towards UK HEIs. Serrano et al. (2020) investigated the efficacy of blended learning in improving student engagement in higher education settings. They

address the pertinent topic of blended learning, which holds possibilities in the current educational landscape. They suggest that blended learning significantly enhances student engagement and that students appreciate the flexibility offered, reporting higher satisfaction levels compared to traditional methods. They conclude that blended learning can cater to diverse student needs, leading to improved learning outcomes. Their research points towards the value in institutions actively integrating blended learning strategies to foster enhanced student engagement. Their research also emphasises the potential of blended learning in catering to the evolving needs of modern learners in higher education. The paper, while emphasising the benefits of blended learning, does not give adequate attention to the challenges educators face in balancing online and offline modalities effectively. The focus on blended learning and its impact on engagement aligns with my project's objective of understanding and promoting effective TEL practices.

*The transformative potential of blended learning*, emphasised by Garrison & Kanuka (2004), provide a discussion in the context of the challenges facing higher education and its potential to support deep and meaningful learning. They discuss the need to rethink and restructure the learning experiences that occur, addressing blended learning's transformative potential. They also highlight how blended learning offers an opportunity to enhance the campus experience and extend thinking and learning, however address how its implementation is fraught with challenges. They see successful adoption of a blended learning requiring the following:

- creation of clear institutional direction and policy
- frame the potential, increase awareness, and commit

- establishment of a single point of support, quality assurance and project management
  - creation of an innovation fund to provide the financial support and incentives to faculty and departments to initiate blended learning course transformations
  - investment in establishing a reliable and accessible, technology infrastructure
- (Garrison & Kanuka 2004:8)

University strategies for TEL were addressed by Flavin & Quintero (2020), who examined 44 UK university strategies for TEL to assess the extent to which institutional strategies engage with and accommodate innovation in technology-enhanced learning. They argue that sustaining innovation and efficiency innovation are more commonplace in the strategies than disruptive innovation, a position which is misaligned with the technology practices of students and lecturers. The strategies suggest UK HEIs are adopting a largely sustaining innovation approach to technology-enhanced learning, aiming to enhance existing provision incrementally rather than being innovative in their redesign efforts. This holds value with the focus on my research, addressing how and the extent of stakeholder engagement in the creation on blended learning approaches.

*The centrality of professional development* is a recurring theme in the literature, as discussed by Sharpe & Beetham (2010), Bennett (2014) Keppell et al. (2015), Buchan (2014), and Serrano et al. (2019). They all underscore the essential role of professional development for educators in creating effective blended learning experiences. They explain how this creation hinges on educators being equipped with the necessary skills, underlining



the importance of ongoing professional development programmes. Sharpe & Beetham (2010) addressed learners' effective use of technology for higher learning, highlighting the need for alignment between technology mediated activities outside of the context of the course and those on course. Alongside other barriers to effective technology use, staff not having the skills to use the technology appropriately and inconsistency between staff were prominent. Bennett (2014) investigated how Sharpe and Beetham's Digital Literacies Framework, initially derived to model students' digital literacies, can be applied to lecturers' digital literacy practices. Bennett argues that lecturers' digital literacies can be understood as a hierarchy of access, skills, practices and attributes, and that motivations for lecturers in achieving improved teaching and learning outcomes for their students are paramount in seeking professional development. The research also addresses that self-efficacy and a belief in the value of technology are critical factors to the uptake of TEL practices. Buchan (2014) sought to understand how to improve the implementation and uptake of new technology within a changing institutional learning environment. The study addresses the traditional 'Diffusion of Innovation' model and its 'early-to-late adopter' categorisation by delving into individual adaptability and change responses in education technology adoption. It proposes that shifting the focus from adopting innovations to actively adapting them is crucial for successful technology integration within institutions. It also suggests that individual adaptability to change plays a key role in the overall uptake of innovations, and institutions can significantly impact this adaptability through targeted support and initiatives. To underline the ongoing interaction between individuals and the institutional environment, the study introduces the metaphor of 'osmosis of innovation', signifying the continuous and shared flow of knowledge and adaptation. This context offers a more nuanced

understanding of technology adoption, moving beyond static categorisations and highlighting the active role individuals and institutions play in shaping change. Both the individual stakeholders and the wider institutional change are central aspects of my project, which can be explored in more depth than the current study offers.

Serrano et al. (2019) addressed the rise in popularity of blended learning and its ability to accommodate the increasing diversity of the HE student population. Their research also aimed to increase awareness of higher education educators about how traditional face-to-face learning can be transformed into blended courses, which resonates with my project as it aims to address the current and potential blended learning practices and how they fit a new blended learning model for the institution. They discuss the key role digital technologies play in the innovation of traditional courses to safeguard student engagement and facilitate better learning experiences. Before implementing new approaches, they suggest the implementation of the Shewhart Cycle, which include four stages; plan, do, check, and act. The focus of this cycle is that it never ends and should be used to guide improvement in a continuous approach during the instructors' teaching life. Furthermore, their research suggests recommendations for creating and evaluating a blended learning approach amongst which some hold relevance to my project including; consultation with staff and the involvement of student representatives prior to the development of a school/institute blended teaching strategy; support and facilitate blended learning needs in terms of finances and staff time; and educate staff in blended learning, whilst ensuring that their uptake is clarified to both staff and students.

In conclusion, the existing literature on blended learning and student engagement provides a foundational understanding of this educational approach's potential in higher education.

My research aims to extend this understanding by offering concrete strategies for the development of educators, thereby enhancing the efficacy and impact of blended learning in the academic setting.

Insights from the literature on blended learning have implications for scholars in the field of educational research, particularly those focusing on technology-enhanced learning. While the existing literature offers an understanding of the potential and challenges associated with blended learning, a notable gap emerges in the provision of specific, actionable strategies for the professional development of educators engaged in these environments. The gap in the literature not only highlights an area requiring further research, but also presents an opportunity for my current work to contribute to the academic discourse.

### **2.3.2 Organisational Culture and Technology Enhanced Learning Innovation**

The nuances of *organisational culture and TEL innovation* was addressed in the literature review, uncovering how institutional culture, an incorporation of values, beliefs, and practices, significantly influences the adoption and integration of TEL in HE. This review draws upon pivotal works by Zhu (2015) to dissect the complex nature of organisational culture in TEL innovation. Their work underline that in the context of TEL, there is no single, universally accepted definition of organisational culture. Instead, organisational culture is a complex and multifaceted concept that encompasses a wide range of factors. Zhu (2015) examined the relationship between organisational culture and teachers' perceptions of and responses to technology-enhanced innovation, with seven dimensions of organisational culture addressed: goal orientation, participative decision making, innovation orientation, structured leadership, supportive leadership, shared vision, and formal relationships. The

results indicated indicate that each institution has its own features regarding the dimensions of the organisational culture and that the features are associated with teachers' perceptions of and responsiveness to innovation and the implementation of technology enhanced innovation. Zhu suggests that implementation is much harder than the adoption of the idea, with a need for tailored solutions to serve the actual learning needs and interests of staff. Furthermore, this indicates that when adopting TEL, universities need a holistic approach, considering a complex mix of pedagogical, technological, economic, and cultural challenges, to face the individual and institutional challenges. Some of the limitations of the research, such as the lack of focus on educational policy and teacher competences in adopting technology-enhanced innovation, are areas my research can address and provide further insight. My project also aims to build on this work and address the variety of challenges faced by stakeholders in the institution and discuss potential solutions to creating an organisational culture that facilitates effective TEL innovation.

*Shaping the outcomes of TEL* is driven by organisational culture, which Kirkwood & Price (2014) see as a dynamic and flexible entity, capable of either propelling or hindering TEL, contingent on its adaptability and receptiveness to innovation. King & Boyatt (2014) identify resistance to change and a lack of institutional backing as formidable barriers to TEL innovation. Zhu (2015) and Loughlin (2017) further advocate for a culture that nurtures collaborative practices and establishes experimentation as essential for the successful integration of TEL. The literature consistently underscores the pivotal role of organisational culture in shaping TEL outcomes. King & Boyatt (2014) advocate the importance of an institutional strategy targeted at providing sufficient resources and guidance for the effective implementation of TEL. They also identify the organisational features of

universities, like faculty autonomy and dispersed academic perspectives, which contribute to the institutional culture and uptake of TEL. Furthermore, they promoted the importance of an institutional strategy targeted at providing sufficient resources and guidance for effective implementation, which my research hopes to further build on. They highlight that without these key features, adoption of TEL can be slower and less impactful. In addition to offering a shared vision, directly engages with the needs and concerns of staff responsible for implementation. Therefore, central to the success of TEL adoption is the consultation with staff and their influence on shaping the institutional approach.

Loughlin (2017) unearths the active resistance which appears to be linked to the dislike of apparent institutional imposition of new technology, combined with professional performance metrics which fail to reward innovation in learning and teaching. This is something that my current research aims to address, focusing on the impact of stakeholder engagement in the creation of institutional TEL approaches. Loughlin also addresses difficulties, yet necessities, of simultaneously developing the physical infrastructure, institutional culture and individual self-efficacy which comprise the first- and second-order barriers to the successful integration of educational technologies.

*Cultivating an organisational culture that is supportive of TEL* is a recurring theme in the literature Xiao (2019) suggests that leadership at various levels must actively drive an innovative culture. Xiao also addressed the argument that university ethos and culture should evolve to keep pace with the times. Their research clarified that out of the 75 Chinese universities, 56 (74.6%) had plans to harness digital technologies to create an online campus ethos and culture which can promote the overall growth of the students. Digital capacity building both for teachers and researchers is the least popular theme

across the 75 universities, confirming findings that changes required in professional practice are often underestimated in institutional strategies. This resonates with my project and the lack of focus on this theme can be explored further in my work, looking to add to the discussion around creating institutional policy and culture. Xiao also highlights similarities and differences to western higher education institutions (UK, Ireland and US), offering key insights into the ways culture impacts TEL innovation. This leads into discussion around institutional policy, which is covered in Section 2.4 later in the chapter.

The discourse surrounding organisational culture and TEL is not only relevant but also pivotal for understanding the broader educational landscape where technological innovation occurs. It provides insights into the influential role of institutional dynamics in the effective implementation of TEL initiatives. This aspect is especially relevant to my research, which aims to outline effective strategies for the promotion of an organisational culture that embraces TEL innovation.

Nevertheless, the literature exhibits limitations, with a discernible gap in the literature concerning practical and empirically grounded strategies for developing supportive organisational cultures for TEL. This void presents a unique opportunity for my research to contribute tangible insights and strategies, rooted in real-world contexts, to enhance the understanding of how to foster organisational cultures that are conducive to TEL innovation in higher education settings.

Overall, the body of literature on organisational culture and TEL lays the groundwork for understanding the critical role institutional dynamics play in the adoption of TEL. However, there is a clear demand for more practical, applied research in this area. My project intends

to fill this gap by exploring effective strategies and explaining the roles of various stakeholders in fostering an organisational culture that is supportive of TEL innovation. Through this exploration, my research aims to contribute to the ongoing dialogue and practices in this area of higher education.

### **2.3.3 Impact on Teaching and Learning Practices**

This critical review draws from a diverse range of scholarly articles, including key contributions from Grassini (2023), Bennett et al. (2018), Passey (2019), and others, to explore how TEL reshapes educational paradigms. Grassini (2023) addresses recent technological advancements, notably artificial intelligence (AI), and how it has altered educational practices. The paper explores the potential and problems associated with applying advanced AI models in education, building on existing literature and contributing to understanding how these technologies reshape current educational norms. The paper asserts that TEL goes beyond simply incorporating technology into education, reshaping the way educators impart knowledge and students acquire it. With advances in TEL, Grassini expresses the need to adapt assessment practices and institutional protocols to manage the issues brought to the fore by the proliferation of AI-generated content in academic work.

*Pedagogical shifts in the context of TEL* are a key area of focus within the literature, with Bennett et al. (2018), Passey (2019), Garrison & Kanuka (2004), Boelens et al. (2018), and Serrano et al. (2019) all asserting that TEL goes beyond simply incorporating technology into education, highlighting that TEL's potential lies in enhancing learning experiences and fostering accessibility. Passey (2019) further supports this notion by emphasising the need

to seamlessly integrate technology with pedagogy and content knowledge to maximise TEL's effectiveness. They all argue for a move towards student-centred learning and active engagement, suggesting that traditional, teacher-led approaches may not suffice in a technology-rich educational landscape. They also advocate for a more collaborative and interactive learning environment facilitated by TEL.

*Resistance to change* is a core barrier to adopting TEL, with King & Boyatt (2014) discussing the resistance faced by educators in adapting to new pedagogical models that TEL demands. This resistance is often rooted in a lack of experience with technology or concerns about the effectiveness of new teaching methods. The literature underscores the need for comprehensive professional development and support for educators to transition smoothly into TEL-focused teaching practices.

The discussion on TEL's impact on teaching and learning practices is crucial for understanding the evolving landscape of higher education. It provides valuable insights into the potential benefits and challenges associated with the integration of technology in education. This discourse is particularly relevant to my research, which aims to investigate pedagogical approaches that positively influence TEL to enhance student learning. However, the literature also reveals gaps, especially in the practical implementation of TEL strategies and the assessment of their effectiveness. This presents an opportunity for my research to contribute by identifying best practices and potential pitfalls in TEL implementation. Moreover, there is a need for empirical studies that evaluate the long-term impact of TEL on student learning outcomes.



In summary, the existing body of literature on the impact of TEL on teaching and learning practices offers a comprehensive understanding of the potential and challenges of integrating technology in education. However, there remains a need for more nuanced research that examines the practical aspects of TEL implementation and its long-term effects. My research seeks to address these gaps, contributing to the field by exploring effective pedagogical approaches and evaluating the impact of TEL on student learning outcomes in higher education to inform a more strategic approach.

### **2.3.4 Student and Staff Perspectives**

*Student and staff perspectives* are key to the successful implementation of TEL in higher education. This analysis addresses the varied viewpoints and experiences of these key stakeholders, drawing insights from a selection of academic papers, including Sharpe & Beetham (2010), Serrano et al. (2019), Walker (2020), Keppell et al. (2014), King & Boyatt (2014), Loughlin (2017) and Buchan (2014).

*Personalised and flexible learning pathways* are highlighted in the literature, revealing that students generally hold positive attitudes toward TEL, accepting its potential to enhance learning experiences through. Sharpe & Beetham (2010), Serrano et al. (2019), and Sharples et al. (2009), and Passey (2019) all express the need for more flexible, adaptive and learner-centred ways of learning to occur. However, Walker (2020) and Loughlin (2017) point out that student engagement with TEL is dependent upon various factors, including the usability of technology, the quality of online content, and the level of instructional support. These factors play a pivotal role in shaping students' overall learning experiences and their acceptance of TEL.

*Implications for workloads* for staff are in direct contrast to the generally positive student views, with staff perspectives on TEL centre being more diverse and complex. While Keppell et al. (2014), Garrison & Kanuka (2004), and note that some educators view TEL as an opportunity to innovate and enhance teaching and learning practices. Conversely, King & Boyatt (2014), Sharpe & Beetham (2010), and Price (2005) highlight concerns among faculty regarding increased workloads and potential disruptions to traditional teaching methods. Buchan (2014) further emphasises the need for addressing these concerns to foster a more effective TEL environment. The exploration of student and staff perspectives on TEL is invaluable for understanding the dynamics of TEL implementation in higher education. This review highlights the importance of considering both the benefits and challenges of TEL from the viewpoints of those directly involved in the educational process. In summary, the literature on student and staff perspectives on TEL offers a foundational understanding of the attitudes and experiences that influence the success of TEL initiatives in higher education. My research seeks to extend this knowledge by providing a more comprehensive analysis of these perspectives, contributing to the development of TEL practices that are more aligned with the needs and expectations of both students and educators.

My research project aims to build upon these findings by conducting an in-depth analysis of staff perspectives on TEL and their experiences of student perspectives. By examining a range of sources, this research can uncover insights that inform the development of more effective and user-friendly TEL practices in HE. However, the existing literature also presents limitations, particularly in the diversity and depth of perspectives covered. There is a need for more comprehensive research that encompasses a wider range of educational

contexts and delves deeper into the nuanced experiences of both students and staff. My project seeks to address these gaps by providing a more holistic and detailed understanding of the impact of TEL on the educational experience from a staff perspective.

## **2.4 Institutional Policy on Technology Enhanced Learning in Higher Education**

This section of the literature review focuses specifically on the institutional policies that shape and influence the adoption, implementation, and impact of TEL in higher education. Drawing from an initially wide base of research articles, I aim to unpick the complexities of this transformation, highlighting the challenges, opportunities, and implications of TEL practices within institutional frameworks.

This review encompasses 10 research articles, each providing insights into the role of institutional policies in the context of TEL in higher education. These papers collectively clarify the critical importance of supportive and clear institutional policies in fostering the successful integration of TEL, while also identifying potential hurdles and areas for improvement.

In the subsequent subsections, I will examine specific themes that are of relevance to my project, aiming to identify areas warranting further investigation. The themes include:

**Policy Development and Implementation:** Examining how higher education institutions formulate and implement policies related to TEL, and identifying the factors that contribute to their success or failure.

**Institutional Support and Resources:** Investigating the role of institutional support and the allocation of resources in facilitating the adoption and effective implementation of TEL practices.

**Faculty Engagement and Development:** Analysing the impact of institutional policies on faculty engagement with TEL, and exploring strategies for enhancing faculty development and readiness for TEL.

**Challenges and Barriers:** Uncovering the challenges and barriers that institutions face in developing and implementing TEL policies, proposing strategies to overcome these hurdles.

#### **2.4.1 Policy Development and Implementation**

*Policy development and implementation* was a key facet of the integration of technology into higher education. In this constantly changing environment, creating and applying TEL policies is key to successful and lasting implementation. A review of current literature offers information on the complexities of developing and implementing TEL policies, focusing on 10 key papers to inform this review of the literature.

*Standardisation and fostering innovation* were an area of focus in the literature with Flavin & Quintero (2018), Graham et al. (2013), and Bell et al. (2009) all provide insights into the strategic planning and policy making processes involved in creating policies that integrate into the institutions. Xiao (2019) further addressed how the creation of TEL policies is often marked by an initial phase of experimentation and adaptation, exemplified by institutions such as Brigham Young University-Idaho (BYU-I) and Utah Valley University (UVU). Graham et al. (2013) address how institutions develop flexible policy frameworks that

accommodate the evolving nature of TEL integration, allowing for adjustments in response to institutional experiences. This emphasis on adaptability underscores the need for TEL policies to strike a delicate balance between providing standardisation and fostering innovation.

*Faculty-led innovation in policy development* is seen to be the foundations of blended learning in some sections of the literature. Xiao (2019) underlined how institutions like the University of Wisconsin-Milwaukee (UWM) developed a bottom-up approach to policy creation. This was characterised by faculty proactively initiating blended classes without explicit administrative directives, where faculty recognise and embrace the potential of TEL to enhance student learning. Such initiatives underscore the need for institutional policies that not only encourage but also support faculty-driven efforts, fostering a culture of collaborative innovation (Hall 2011; Graham et al. 2013).

*Multi-stage process in the adoption and implementation of TEL policies* in higher education institutions is typical. Xiao (2019) explains that in the initial stage, institutions identify organisational challenges that TEL could effectively address. Beyond this stage, they actively align TEL initiatives with broader institutional goals, such as addressing rapid growth, expanding access to education, and enhancing faculty and student flexibility. Graham et al. (2013) explore the pursuit of improved learning outcomes emerging as a critical driving force behind TEL adoption, as institutional leaders recognise its potential to address growth, cost, or flexibility issues while potentially enhancing student learning.

*Adaptable policies that can evolve* is evident after an analysis of the literature on TEL policy development and implementation. It reveals valuable insights into the multifaceted nature of

this process with Hall (2011), Thanaraj & Williams (2014), and Xiao (2019) all touching on this factor. These studies emphasise the need for adaptable policies that can evolve based on institutional experiences. However, a noticeable gap in the literature is the lack of emphasis on the systematic measurement and evaluation of the impacts of these policies on teaching and learning outcomes. This gap presents an opportunity for future research to address this critical aspect of TEL policy effectiveness. Policy development and implementation in TEL is extensively explored in the literature, with various studies offering diverse perspectives on its importance, definition, and strategies. My project aims to build upon these insights, focusing on developing strategies and best practices for successful implementation and investigating the role of leadership and governance in shaping TEL policies. My research project aims to address the identified gap by focusing on developing comprehensive, adaptable, and measurable policy implementation strategies in TEL, aligned with institutional goals and structures. This endeavour will extend the current understanding of TEL policy effectiveness by exploring effective methods for evaluating their impact on both teaching and learning outcomes. By ensuring that TEL policies are not only well-formulated but also achieve their intended objectives effectively, this research will contribute to the advancement of TEL implementation in higher education.

#### **2.4.2 Institutional Support and Resources**

*Institutional support and resources* hold a key role in the successful adoption and implementation of TEL practices is well-documented in the literature and seen as a vital aspect of its success (Flavin & Quintero 2017; Graham et al. 2013; Czerniewicz & Brown 2009; Xiao 2009). This support is seen to be complex, encompassing the development of

clear and comprehensive TEL strategies, the provision of professional development opportunities, and the allocation of necessary technologies, infrastructure, and personnel.

Developing institutional strategies for TEL is emphasised by Flavin & Quintero (2017) and Graham et al. (2013) who argue that these strategies should articulate the institution's vision, goals, objectives, and available resources for faculty and staff. These strategies should also align with the actual technology practices of students and lecturers to ensure effectiveness and relevance. Additionally, Graham et al. (2013) highlight the importance of professional development in the effective use of educational technologies and pedagogical approaches suited for blended and online learning environments. Similarly, Flavin & Quintero (2017) accentuate the importance of aligning institutional strategies with the actual technology practices of students and lecturers to ensure the relevance and effectiveness of TEL initiatives.

Training and professional development opportunities for faculty are also seen as key factors according to Thanaraj & Williams (2014), who discuss the significance of providing adequate resources for faculty, to ensure effective TEL practices. They stress the necessity of aligning institutional support with the requirements of TEL initiatives. Likewise,

Cunningham (2016) highlights the role of government and institutional backing in promoting TEL adoption, citing examples from Kenyan universities that resonate with practices in UK institutions. Challenges such as skills deficits among academic staff and infrastructure limitations persist, as noted by Cunningham (2016). These challenges necessitate comprehensive training in content development and collaboration tools, as well as investments in digital infrastructure. The literature also suggests the importance of clear

implementation and change management plans to fully realise the benefits of TEL (Cunningham, 2016).

In conclusion, the studies by Cunningham (2016), Czerniewicz & Brown (2009), Flavin & Quintero (2018), and Graham et al. (2013) collectively highlight the crucial role of institutional support and resources in TEL adoption. This includes the development of TEL strategies, professional development opportunities, and the allocation of necessary resources. These insights are instrumental for my project, aiming to assess the current landscape of institutional support for TEL, and to develop possible structures for future effective TEL initiatives. Yet, they may overlook the nuanced barriers within different institutional cultures and the varying levels of faculty readiness, which are critical for my research in understanding and enhancing TEL support.

#### **2.4.3 Fostering Faculty Engagement with TEL**

The significance of faculty engagement and development in TEL is well represented in academic literature, with four shedding light on varied aspects of this theme. Graham et al. (2013) emphasise the pivotal role of institutional policies, strategies, and support structures in *fostering faculty engagement with TEL*. They identify that institutional strategies, which include the overall design and policies of TEL, are crucial in the early stages and through to the mature implementation of TEL. At institutions like Brigham Young University and BYUHawaii, faculty have access to technical and pedagogical support for course blending. However, this support often lacks specificity towards TEL, necessitating high individual motivation from faculty. Consequently, insufficiently targeted support is seen to hinder the widespread adoption of TEL among faculty, despite its potential benefits.



Thanaraj & Williams (2014) and Czerniewicz & Brown (2009) discuss faculty involvement in TEL, indicating the importance of faculty-driven initiatives and collaborative innovation in TEL. Faculty attitudes and beliefs significantly influence their engagement with TEL, with Parchoma (2008) noting that without adequate training, support, and recognition, faculty may be hesitant to integrate digital technologies into their teaching. Addressing these barriers is essential for enhancing faculty engagement with TEL.

Recognising the critical role of faculty development in TEL, my project seeks to address the implementation is key stakeholders see value in professional development programmes designed to boost faculty engagement with TEL. Central to these programmes could be the provision of technological training that encompasses a range of educational technologies, including learning management systems and online collaboration tools. Equally important is the pedagogical support offered to faculty, which may involve assistance in designing effective TEL courses through various means such as workshops, mentoring, and peer review processes. Additionally, the literature acknowledges how incentivising faculty efforts in integrating TEL into their teaching can be beneficial. Recognising and rewarding stakeholder commitment and contributions to institutional TEL approaches can be addressed in my project.

The reviewed literature offers valuable insights into faculty engagement with TEL, highlighting the crucial role of institutional support. However, it primarily focuses on the institutional perspective, paying less attention to the individual motivations and challenges faced by faculty. My research can probe into the specific needs and motivations of faculty in various institutional contexts, potentially leading to more personalised support and development programmes.

## **2.5 Conclusions and Implications for the Study**

This study seeks to critically engage with and extend the current discourse, addressing gaps and tensions identified within the literature. The synthesis of key themes reveals a complex landscape, wherein policy development, institutional support, faculty engagement, and other challenges form the core pillars of effective TEL integration in higher education. Policy development and implementation literature reveals the complex process of TEL policy formulation and execution, marked by a contradiction between fostering innovation and adhering to standardised practices and processes.

Institutional support and resources are seen as critical to TEL implementation, alongside policy and processes for blended learning adoption. These also underscore the significant influence of organisational culture on the effective deployment of TEL. This research aims to address potential alternative models of resource allocation and support structures to enhance the institutional capacity for TEL.

Faculty engagement and development emerges as a focal factor in TEL success. The discourse in the literature signals an area of potential tension in ensuring faculty preparedness and engagement with TEL initiatives. My study aims to explore original strategies for faculty development and engagement, potentially offering new insights into approaches that engage with and are led by key stakeholders. Challenges and barriers are multifaceted, spanning infrastructural to policy-related barriers. This study aims to contribute to the existing body of TEL research by offering a clear understanding of the interplay between policy, institutional support, and faculty engagement, alongside strategies to overcome the frequent challenges that surface.

## Chapter 3: Theoretical Framework

### 3.1 Introduction

The function of this chapter is to address Cultural Historical Activity Theory (CHAT) as my chosen theoretical framework and how this frames the study of activity systems that engage with existing realities and explore how blended learning practices in a research intensive institution might change and develop in particular directions. As outlined in chapter 1, the rationale for this project stems from having been a teacher across a range of Further Education (FE) and Higher Education (HE) settings and institutions and seeing firsthand the limited uptake of technology to develop pedagogic practices. In my role as a Digital Learning Facilitator (DLF) at a research-intensive university I have observed what I deem to be tangible barriers to successful uptake and implementation of technology to develop pedagogy, specifically blended learning, including; a lack of strategic vision, limited digital literacy skills of academic staff, restrictive policies that limit innovation, and a disconnect between staff and such policies. This project aims to facilitate participants analysing barriers within the institution as a precursor to changing the situation. Therefore, starting from a principle that giving stakeholders additional involvement in developing policy may lead to greater agency and transformative impact in their practice and institution, this project seeks to develop an understanding *with* teachers of how some practices might be developed and changed in a given setting contributing to institutional policy that will foster the uptake and successful implementation of digital pedagogy. To develop that understanding with teachers, the Change Laboratory approach will be used. Furthermore, therefore, this chapter sets out how the Change Laboratory method builds on the theoretical framework of CHAT, where the context for understanding human actions is the

activity system (Leontiev 1978). The Change Laboratory has been seen to be effective, in a number of past successful theses (Moffitt 2019, Scahill 2021, Miles 2021), at accomplishing the empowerment of stakeholders to redesign and enact change in their research sites.

A number of ontological and epistemological assumptions inform the structure for this study, guiding the choice of theoretical framework, methodology, methods and data analysis. This project starts from the conviction that to enact academic development teachers need to play a pivotal role developing agency, emerging with the ability to question, analyse, and shape their own practice. This point resonates with the argument by Haapasaari, Engeström, & Kerosuo (2016) and Sannino, Engeström, & Lemos (2016) who point towards the value of transformative agency and the way the Change Laboratory can facilitate this. In the Change Laboratory, activity theory and expansive learning will guide the design of the project, *with* participants developing innovation in their local activity systems. Activity theory, expansive learning and double stimulation will be discussed in more depth and addressed in relation to their value towards this study in subsequent sections.

This chapter discusses my ontological and epistemological position in Section 3.2, providing a foundation of how they influence the structure and process of this project, whilst also outlining the theoretical concepts and framework that I use to analyse this project. Section 3.3 discusses Cultural Historical Activity Theory (CHAT) and Activity Theory (AT), which serve as the primary theoretical frameworks guiding the analysis. Section 3.4 addresses the concept of double stimulation, exploring how this method supports participants in overcoming challenges and achieving transformative change. Finally, Section 3.5

introduces the Change Laboratory (CL) methodology, explaining how it is used to redesign activity systems and foster stakeholder engagement in TEL integration.

### **3.2 Ontological and Epistemological Assumptions**

Fundamental to my ontological position is that there is an underlying reality and that it is constantly changing and developing. This project engages with the existing reality, in this case with regards to teaching, learning and assessment in an institution, and explores how it might change and develop in particular directions, for example by incorporating more blended learning practices. Circling back to my experiences as a student and teacher (outlined in Chapter 1), the variety of roles and jobs I have held has given me an insight and appreciation for the wide-ranging approaches by individuals, curriculum teams, institutions and sectors have with regards to blended learning and both the interconnected and sometimes disjointed approaches leading to its evolution. I have personally experienced and can align myself with Tolman's belief that 'reality consists of dialectical processes of self-movement of developing systems of interaction' (cited in Virkkunen and Newnham 2013:30). By dialectic processes I refer to the method of contradictory processes between opposing sides (Sameroff 2010), which I have experienced in past roles where opposites are held in a mutually constituting relationship to serve a purpose and achieve an end goal. The notion of unity of opposites is a key notion of dialectics, meaning that the opposing forces in a system require one another and, through their interplay, form the basis of the development of the system (Sannino, Engeström & Lahikainen, 2016:248). These principles are central to this study and its configuration.

From an epistemological perspective, the starting point for this study is that to truly understand an issue in reality, we need to engage in its change or development. This can be associated to Marx's work where he related to a need to try to change the world in order to really understand it, which holds great emphasis here. He advocates what he called 'practical-critical' activity over introspection or narrow empiricism, and intervention over interpretation:

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*All mysteries which lead theory to mysticism find their rational solution in human practice and in the comprehension of this practice [...] The philosophers have only interpreted the world in various ways; the point is to change it (Marx, 1845/1976, cited in Bligh & Flood 2015:4).*

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Transformation based on autonomous participation between the participants and researcher and their ability with reflective thinking (Virkkunen & Ahonen 2011:232) drives and shapes this research design. Transformation in this project will frame the investigation and development of blended learning in the university, ensuring the participants are valued as co-researchers throughout. Participants are introduced to the research process and learn actively through the direct involvement in the process in line with social constructionism as an active process (Schwandt 2014). Objects are seen to exist and evolve only as elements of expanding systems of relationships like living organisms coevolve within their ecosystems (Virkkunen & Ahonen 2011:232), meaning the CL sessions offer the space for transformation and expanding systems to facilitate the development of blended learning approaches individually, collectively and institutionally.

Drawing together these ontological and epistemological perspectives leads to a research design focused on co-production of knowledge and meaning, with Activity Theory (AT) being the overarching framework chosen because of its fit with such perspectives. Activity Theory and related learning theories will be discussed in relation to this project, below, to add context to the process undertaken.

### **3.3 Cultural Historical Activity Theory (CHAT) and Activity Theory**

The backgrounds of CHAT and Activity Theory (AT) are historically linked to the work of Lev Vygotsky, Aleksei Leontiev and Alexander Luria, and are 'attempts to provide an account of learning and development as a mediated process' (Daniels, Cole & Wertsch 2007:2).

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*“...activity theory redirects our gaze from what is going on inside the individual to what happens between human beings, their objects, and their instruments when they pursue and change their purposeful collective activities. In this theoretical tradition, Vitaly Rubtsov was one of the first to focus the analysis on mediated cooperative actions.” (Sannino & Engeström 2018:44)*

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It is built on the philosophical and methodological foundation of Marxist dialectics, aimed at actively changing the conditions of one's existence, not merely accepting and describing it (Sannino 2011). Engeström (1993) previously articulated that the activity approach was perhaps underutilised in academia despite its potential to provide a non-reductionist approach to human development. CHAT's origins, from the work of the aforementioned

Russian psychologists, challenged dominant theories of behaviourism and instead emphasised the role of social activity through sharing internal and external artefacts.

Activity theory provides a conceptual framework from which we can understand the interrelationship between activities, actions, operations and artefacts, subjects' motives and goals, and aspects of the social, organisational and societal contexts within which these activities are framed. Leontiev theorised that activities were composed of actions and operations (McAvinia 2016) and established a formal distinction between three concepts; *activity*, *action* and *operation* which are seen as related hierarchically represented in Figure

3.1.

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*“Activities, actions, and operations Activity in a narrow sense is a unit of life, a subset of all possible processes related to the interaction of the subject with the world. The subset is defined by its orientation toward a specific motive. However, activities are not monolithic. Each activity, in its turn, can be represented as a hierarchical structure organized into three layers. The top layer is the activity itself, which is oriented toward a motive. The motive is the object, which stimulates, excites the subject. It is the object that the subject ultimately needs to attain.” (Kaptelinin & Nardi 2006:63)*

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Bligh & Flood (2015:6) summarise that '*activity* refers to *collective and sustained* effort, regulated by an object of activity, and having both sense and meaning. *Action* refers to something more time-bounded and granular, regulated by a particular goal, which may be



undertaken by an individual (though in a *conscious, premeditated* way). *Operation* refers to those *routine processes* that are used to adjust actions, regulated by current *conditions*.’

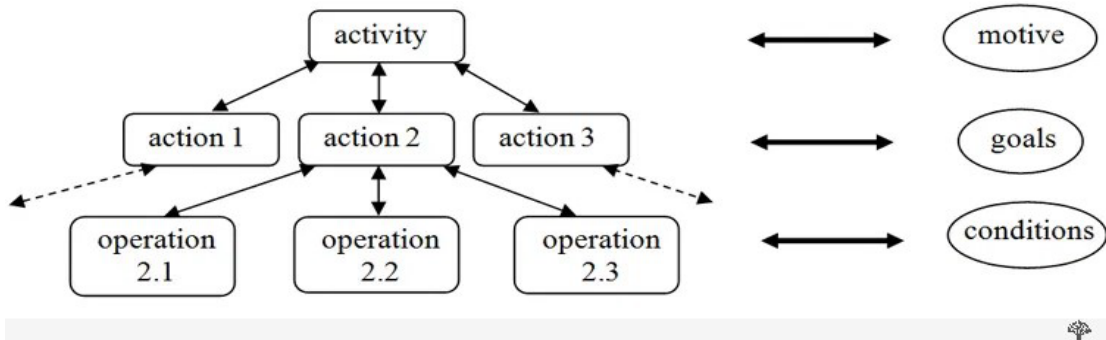


Figure 3.1 - Hierarchical structure of activity

Thus, there is the overall **activity**, ‘driven by an object-related motive’ (CHAT-DWR, 2011), the level of **action** which is goal-oriented and contributes to the activity as a whole, and finally the level of **operation** (Leontiev 1981). Operations are automatic and determined by the conditions under which the activity is undertaken.

Blunden (2010:178) provides a useful summary example of the distinctions between the processes: \_\_\_\_\_

*“The motive of an activity (such as production of cloth) is not translated directly into individuals' goals (which may be earning a wage). The problem of forming individuals' goals so that the individuals' actions are rearticulated to constitute activities which meet social needs is a problem of the social organization of labor. The goal of the individual's action arises only thanks to the representation of the activity in and through the mediation of social relations.”*

The changing relationships between activity, actions, operations, objects and goals continues to form the foundation of the CHAT tradition of activity theory (Bligh & Flood 2015). Activity Theory being set of basic principles that constitute a general conceptual system, rather than a highly predictive theory (Kaptelinin & Nardi 2006). In activity theory the unit of analysis is an activity whereas actions are goal-directed processes that must be undertaken to fulfil the object (Nardi 1995).

Engeström (2001:133) summarised activity theory into five key principles which will be addressed and their relevance to this project in the following subsections:

- 3.3.1 Activity Systems as the Unit of Analysis
- 3.3.2 Multi-voicedness to Provoke Change
- 3.3.3 Historical Development for Context Setting
- 3.3.4 Contradictions to Drive Change
- 3.3.5 Expansive Learning to Reconceptualise Activity

### **3.3.1 Activity Systems as the Unit of Analysis**

The first principle, collective and object orientated activity, is that CHAT's prime unit of analysis is one or more *activity systems* each motivated by and oriented toward *objects* (Engeström 2000). These objects are, in turn, mediated by instruments, community, rules, and the division of labour as outlined in Figure 3.2.

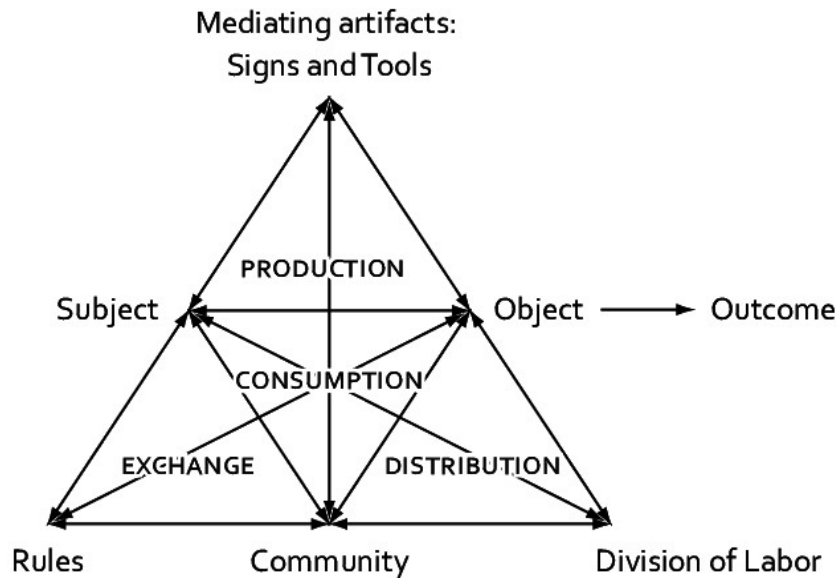


Figure 3.2 - Engeström's (1987:78) triangular activity system explaining the structure of human activity.

This principle underpins that goal-directed individual and group actions are relatively independent but subordinate units of analysis, eventually understandable only when interpreted against the background of entire activity systems.

*“Production creates the objects which correspond to the given needs; distribution divides them up according to social laws; exchange further parcels out the already divided shares in accord with individual needs; and finally, in consumption, the product steps outside this social movement and becomes a direct object and servant of individual need, and satisfies it in being consumed. Thus production appears to be the point of departure, consumption as the conclusion, distribution and exchange as the middle.”*

*(Marx 1973:89 in Engeström 2014:63)*

In relation to this study, collective and object orientated activity is central in addressing the distinction between short-lived goal-directed action and longer lasting fundamental

changes. A historically evolving collective activity system, seen in its network relations to other activity systems, is taken as the prime unit of analysis.

### **3.3.2 Multi-voicedness to Provoke Change**

The second principle, multi-voicedness is what Engeström (2001:136) suggested 'an activity system is always a community of multiple points of view, traditions and interests.' The division of labour in an activity creates different positions for the participants, who carry their own diverse viewpoints, perspectives, and histories. In the context of this project, multi-voicedness is a principle that acknowledges the varied perspectives of all stakeholders involved in TEL at Lancaster University. Mayer and Lees (2013:667) expressed that 'people, all with individual and professional histories, job roles, opinions and personalities, populate activity systems... ..Collaboration can spring from the polyphony of multi-voicedness.' Pertinent in relation to blended learning in a university setting, multivoicedness could be collaborative working where different professions across an institution are brought together. For example, academics, librarians, IT support, academic developers, learning technologists, course administrators and other stakeholders.

The activity system itself carries multiple layers and strands of history etched in its artefacts, rules and conventions (Kaptelinin & Nardi 2009). The multi-voicedness is amplified through interrelating activity systems, with tensions and contradictions between activity systems leading to progress. Engeström (2014) suggested an activity system is by definition a multivoiced formation. An expansive cycle is a re-orchestration of those voices, of the different viewpoints and approaches of the various participants. Multi-voicedness is important and pertinent to this study in the formulation of ideas through collaboration across

organisational profession and cultural boundaries (Engeström 2005 & 2008). Additionally, since practice is socially and culturally embedded, sustainable developments of practice require input from all involved. Acknowledging and celebrating multi-voicedness enables transformation as well as a transmission of culture, allowing learning *for change* rather than the learning *for stability* that tends to be the norm in historically rooted and rigid educational establishments (Morris et al. 2021). Those historically rooted norms and practices are addressed in more detail in the subsequent section.

### **3.3.3 Historical Development for Context Setting**

The third principle, historical development, highlights that to understand the 'problems and potentials' (Engeström 2001:136) of activity systems, we must first understand the way in which those systems have formed and changed; the histories that shape a particular activity. At LU, the integration of TEL needs to be examined against the circumstances of the institution's technological and pedagogical history. For example, previous attempts to integrate digital tools may have faced challenges such as inadequate infrastructure or lack of training, which could influence current attitudes and readiness for adopting new TEL practices. If one tries to understand activity without historicity, consequential phenomena are easily dismissed as arbitrary irrational features and tend to be eliminated or ignored (Engeström & Sannino 2021:7). Knowing is inseparable from doing in the historical context of activity (Nicolini, Gherardi & Yanow 2003) meaning historical development is essential in progressing from where we have come from, where we are now, to where we want to be in the future. Thus, blended learning needs to be analysed against the history of its local organisation and against the more global history of the pedagogical concepts, procedures

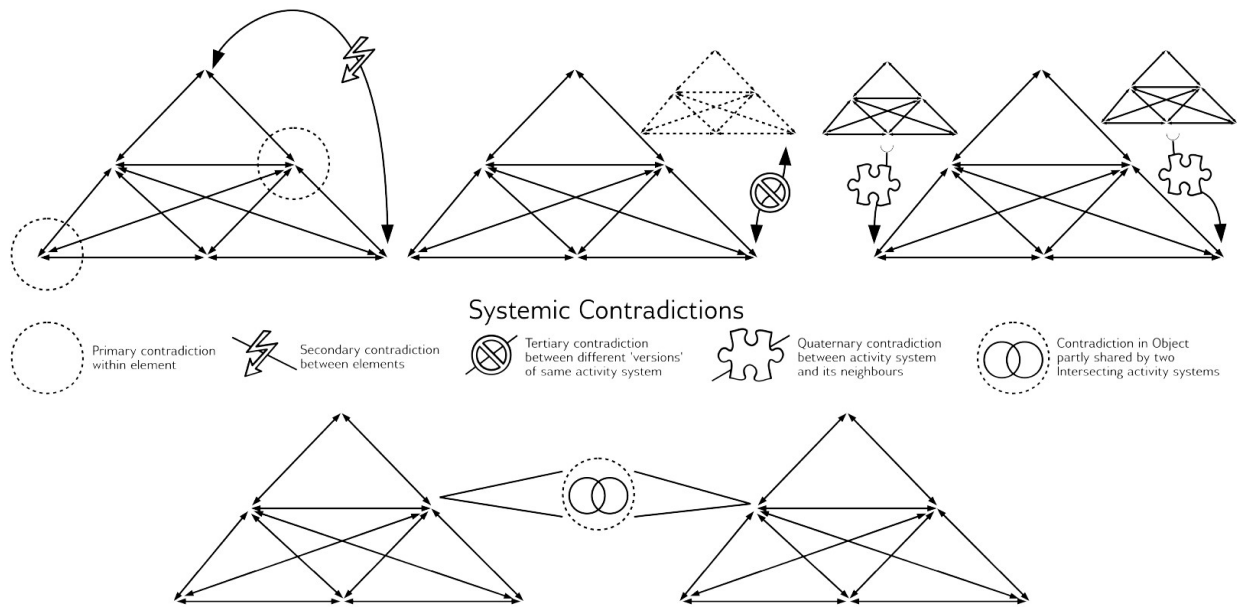
and tools employed and accumulated in the local activity. Understanding current problems and future potential of blended learning at the project institution, both of which Engeström (2001:136) suggests are fundamental to enact change through action, are essential as Miles (2021:75) suggests ‘You cannot separate history from the present’.

### **3.3.4 Contradictions to Drive Change**

The fourth principle of CHAT, contradictions, which Engeström (2001:137) refers to as drivers of social change which emerge from problems arising within systems of activities. There are four levels of contradictions associated with CHAT (Engeström & Sannino 2010:7):

1. Primary contradictions emerging within each and any of the elements of the activity system.
2. Secondary contradiction between two or more nodes (e.g., between a new object and an old tool).
3. Tertiary contradictions between a newly established mode of activity and remnants of the previous mode of activity.
4. Quaternary contradictions between the newly reorganised activity and its neighbouring activity systems.

Bligh and Flood (2015:9) were able to visually represent the four levels of contradictions, as shown in Figure 3.3, representing the different forms of systemic contradictions.



*Figure 3.3 - Graphical representation of systemic contradictions*

### 3.3.5 Expansive Learning Leading to New Practices

The fifth principle, expansive learning, according to Engeström (2014) is a process of learning motivated by historically accumulated contradictions and resulting, where successful, in historically new forms of activity. According to Virkkunen and Newnham (2013:59) expansive learning is a cycle that ‘carries out the process of ascending from the abstract to concrete’.

Expansive learning refers to collective processes in which an activity system resolves its internal contradictions by constructing and implementing a new way of functioning for itself (Engeström 2007). For instance, academic and professional service staff may question blended learning policy or strategy and begin to develop alternative approaches that support student learning and improve student experience. Augustsson (2021:477) explains expansive learning as a ‘collective process in which participants, through learning actions,

change and create new activities by going beyond the already known and relatively stable practices within the activity system'. The process is intended to go beyond what is currently known by generating a zone of proximal development and the aggravation of contradictions by these participants leads to reconceptualization through collective activity, which this project aims to achieve through the change laboratory (Sannino et al. 2016). The starting point of expansive learning is the emergence of a state of need in an activity, usually uncovered by participants questioning their dominant activity (Kerosuo, Kajamaa & Engeström 2010). Engeström (2008 from Bligh and Flood 2015) suggested seven stages of the expansive learning cycle, which would construct and resolve evolving contradictions in a complex system and explained as cyclical model in Figure 3.4.

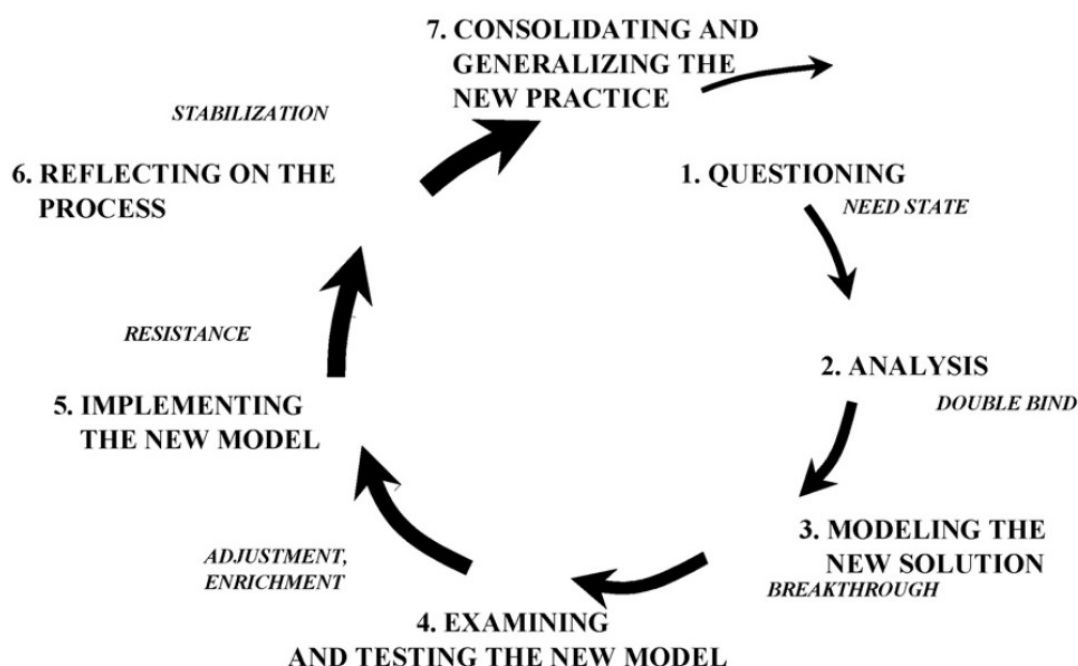


Figure 3.4 - Sequence of learning actions in an expansive learning cycle (Engeström & Sannino 2010:8)

Each stage has a purpose and can be explained in more depth. Stages:

1. *Questioning* involves current practices and existing plans being questioned.



2. *Analysis* is where people examine the history of the present situation, tracing the origins and aiming to understand the current situation as a direct result.
3. *Modelling* is where people aim to construct a new, simplified model that aims to explain the situation and offer potential solutions.
4. *Examining* involves people work with the model (in discussion or in practice) to better.
5. *Implementing* has people render the model more tangible by applying it practically and theoretically.
6. *Reflecting* involves reflecting and evaluating current processes and generating critique and recognising further requirements.
7. *Consolidating* comprises of peoples attempt to entrench stable forms of new practice.

Bligh & Flood (2015) explain the cycle and sequence of learning actions (Figure 3.4) as an ideal approach, yet are mindful of the heuristic model being altered as Engestrom (2008:131) stated:

*“One probably never finds a concrete collective learning process that cleanly follows the ideal-typical model [...] Every time one examines or facilitates a potentially expansive learning process with the help of the model, one tests, criticizes, and, hopefully, enriches the theoretical ideas of the model.”*

Engeström et al. (2012) acknowledge that although the stages and cycles, are in theory ideal, due to a variety of circumstances are unlikely to be followed in the ideal-typical model

put forward. They address that in practice, the cycle may proceed iteratively with particular stages abandoned or redundant, with people returning to earlier phases. The expansive learning cycle is commonly used by researchers through direct intervention for designing Change Laboratory interventions. 'The recurring quality of expansive cycles is empirically accessible by means of analysing smaller cycles within a bigger cycle' (Engeström et al. 2012:86). Here Engeström et al. are referring to the cyclicity in processes of expansive learning being multifaced and often more complex with multiple mini-cycles present.

Within this study the expansive learning cycle is key to allowing abstract ideas from participants to become concrete practice through the Change Laboratory. The intention is to unearth, challenge and empower participants to resolve contradictions through exposing and aggravating their issues through a range of pre-planned activities to promote desired learning actions using double stimulation (Sannino 2015).

### **3.4 Double Stimulation for Volitional Action**

Double stimulation has two parts and is considered 'the mechanism with which human beings can intentionally break out of a conflicting situation and change their circumstances or solve difficult problems' (Sannino 2011:584). Within Vygotskyan studies double stimulation is understood as 'a particular method of experimental investigation...using two groups of stimuli...One group of stimuli has the function of a task toward which the activity of the experimental subject is directed, whilst the other takes on the function of signs which help to organise the activity' (Vygotsky 1994:208). Vygotsky's double stimulation, at a basic level, involves the researcher setting a problem as a first stimulus and then introducing a second stimulus that can be adopted by the participant to problem solve through their own

agency (Engeström and Sannino 2010:5). Sannino (2015:2) similarly suggests ‘...double stimulation, besides being a method, is a principle of volitional action which distinctively characterises all higher mental functions. Second, double stimulation comprises conflictual aspects, in particular conflicts of motives. Together with the two stimuli conflicts of motives constitute the core of a strategic setup that human beings establish to intentionally affect their behaviour and the world around them’.

Engeström (2007) shifted the focus from Vygotsky’s early experiments which concentrated on the individual to the collaborative experience of double stimulation, which Vygotsky had himself alluded to the when addressing the value of learning within the social contexts (Vygotsky 1997:106). Engeström (ibid) argues that agency leads to action that can extend beyond pre-determined limits and has ability to move beyond sociocultural norms. Engeström (2011) expresses the notion that double stimulation enables freedom for participants to construct the task itself, not only the means to solve it. For this project the application of double stimulation is foundational to promote participants’ collective transformative agency (Sannino et al. 2016) and work across as their activity systems towards shared problems relating to blended learning practices in the specific institution.

Morselli (2019:63) suggested ‘double stimulation can be used by groups and transferred to the Change Laboratory to remediate the aggravated contradictions affecting an activity system.’ He goes on to explain that double stimulation is characterised as a redress process, since the individual substitutes the previously internalised tool with a new one that is more useful to resolve the conflict of motives. This a pertinent aspect of this project due to the variety of top-down and bottom-up processes and procedures that will form Change Laboratory sessions. Virkkunen (2006) states that in the Change Laboratory, the principle

of double stimulation is key to construct practitioners' desire to transform their activity system. During the Change Laboratory, the power traditionally reserved for management is challenged through double stimulation, allowing participants to develop collective transformative agency and enact change in organisations. This project is designed around a series of dual stimulation tasks, set out in the Change Laboratory methodology, which is discussed in more detail in the section below.

### **3.5 Change Laboratory to Reconceptualise Activity**

The Change Laboratory is the term used to describe a deliberate intervention designed to foster change through a formative intervention for the development of work activities by participants in collaboration with a researcher-interventionist (Virkkunen & Newnham, 2013). Bligh & Flood (2015:1) suggest that Change Laboratory methodology 'prioritises challenging conventional wisdom and reconceptualising activity' and suggest how this is closely aligned with activity theory (addressed previously in this chapter).

The Change Laboratory seeks to apply a Vygotskian, developmental approach in real world, collective, organisational settings making it an ideal methodology for this project. This project's Change Laboratory intervention intends to facilitate people working together in a structured and repeated fashion to generate new policy development and the design of activities to help that policy get implemented in their institution. Participants will work with the insider-researcher on activities that aim to challenge traditional/typical insight and reimagine activity. The Change Laboratory approach is a direct attempt to cultivate genuine change and transformation through helping stakeholders to develop their own new. Furthermore, using the Change Laboratory methodology offers the possibility of

constructing tangible examples where academics can change their practices to accomplish more effective, innovative, and personalised learning experiences, aligning with institutional goals and improving educational outcomes. To achieve this table 3.1 intends to explain how the Change Laboratory approach will bring together the key principles and their uses for this project. This design approach will be elaborated more concretely in the next chapter.

*Table 3.1 - Change Laboratory key principles and their uses for this project.*

<u>Principles</u>	<u>Uses in Project</u>
Activity Systems	Prime unit of analysis addressing the distinction between short-lived goal-directed action and longer lasting fundamental changes
Multi-voicedness	Analyses of sideways interactions between different actors and activity systems
Expansive learning	Address cycles that identify process of ascending from the abstract to concrete
Historicity	Encourage investigation of how earlier contradictions underpinned the development of the current activity system
Double stimulation	Drive volitional actions and overcome uncertainty through the use of mediating artefacts
Mirror data	Provide evidence of the problems linked to blended learning in the form of existing institutional policy documentation.

## **Chapter 4: Research Design and Methodology**

### **4.1 Introduction**

The function of this chapter is to set out the Change Laboratory methodology and associated research design used in this project, building on the theoretical principles discussed in Chapter 3. Firstly, the chapter outlines the CL methodology and reasons to choose this approach based on its advantages and limitations. Proceeding sections will discuss the research design, selecting the intervention unit and participants, scope and timing, creating the online CL venue, a view on insidership in relation to this study, the sequence and structure of tasks and the ability to generate mirror data, data analysis approaches, potential limitations and ethical considerations, finally concluding with an overall summary.

### **4.2 Rationale for the Change Laboratory Approach**

As discussed in chapter 3, the starting point for this project is a conviction that, to truly understand an issue, we need to engage in its change or development. In numerous roles within higher education institutions, I have witnessed a lack of engagement with effective blended learning approaches by teaching staff, as well as a limited impetus from a strategic perspective to facilitate a blended learning model that works for staff and students alike. The Change Laboratory represents a break from traditional formative experiments, or formative interventions as it is a 'living toolkit' (Virkkunen & Newnham 2013:xvii) where each enactment is an attempt to engage with local circumstances and specific potentials of the activity systems involved. The Change Laboratory offers alignment with my theoretical positions, also previously stated in Section 3.2 and supported by Bligh and Flood (2015). It also offers the opportunity to create conditions under which participants can be observed

discussing and designing alternative blended learning activity systems to those already in place and that we are familiar with. Virkkunen & Newnham (2013) express the purpose of the Change Laboratory to not only change activity, but to understand root causes and through collaborative transformative agency to develop new perspectives, another key aspect in choosing this methodology. As Bligh & Flood (2015) advocate, the Change Laboratory methodology directly attempts to apply activity theory research principles to real-world interventions. This leads to research-interventionists and participants using unfamiliar concepts and intervention procedures, which can be both eliminating and challenging for both.

Over the past seventeen years Change Laboratory methodology has been used across numerous disciplines and contexts (Kerosuo, Kajamaa & Engeström 2010) to create a research-assisted environment of change where participants can re-design their work activity and organisation by creating new models, tools, and practices with the aid of researcher-interventionists. Bligh & Flood (2015) referred to the limited application of the Change Laboratory in HE but expressed the potential it offers in this sector, which has since been shown in numerous PhD Theses (Hasted 2019; Pattison 2020; Scahill 2022; Miles 2021). Amongst the implications of using the Change Laboratory for this project, was its ability to 'offer a framework for connecting practices, specifically where the existing active intersection of practices is currently limited' (Hasted 2019:250). Also, building on the work of Miles (2021:257) who expressed the 'teacher-led, bottom-up intervention that is strongly rooted in theory at all stages of the research, from design to implementation to data analysis', this project seeking to develop an understanding with teachers of how some practices might be developed and changed in a given setting contributing to institutional

policy that will foster the uptake and successful implementation of digital pedagogy and effective blended learning approaches institution wide.

### **4.3 Research Design**

This section sets out my conviction for choosing the Change Laboratory methodology, encompassing the designing of workshops that aim to guide the participants along the expansive learning cycle, question their everyday working practices, develop transformative agency and creating new knowledge. A starting point for this to be achieved was to choose an intervention unit to be the focus of change, where there is already recognition of that need for change (Virkkunen & Newnham 2013). This is further explored in section 4.3.1 where I give a description of the project site, leading onto Section 4.3.2 which details who and why the participants were selected. In Section 4.3.3 the initial planned duration and sequence of the CL sessions are explained, along with the required variations as the project progressed. Section 4.3.4 specifically details the shift from the traditional in-person Change Laboratory and how this study used an online approach to deliver the sessions and capture the activities. Section 4.3.5 specifically deals with the issue of insiderness and acknowledging the affordances and limitations within this project. Finally, Section 4.3.6 sets out the initial task sequence for this Change Laboratory project which aimed to collaboratively carry out a cycle of expansive learning actions in the order previously mentioned.

The Change Laboratory sessions involved creating a series of workshops aimed at guiding the participants along the expansive learning cycle, with participants' agency supported to deviate from the initial intentions of the workshops and cycle should it be required. Bligh &



Flood (2015:11) referred to this as ‘gradually-shifting focus on particular expansive learning actions...’ with ‘...sessions designed to focus on one particular expansive learning action often to do so in tandem with others (for example, *examining* a model will likely involve re-visiting *modelling* decisions).’ They also clarified this to be a particular challenge, based on the necessity of detailed planning from the research-interventionist and the lack of pre-determined solutions to the issues being discussed. So, although deviation from the design intentions is welcomed and can be interpreted as participants developing agency and ‘...generate deviations from the interventionist’s intentions’ (Engeström, Sannino & Virkkunen 2014:123), the design sequence and construction of tasks within particular sessions require rigorous attention and a maintained focus on expansive learning, which is outlined in subsequent subsections.

#### **4.3.1 Selecting an Intervention Unit**

In this project the intervention refers to the site of the intervention, where I saw the potential for change and the acknowledgement of the need for change with regards to blended learning approaches. Selecting the Change Laboratory intervention unit an essential priority and Virkkunen & Newnham (2013:65) suggest when selecting the pilot unit or units for the developmental process, questions such as the following have to be addressed:

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*which unit(s) or local instance of the activity experiences the need for change before others and/or the strongest; which unit or activity is in a central position in view of the later spreading and further development of a new model of the activity; in which unit is the management and personnel interested in and capable of developing a new model of the activity with the*

*support of external researcher interventionists, and in which unit is the situation settled and stable enough to carry out the Change Laboratory process?*

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All of the above questions were considered when selecting the intervention unit for this Change Laboratory research project, with the availability of the site and participants due to the research interventionist's role within the institution (outlined in Chapter 3) being a key driving factor. When addressing the local need for change, the intervention unit had started to go through major change due to the Covid-19 pandemic and the associated impact on the pedagogical approaches. Alongside this, the institution was also coming towards the end of both the digital and education strategies meaning a tangible opportunity to inform change and facilitate the bottom-up approach previously discussed.

In summary, the intervention unit for the Change Laboratory in this project was chosen based on a number of factors. The need for change with regards to blended learning approaches, the availability of the site and participants, and the timing of the project in relation to the institution's digital and education strategies were all taken into consideration. Additionally, the impact of the Covid-19 pandemic on pedagogical approaches and the interest and capability of the management and personnel in developing a new model of the activity with the support of the researcher interventionists were also factors that influenced the selection of the intervention unit. The unit selected was seen as being in a central position for the later spreading and further development of the new model of the activity and the situation was stable enough to carry out the Change Laboratory process. Overall,

the goal was to select the unit where change was most needed and where the research interventionist had the most influence to facilitate a bottom-up approach.

### **4.3.2 Selecting Participants**

An integral aspect of selecting participants for this study was following Virkkunen and Newnham's (2013) premise that participants in the Change Laboratory are dealing with the same object in their daily work and are involved in realising the same outcome.

Furthermore, an additional consideration for the participant selection in this study was to ensure a broad group of people from across the target unit. The hope was this would lead to a broad cross-section of the institution from both academic and professional service roles; as well as the expertise and experience associated with both. It was recognised that the online approach taken in this specific Change Laboratory intervention would be troublesome with the numbers outlined by Virkkunen & Newnham (15-20), so the intention to recruit up to 12 participants was sought to ensure effective participation and to limit any local hierarchies that may have a detrimental impact on participant willingness to share openly and honestly.

An open call for participation was distributed through institutional channels, social and formal, as well as direct contact with colleagues of the researcher (with the insider researcher influence further discussed in Section 4.3.5), having previously worked with them in the Digital Learning Facilitator role. The open call followed institutional ethical guidelines to ensure informed consent and ethical approval was achieved before starting the CL project. Educational Development (ED) staff, Library (learning design) staff, and module/course/department administrative staff were targeted as all stakeholders have a

valid voice in the focus on the project. As the Change Laboratory is presented as a solution to the contradiction between top-down and bottom-up development approaches, the sampling aimed to have a cross section of participation (Virkkunen & Newnham 2013), with some management involvement from across the institution too.

This study initially recruited 9 participants, reducing to 7 after an outline of the commitment required to attend as many of the 8 bi-weekly sessions as possible. An overview of their roles, experience and potential contribution to the project can be seen in Table 4.1.

*Table 4.1 - Overview of Participant Roles and Potential Contribution.*

Participant Number	Role and Vignette	Potential Contribution
1 AC	<p>Senior Lecturer</p> <p>They value the impact of place in architecture and how architecture can improve our life quality and create a perfect harmony between body, mind, and space.</p> <p>They have been internationally recognised for their work ad designed, lead, managed and coordinated multiple projects (public and private clients) of different scales, with several different environmental demands and stages of the design process.</p> <p>They like to stimulate students' creativity and critical thinking, ultimately enabling them to be resilient and problem-solving professionals. Complementary, they are interested in the design of learning and teaching spaces and how to enhance the learning experience.</p>	<p>Expert in learning and teaching environments. Current interest in the policies and practices that affect the design of spaces, and the tools or products that enable learning to take place.</p>
2 TB	<p>Teaching Fellow &amp; External Consultant</p> <p>They have experience of planning to meet priorities and implement key supporting projects in a timely manner to ensure success. This comes from a clear strategy to create a culture of high performance requiring detailed plans from the bottom up.</p> <p>Their approach to integrated focussed research and development can play a key role in the innovation, introduction and improvement of diverse strategies.</p> <p>As a consultant they an offer the role of a focused researcher, operating behind the scenes on tasks that front line practitioners may not have time and/or skills to undertake. Posing difficult questions can often stimulate staff to focus on the real issues they need answered. They have the ability to help design term research and development.</p>	<p>Supports staff in developing skills and education that align to the strategy of the organisation they are working in.</p>

Participant Number	Role and Vignette	Potential Contribution
3 AH	<p>Lecturer &amp; Researcher</p> <p>Lecturer in Health Inequalities at Lancaster University. Their primary research interest is on outcomes and how people (and especially older people and people living with dementia) navigate health, social care and housing economies. Within this area, they have a specific interest in the role of information seeking and giving practices. They have published extensively on these issues, including both theoretical and empirical contributions to the literature. Their research experience has mostly involved qualitative and mixed methods approaches and has experience and interest in realist methodology.</p> <p>They often present at national and international conferences, is an active reviewer for many journals and funding bodies.</p>	<p>Research experience has involved qualitative and mixed methods approaches with older people. The work he has been a part of is published and cited across social/health policy, medical journals and policy reports/working papers.</p>
4 PD	<p>Director of Teaching</p> <p>They have influence within the Institute of Coding and have been part of the start-up of the School of Computer Science at a China campus. They have held teaching and learning roles such as faculty digital learning director, school senior tutor, and managed projects to improve student experience implementing virtual desktops and designing flexible learning spaces. They have also been involved in staff development via PGCHE sessions, mentorship, teaching &amp; learning conferences. His primary interests are programming education and data analytics in education and gaming. As part of his Institute of Coding role, they are designing, implementing, and evaluating innovative Computer Science courses for non-CS students which allow the exploration of the questions around how to best teach programming to large groups of students with diverse backgrounds and needs.</p>	<p>Is a Senior Fellow of the HEA and a keen interest in digital teaching and learning practices.</p>

Participant Number	Role and Vignette	Potential Contribution
5 WT	<p>Senior Lecturer</p> <p>Their main interest and background is in developing methods and tools for time series analysis and in general analysis of uncertain dynamic and non-linear systems. The general thread in the apparently wide-ranging application areas.</p>	<p>Research which involved modelling processes.</p>
6 PH	<p>Senior Leader in Professional Services</p> <p>They deliver a strategic planning and control function for IT services which support communications and collaborations within an agreed span of control across the University. They are critical to the success of the University and must deliver tangible value and help the University meet its strategic objectives. They also design assurance and governance framework that will ensure that solutions are aligned to our consumers' needs, the University's strategic objectives and in line with IT architecture principles.</p> <p>They also develop, promote and manage a comms and collaboration services roadmap, a plan which will put in place the infrastructural elements required to ensure the success of Digital Lancaster.</p>	<p>Strategic overview of intervention unit digital services, systems and processes.</p>
7 RB	<p>Teaching Fellow &amp; Director of MA</p> <p>Director of the MA in Translation, the Mlang Languages and Cultures and of the Extra-curricular Courses Programme</p>	<p>Teaches across numerous undergraduate and postgraduate courses that traditionally would be seen as face-to-face.</p>

The CL group provides a representation of the work unit, with participants across curriculum areas and with professional services (PS) involvement too. While the limited professional services involvement in comparison to academic staff is evident, the one PS participant has a breadth of engagement across the institution due to their role so is a valuable asset to the study. No students were sought for this study, however some elements of student feedback and student voice data are used as mirror data in some sessions to instigate discussion. The choice not to include students as direct participants in the study was made to promote the sharing of honest opinions and accounts from staff at the intervention unit without the fear of their comments being shared with other students. There was also a consideration of the main focus being a blended learning model from a teaching/pedagogical perspective and that students are not dealing with the same object in their day to day.

#### **4.3.3 Scoping and Timing**

Virkkunen & Newnham (2013:66) suggest that 5-12 sessions of around 2 hours' duration take place on a weekly basis. Given the academic calendar and the workload of the participants, a weekly schedule of 2-hour sessions was considered impractical. Due to the potential for participants to have numerous commitments to teaching, research, and administrative duties, a bi-weekly schedule allowed for better accommodation of these existing responsibilities, ensuring higher attendance and consistent participation.

Additionally, shorter, 60-minute sessions were chosen to maintain engagement and prevent fatigue in the online environment. Extended 2-hour sessions could have led to diminishing returns in terms of participant focus and productivity, especially given the intensity of the



collaborative work required in an online CL setting. Shorter sessions, spread out over a longer period, were deemed to provide participants with sufficient time to reflect on the discussions and prepare for subsequent meetings, which Bligh & Flood (2015) suggested is an important aspect to consider. By adopting a more flexible approach, the CL sessions were likely to be seen as manageable and valuable by participants, fostering a more committed and effective collaboration process.

It was anticipated that 8 bi-weekly sessions would be required to complete the process. Bligh and Flood also suggested there must be sufficient sessions to support consideration of the full range of expansive learning actions and necessary work between sessions, which this CL set-up seemed to offer. The sessions needed to take place regularly enough to maintain the impetus for undertaking tasks or generating new evidence between sessions, which the planned bi-weekly approach over 8 sessions offered.

The initial information and schedule for the sessions (see Appendix 1) was distributed to participants when obtaining consent, explaining a Wednesday 4-5pm bi-weekly reoccurring online meeting would be required, with recordings of each available after the event. Due to the timing of the start of term at the target unit and the associated workload of participants a slightly delayed start was agreed, meaning an October instead of September start. This led to a gap between session five and six due to the December Christmas period, workload and annual leave. Sessions started 13<sup>th</sup> October 2022 and ended 9<sup>th</sup> March 2023, spanning 147 days in total. As the project progressed an additional ninth sessions were required in order to complete the consolidation phase of the expansive learning cycle.

Due to the engagement of participants throughout the CL process, subsequent meetings have taken place and been scheduled to continue the discussion and potentially address longer-term implementations of any works completed.

#### **4.3.4 Creating an Online Venue**

This section sets out the approach to venue creation, starting with an overview of the traditional approach and how elements of this were reimagined for the online Change Laboratory approach for this project. In a traditional Change Laboratory venue Engeström (2007) prescribes an approach which advocates the use of three sets of surfaces (Figure 4.1), essentially one for the mirror to present the first stimulus, a presentation space for the second stimulus, and a working area for the group to discuss ideas and solutions in the third. Engeström was also prescriptive on assigning roles within the group, participants facing the surfaces and having a scribe assigned to take minutes of the meeting. This was not a traditional CL as it was solely based online, with all sessions, interactions and resources based in the virtual setting.

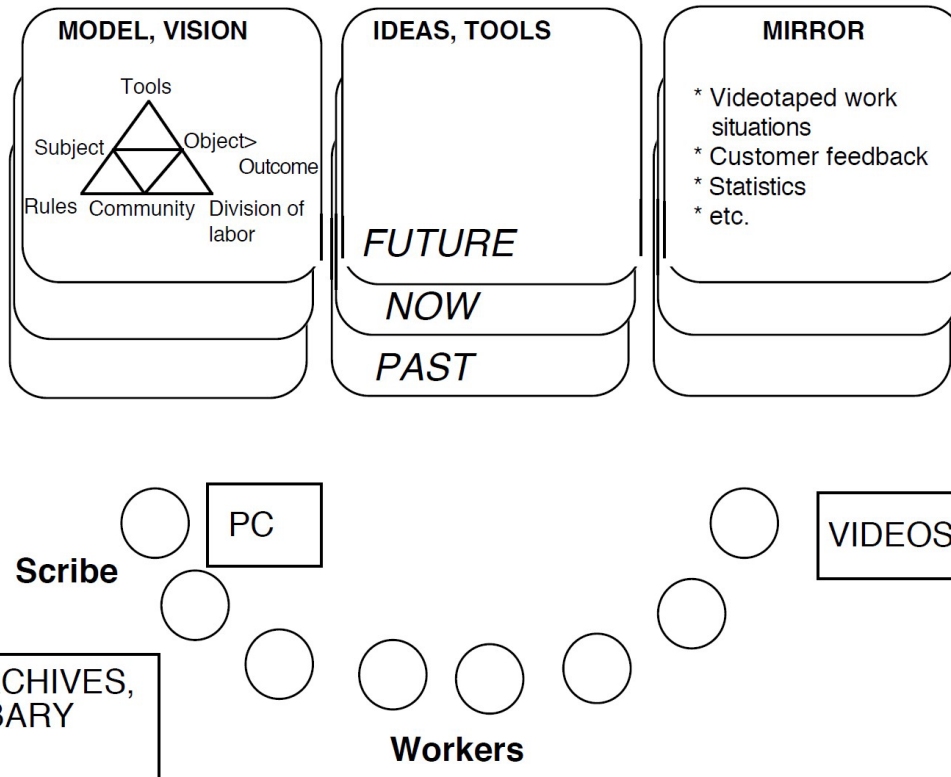


Figure 4.1 - Prototypic Change Laboratory set up (Virkkunen & Ahonen 2011:237).

This study was created and facilitated using Microsoft Teams (MS) and the range of the inbuilt applications and tools to facilitate the CL experience in the virtual setting. A reoccurring Teams meeting was created with participants added to ensure the date and time was in their calendar/diary from the outset. Evolving on from what Virkkunen & Ahonen (2011) set out as an archetypal layout of the CL space (Figure 4.1) and its instruments for supporting the interplay between emotional involvement and theoretical genetic reflection, this study was able to use MS Teams to create a space that allowed participants to all see one another on screen whilst working on or contributing to the set activities (Figure 4.2). It also progressed on from what Engeström et al. (1996) set out as the dominant tool of the Change Laboratory being a 3x3 set of surfaces for representing the work activity.

Participants in the standard Change Laboratory process face the surfaces, aided by a scribe elected within the group, as well as by video equipment and available additional tools such as relevant databases and a reference library. However, this study was able to omit the scribe element and have all participants fully engaged in the discussion and activities without the need for notetaking due to the inbuilt transcription facility within Teams meetings.

Figure 4.2 aims to show how the online environment kept the key fundamentals of a Change Laboratory; the horizontal dimension of the surfaces for different levels of ideas and theoretical generalisation; as well as the *mirror* data (concrete examples of the kind of dilemmas and problems being discussed) in Figure 4.1 used to represent and examine experiences from work practice, particularly problem situations and disturbances (Skipper, Nøhr, & Engeström 2020). The layout shows how the participants and insider researcher all have the same vantage point for all resources, mirror data, activities and aspects of the online Change Laboratory. This study was able to use the online approach to use a variety of video recordings on screen to ensure all participants were able to view, along with closed captions if required. The traditional three surfaces for representing work activity were possible during sections of the online Change Laboratory sessions, with the meeting platform allowing for a range of tools to be shared/viewed simultaneously. The *model/vision* surface was used for theoretical tools and conceptual analysis and generally used Microsoft Whiteboard as a collaborative resource where all participants had the facility to contribute, where annotations would be attributed. The *ideas/tools* surface is where potential solutions and ideas are generated. In the online Change Laboratory this was possible with a range of tools within Teams, such as:

- Chat feature
- Polling tool
- Mentimeter
- Whiteboard
- Screenshots

The *mirror* surface is used to represent and examine experience coming from the work practice, generally problematic situations and/or disturbances, but also alternative solutions to such issues. For this project mirror data included a range of institutional documentation with sections shown on screen via PowerPoint or screen sharing the full document (which on occasions was sent to participants to view in advance). Additional mirror tools included NSS survey results, previous Change Laboratory participant quotes, and video clips from previous sessions and videos on blended learning and the target institution's focus on specific topics.

With all 3 surfaces there is the potential to address problems in the past, present and future. This Change Laboratory used the surfaces online to firstly address the present issues, drawing on past experiences to inform potential future alterations and solutions. Due to the online and technological approach of this Change Laboratory, the facility to draw upon a variety of tools to support the movement between the horizontal and vertical aspects of the surfaces (Figure 4.2) was made possible. This will be addressed further and clearer in the results section which will detail the sessions and processes to a greater degree.

**KEY**  
P = Participant  
IR = Insider Researcher

Online/Virtual Environment

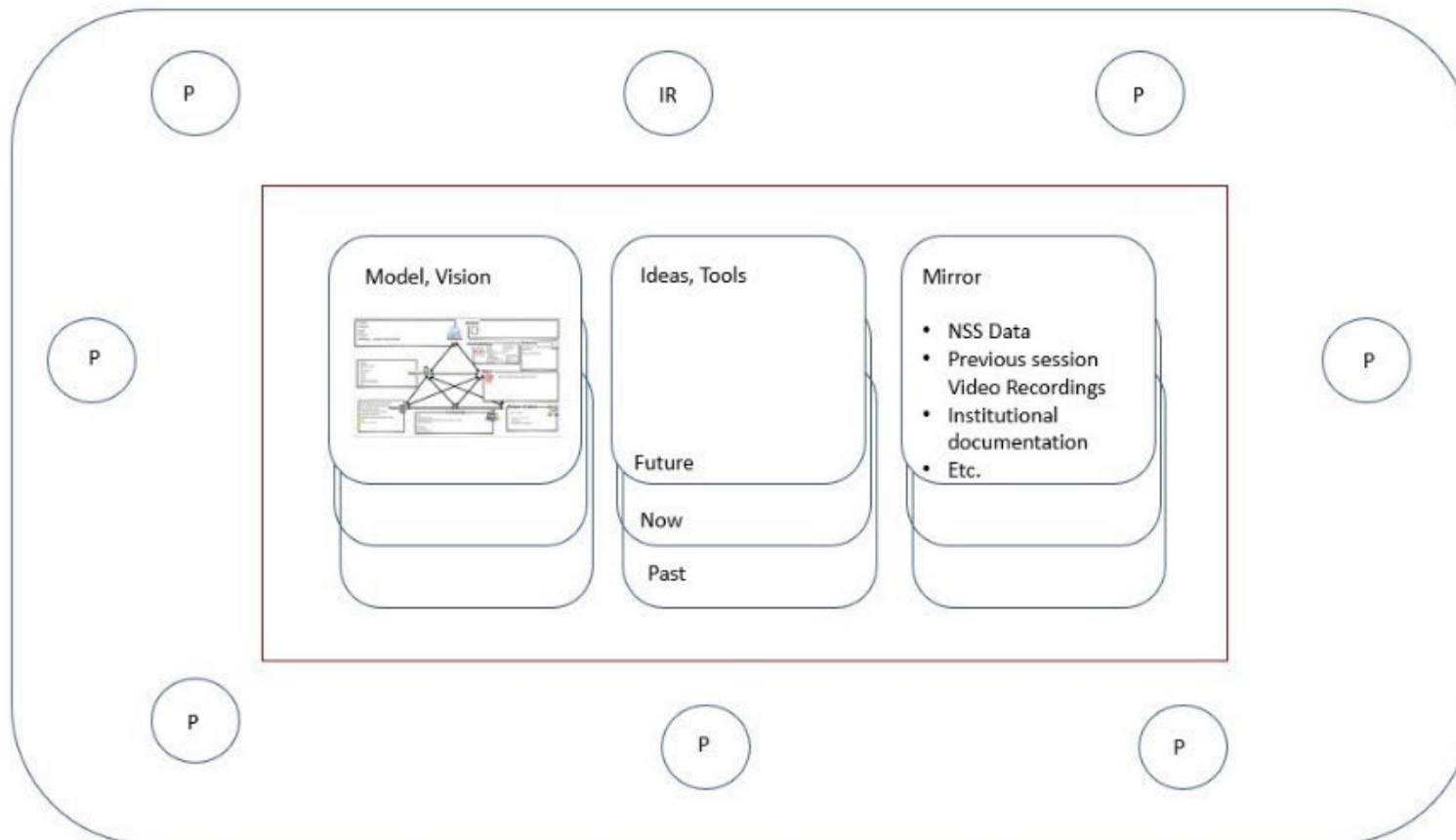


Figure 4.2 – Example illustration of online Change Laboratory set-up.

#### **4.3.5 Insiderness**

As I work in the researched unit this study must be considered as insider research, which has strengths and opportunities associated, but also some challenges and limitations which this section aims to address. Insider researchers are ‘...well positioned to gain an in-depth understanding of the programme situated within the organisations where they are actively involved and currently employed’ (Fleming 2018:311). As I worked in the intervention unit over a number of years and worked with a number of the participants on various teaching and learning projects, this project must be considered insider research. Bligh & Flood (2015:12) acknowledge that the ‘participant selection processes might be easier for insider researcher due to the greater familiarity with local dynamics’ whilst also noting that the area is itself ‘poorly documented in the literature’. A sentiment supported by Mercer (2007) who discussed the less than extensive literature surrounding insider researchers. Although an insider to the research unit, the participant selection protocols were followed in line with the ethical guidelines for my institution, along with the informed consent (which is detailed further later in this Section 4.7). Insiderness was a key facet to recruitment, drawing on the local problems identified over the years in post and establishing a bank or potential effective contributors to the project.

Taylor (2011) coins the term ‘intimate insider’, which she explains in a positive light, with a degree of caution, as being able to use ones previously established friendships in field research to provide a reflexive, responsive and ‘empirically literate’ approach. It is worth noting that in this study not all participants had a previous relationship with me as the insider researcher, and those who did were to varying degrees, meaning there was a continuum that each participant could be placed on. Placing oneself as an insider

researcher provided the opportunity to gather rich, focused and relatable data to be analysed. Conversely to these perceived benefits of insider research there are some considerations of potential disadvantages; such as biased towards the findings; an over reliance on participants the researcher feels comfortable with; role conflicts and focusing on personal orientated events (Bonner & Tolhurst 2002). All of which are addressed to a greater degree in sections 4.6 and 4.7 of this chapter. As an insider researcher I was able to draw on my experiences within the research unit drawing on previous discussions and participation in meetings with senior university figures regarding the development of blended learning. This helped to shape the direction of the research and offer a clear focus that the research unit desired change and development in this area. This insiderness also allowed me access to and use of a range of sources that would be effective mirror materials and resources to support the design and construction of the change laboratory sessions.

Overall, as an insider researcher I acknowledge the strengths and opportunities associated with insider research such as the ability to gain an in-depth understanding of the programme and the ease of participant selection. However, I also acknowledge the potential limitations of insider research such as the risk of bias and an over-reliance on familiar participants. As noted, the literature on insider research is limited and being 'intimate insider' afforded the use of previously established friendships in research to provide a reflexive and responsive approach. I also state that being an insider researcher allowed me to draw on experiences within the research unit and access a range of sources that would be effective mirror materials and resources to support the design and construction of the change laboratory sessions.



#### 4.3.6 Outlining Task Sequence

This section explains the Change Laboratory sequencing and related tasks, highlighting key influences on the approach taken. According to the literature on Change Laboratory methodology, sessions need to be held regularly to keep momentum and interest in finding solutions to problems. There should also be enough time between sessions for participants to complete tasks, and a sufficient number of sessions to generate change (Virkkunen and Newnham, 2013). As previously stated, Change Laboratories are typically held at weekly intervals for one to two months (Engeström et al. 1995; Haapasaari et al. 2016), while others may be longer (e.g. Engeström et al. 2001; Vänninen et al. 2015), with a fundamental aspect being the design on the process throughout the duration. Bligh and Flood (2015:13) address the importance of planning out the Change Laboratory process stating:

*'It is initially necessary to broadly map out tasks across the sequence: mapping sessions to expansive learning actions, determining attendance and resource requirements, and a particular challenge trying to anticipate how later sessions might build on the processes and outcomes of earlier ones. Earlier sessions will be more rigidly planned by the researcher interventionist yet, as the sequence moves on, the content of sessions becomes increasingly contingent on the earlier sessions and increasingly under the initiative of the participants themselves.'*

The initial task sequence for this Change Laboratory to collaboratively carry out a cycle of expansive learning actions are outlined in Table 4.2.

**Table 4.2 - Summary of Change Laboratory Sessions Linked to Expansive Learning Actions**

Session	Expansive Learning Action (EL)	Key goal	Content
1	<i>Questioning</i>	Questioning about current institutional approach to blended learning to create autobiographical accounts of practice	Explaining the way of working in the Change Laboratory. Beginning the expansive learning process by discussing the mirror data about problematic aspects of the current practice, questioning and problematising aspects of current practices. Share institutional education strategy and question practice in relation to stated aims.
2	<i>Analysis</i>	Historical Analysis	Use NSS and module evaluation as mirror data and question applicability to current blended learning approaches.
3	<i>Analysis</i>	Analysis of blended learning timelines  Review target unit educational strategy	Summarising the main problem areas in the current form of activity, defining tasks for further analysis.
4	<i>Modelling</i>	Modelling activity systems	Participants collect data around historical changes in the activity system and what currently exists.
5	<i>Examination</i>	Examination of prospective activity systems and relevance	Sub-groups discuss alternative models for blended learning at target institution.
6	<i>Implementation/Process reflection</i>	Implementation – discussing potential with colleagues for alternative blended learning models	Drafting a vision of the future form describing the possible characteristics of the changes to learning and teaching in the upcoming years.
7	<i>Implementation/Process reflection</i>	Process reflection	Discuss and elaborate the ideas for the new model and new tools and forms of action. Selecting appropriate ideas for further development.
8	<i>Implementation/Process reflection/Consolidation</i>	Consolidation	Consider next steps post research and Change Laboratory intervention.
Ongoing			Leave all session materials, recording and mirror data available in the Teams space for access.

This study was designed based on the principles of formative intervention, which emphasises the need for ongoing evaluations and adjustments to improve the intervention over time. However, I had to consider the specific constraints of the setting and my role as a sole researcher-interventionist. This meant that the study had to be tailored to fit within the available timescales and resources, and that the scope of the intervention had to be adjusted accordingly. Despite these limitations, I made sure that the study still followed the key principles of formative intervention as closely as possible, to achieve the desired outcome of improving the intervention over time. The sequence of sessions was initially planned with the understanding that later sessions would be directed more by the participants, activities and related mirror materials collected rather than the insider researcher. Participant-initiated deviations from the plan constitute an essential part of the expansive learning in the Change Laboratory (Engeström & Sannino, 2012), which will be discussed in more detail in the results chapter (Chapter 5). Tasks within Change Laboratory sessions follow the Vygotskyan dual-stimulation design, which will be detailed further in the proceeding section.

## **4.4 Methods**

### **4.4.1 Task Design**

In this section, I provide a detailed explanation of the research instruments that were used in the Change Laboratory. However, before diving into the specifics of these instruments, I first address the task design as a fundamental aspect of the methods used in this project. The task design is considered a crucial foundation for fostering participants to produce new knowledge using the principle of double stimulation. The task design is the backbone of the Change Laboratory sessions and it is essential that it is well-designed and tailored to the

specific needs of the study. The task design plays a vital role in guiding participants through the expansive learning stages, and in stimulating their thinking and problem-solving abilities. This section will provide a detailed explanation of how the task design was implemented and how it contributed to the success of the study.

In the context of the Change Laboratory methodology, the concept of 'consensus' (Table 4.3) reveals a central tension between divergent theoretical perspectives on multi-voicedness. Dialectical thinking, as emphasised by Williams & Ryan (2019), often operates as an alternative to the pretence of consensus, suggesting that contradictions and complexities should remain open-ended and unresolved, allowing for a richer exploration of perspectives. Williams & Ryan argue that there is no requirement that consensus should be approached, positioning multi-voiced interactions as a critical driver for expansive learning rather than an endpoint. On the other hand, Spinuzzi (2019) describes the Change Laboratory as a consensus-based change process, highlighting its capacity to unify divergent voices around shared objectives.

These tensions shaped the task design and analytical approach in this study. The structured methodology of the Change Laboratory deliberately creates spaces for both agreement and disagreement. Task stimuli, such as mirror data, were selected and framed to surface institutional contradictions, encouraging participants to critically engage with embedded issues and offer competing interpretations.

Participants should interact with each other, the stimuli, and the mirror data, negotiating consensus as an iterative and emergent process. Initial phases often involved critique and resistance, reflecting diverse perspectives and highlighting tensions. As tasks progressed,

these divergent viewpoints converged through facilitated dialogue and the co-construction of models, tools, and solutions. Notably, the design of the tasks avoided imposing impulsive resolutions, instead allowing participants to explore contradictions as opportunities for transformation.

In this way, the task design reflected the dual imperatives of the Change Laboratory, to respect the multiplicity of voices and experiences within the group while also creating pathways toward actionable outcomes. By balancing these imperatives, the methodology upheld the principle that divergence and consensus are not mutually exclusive but are instead complementary elements of transformative change.

As previously discussed in Chapter 3, the tasks within the Change Laboratory sessions are closely aligned with the expansive learning stages (Engeström 2001). This means that each task is carefully designed to support participants in progressing through these stages, and to help them gain new knowledge and perspectives. In order to achieve this, the tasks are designed around Vygotsky's principle of double-stimulation (Bligh & Flood 2015; Engeström 2007) which aims to provide participants with active guidance and support as they work to solve a problem. This principle is based on the idea that when a subject is placed in a structured situation where a problem exists, and is provided with guidance and support, they are more likely to construct new solutions. Thus, the tasks in the Change Laboratory sessions are structured in such a way that they present a problem, and then guide and support participants as they work towards finding a solution. This is a central aspect of the Change Laboratory methodology and an important aspect of the task design in this study.

Task designs need to consider the following aspects:

- *Mirror-data*
- *First-stimulus*
- *Second-stimulus*
- *Social organisation*
- *Documentation*
- *Discussion and recording* (Bligh & Flood 2015:13)

Mirror data materials are used to represent practice-problems and contradictory situations to participants, with an example in this study being the institutional 'Minimum expectations for teaching events' document that was an integral aspect during the response to teaching at the start and during the pandemic. The first stimulus is the task specification, so in this example discussing concepts of blended learning at the institution. The second stimulus is the analytical *frameworks* or *assistance* will be offered to participants to address the first stimulus problem, which in this case is the Mentimeter word cloud questions. The social organisation takes how are participants to be organised into consideration, addressing whether whole groups, part groups or individual working is required. This example has individual and whole group organisation in the online space, supported by the online meeting construct and visual aids, leading to documentation of the ideas (Figure 4.2). Proceeding discussions need to be recorded so they can be drawn on in later sessions, and so that it is captured in a manner adaptable to the research analysis. As previously stated, the online approach to this Change Laboratory allows the session to be recorded and transcribed, ensuring all discussions are captured for future use. Table 4.3 outlines the session and task design template followed throughout the Change Laboratory process with

an example of the first planned session, which addresses the key areas considered. Individual detailed sessions will be outlined in Chapter 5 for deeper insights. The first session of the Change Laboratory (Table 4.3) focused on getting the participants to question and critically evaluate the concept of blended learning in general, then in relation to their own HE institution. This theme continued in the second session, where participants would begin to historically analyse the reasons behind current practices and approaches. This analysis carried over into the third session. More detailed information on each session will be addressed in Chapter 5.

**Table 4.3 – CL Session Task Design Template and Example.**

Session number	Expansive learning action	First-stimuli	Mirror-data	Second-stimuli	Social organisation	Documentation	Discussion and Recording
1	<i>Questioning</i> about current institutional approach to blended learning	Task 1  Consider and discuss the concepts of blended learning in general, then in relation to own HE institution. Interactive Poll.	Institutional 'Minimum Expectations for Teaching Events' document shared with participants.	Blank graphic organiser to produce blended learning model for a post-pandemic HE institution.	Split groups in 'Breakout Rooms', coming together for wider consensus discussion.	'Breakout Room' Whiteboard, sharing screen with whole group.	All aspects of the session and Breakout Rooms will be recorded and auto transcribed using Microsoft Teams. All completed Whiteboard and Word documents will be saved and stored accordingly in the group area.
1	<i>Historical analysis</i> of past approaches to blended learning in teaching practice	Task 2  Consider a timeline of blended learning in your own teaching practice/working scope.	NSS Survey Data (Institutional and Benchmark Data)	Blank table to complete, identifying 3-year period, what have been the 2 key areas of progress and 2 for regression?	Individual task with sharing to wider group.	Collaborative Word document with each participant given designated area to add comments.	All aspects of the session and Breakout Rooms will be recorded and auto transcribed using Microsoft Teams. All completed Whiteboard and Word documents will be saved and stored accordingly in the group area.



After each Change Laboratory session, I reviewed the recordings and compiled transcripts, notes and artefacts that could be used in subsequent sessions as mirror data. I started to plan for the subsequent session based around progressing through to the next stage of the Expansive Learning Cycle. All transcripts, recording and session created artefacts were available for all participants in the Teams area to ensure that everyone was informed and up-to-date, even if they missed a session.

The design of this study incorporated multiple strategies to ensure research quality and trustworthiness, as outlined by Shenton (2004). **Credibility** was enhanced through the triangulation of data sources, including video recordings, backchannel text, and participant-generated artefacts, which collectively provided a comprehensive dataset. Prolonged engagement with participants across multiple Change Laboratory sessions fostered deep exploration of the research questions and built trust within the group. To ensure **transferability**, detailed descriptions of the research setting, participants, and institutional context were provided, enabling readers to evaluate the applicability of findings to their own contexts. **Dependability** was addressed by maintaining a transparent audit trail of the research process, including session plans, transcriptions, and iterative analyses. Finally, **confirmability** was reinforced through reflective journaling, where the researcher documented personal biases, decisions, and observations to ensure interpretations were rooted in the data. Collectively, these measures underscore the methodological consistency of the study and the reliability of its findings.

#### 4.4.2 Research Instruments

A research instrument in a Change Laboratory refers to the various tools and methods used by the researcher to collect data during the Change Laboratory sessions. These instruments can include things like video recordings, backchannel text chat, artefacts, mirror data, and research diary notes. These instruments are used to gather information and data about the Change Laboratory sessions, the expansive learning process and the participants. They can provide a comprehensive and rich data set, which can be used to gain a deeper understanding of the Change Laboratory process and the expansive learning process. They are used to capture the dialogue and interactions that occurred during the Change Laboratory sessions, real-time thoughts and comments, any physical objects produced during the session, data collected outside of the Change Laboratory sessions, as well as researcher's observations and notes. Throughout the Change Laboratory sessions, a variety of data collection methods and tools were used to capture data in multiple ways. This is in line with the suggestion by Hosking (1999) who proposed moving away from focusing on dialogue alone as the sole source of data collection. The research instruments used in this study include:

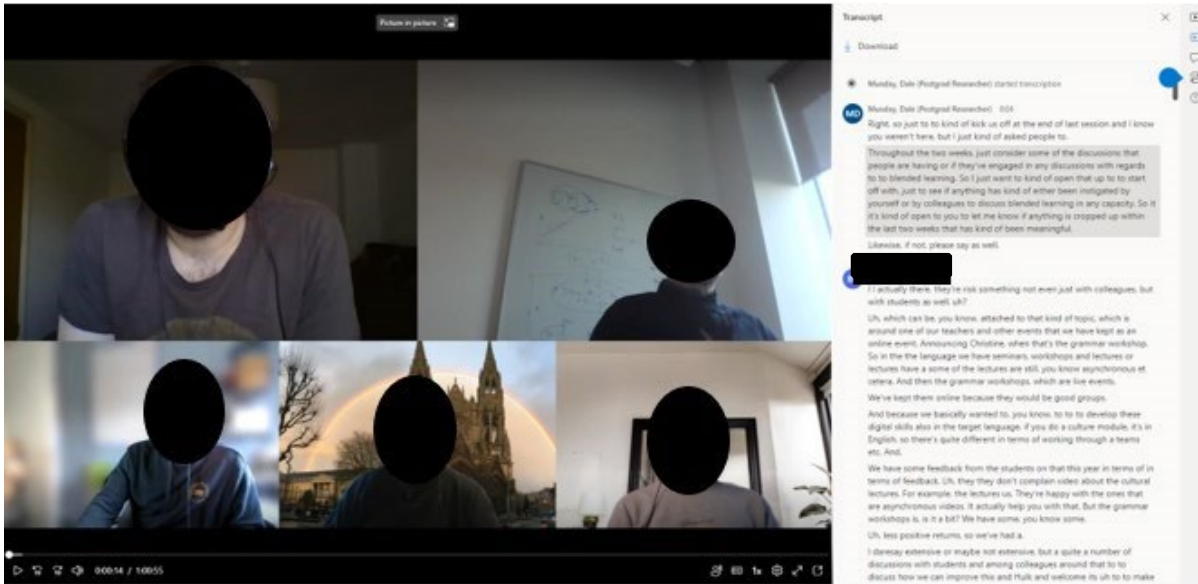
- Video recordings and associated transcript: This method was used to capture the dialogue and interactions that occurred during the Change Laboratory sessions. The recordings were later transcribed for analysis.
- Backchannel text chat: Participants were also able to engage in backchannel text chat during the sessions, which provided a record of their thoughts and comments in real-time.

- **Artefacts:** Any materials, documents or other physical objects produced during the Change Laboratory sessions were also collected as artefacts, which can provide insight into the process.
- **Mirror data:** Data collected outside of the Change Laboratory sessions, such as module evaluations and National Student Survey data, were also used as mirror data to provide a broader context for the study.
- **Research diary notes:** The researcher kept detailed notes on the process and their observations throughout the study, which provided an additional source of data.

The use of these various research instruments allowed me to gather a comprehensive and rich data set, which can provide a more in-depth understanding of the Change Laboratory sessions and the expansive learning process. An example of these research instruments are elaborated below in the context of this Change Laboratory project and associated sessions.

#### **4.4.2.1 Video Recordings and Associated Transcript**

Each Change Laboratory session was recorded using the Teams in-built recorder which also generates an associated transcript that would only need minor corrections for accuracy (Figure 4.3). One missed session by a participant meant they watched the session recording and produced their own video summary based on the discussions, which was used as a research instrument and data source.

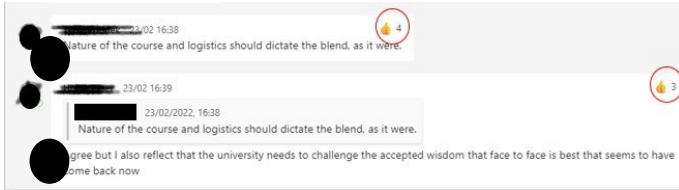


*Figure 4.3 - Recording and Transcript Screenshot Example (Faces and names obscured to preserve anonymity)*

During sessions any presentation or designated screen was able to be captured with only minor exception, when participants were working on the integrated Microsoft White Board tool, the collaboration on screen was not captured but the discussion and completed artefact was.

#### 4.4.2.2 Backchannel Text Chat

During the sessions the chat facility was available as a backchannel communication tool, which also was not recorded on the video but was able to be copied after the session. Each chat post was time stamped so correlation with the recording and transcription was possible should it be required. Backchannel text chat also allowed for reactions via emoticons (Figure 4.4) to be used by participants which also offers an additional source of data not initially contemplated prior to starting the study.



*Figure 4.4 – CL Session Chat Reactions Example (Names obscured to preserve anonymity)*

### 4.4.2.3 Artefacts

Artefacts were created in a range of ways using a selection of effective integrations with Teams. Mentimeter was integrated into session 1 (Figure 5.8) to allow participants to contribute to key questions around blended learning and the target institution, producing a word cloud to spark discussion within the session but also an artefact to be used as mirror data in future sessions. Microsoft Whiteboard facilitated numerous opportunities for collaborative and individual artefact creation in Change Laboratory sessions. Figure 4.5 shows an example of how each participant was given their own Whiteboard space in session 2, allowing the completion of an individual timeline task to encourage self-awareness in relation to blended learning engagement, leading to discussion (Sheridan et al. 2011). All scribing was visible to the insider researcher and other participants during and after the session and retained as data too.

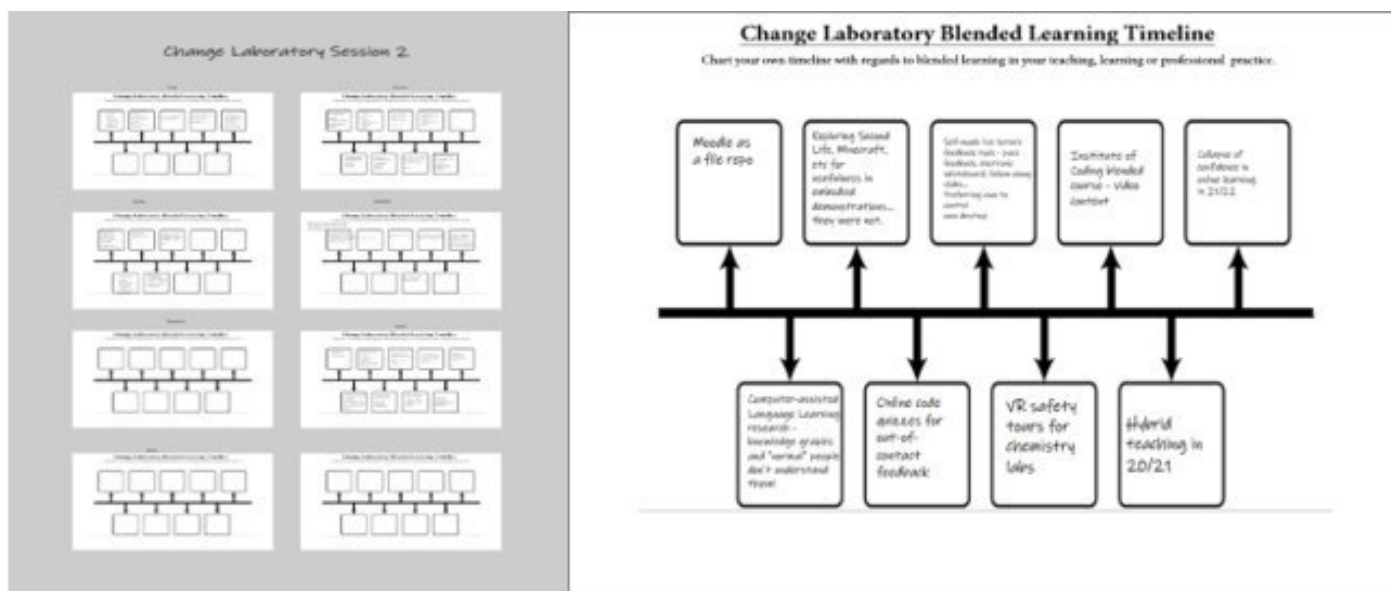


Figure 4.5 - Session 2 MS Whiteboard Individual Blended Learning Timeline Whiteboard Task.

#### 4.4.2.4 Research Diary Notes

Notes were taken by the researcher interventionist at points throughout the Change Laboratory process, with some being made during sessions to flag key points and to prompt reflection on aspects of the session for future data analysis.

#### 4.5 Data Analysis

This section details how data generated from the varied research instruments and Change Laboratory sessions were analysed with justifications for the chosen approach. As stated by Bligh & Flood (2015:158) 'Change Laboratory interventions generate voluminous data'. With this in mind, this project's data was essentially analysed in a three phase process (Scahill & Bligh 2022:112-113): (i) intersession analysis, firstly during the sessions with participants' contributing to the ongoing collaborative analysis of data as the session develops; (ii) intrasession analysis, where the researcher-interventionist then examines

data from a given session afterwards that leads to the ongoing design of the project; and (iii) post-intervention analysis which is conducted to produce the research outputs and project findings. Each of which are detailed further below. This allowed the production of tasks, tools, and activities required for subsequent workshops. A more detailed account of each follows (Sub-sections 4.5.1-4.5.3).

For analysis of the intersession, intrasession and post-intervention analysis of the video footage, back-channel text and generated artefacts, activity system analysis was used. Activity systems analysis, as described by Yamagata-Lynch (2010), is a method for investigating complex learning environments in real-world contexts. It helps researchers and practitioners understand the relationship between individual activity, context, and their effects on each other. The process allows for the use of a manageable unit of analysis, identification of systemic implications, understanding of contradictions and tensions, and clear communication of findings. Additionally, the approach allows for ongoing drafting and refining of activity systems during the analysis process. The analysis process involves the examination of raw data to arrive at an explanation. All of which align with the focus of this project and the Change Laboratory methodology.

#### **4.5.1 Intersession Analysis**

This type of analysis was conducted during the Change Laboratory sessions. The researcher monitored the ongoing interactions and activities, taking notes (Figure 4.6) on any observations or insights that emerged. This allowed for immediate adjustments to be made to the intervention, as the session progressed. By conducting intersession analysis, the

researcher can ensure that the intervention is on track, and make any necessary adjustments to optimise the outcome.

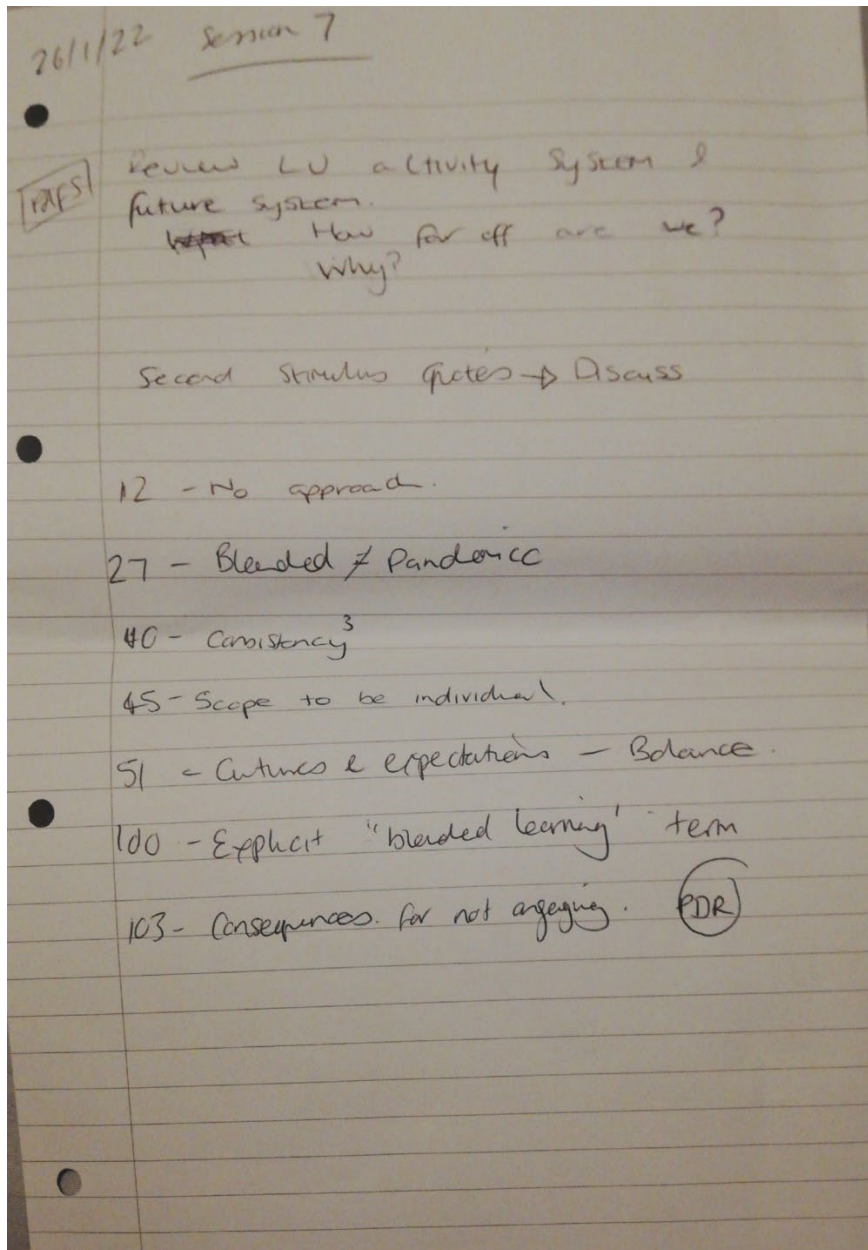


Figure 4.6 - Intersession Analysis Example.



### **4.5.2 Intrasession Analysis**

This type of analysis was conducted between the Change Laboratory sessions. The researcher reviewed the video footage, back-channel text and generated artefacts from the previous session, to identify key outcomes and summarise them. The information obtained was then used to design the tasks, tools, and activities for the next session. By analysing the data between sessions, the researcher can identify areas that need improvement and adjust the intervention, to achieve better outcomes.

As mentioned previously, each session was recorded and automatically transcribed with required amendments for accuracy made by the research interventionist. Preliminary or 'first-order' analysis of the conversations within each session was performed immediately after each session ended to specify actions and formulate a preliminary description of these actions (Augustsson 2021).

During the Change Laboratory sessions various artefacts were produced by the participants which were later used as mirror data. These artefacts were created by both individuals and groups during Change Laboratory activities, including diagrams of activity systems, timelines and word clouds. Thematic analysis of these artefacts was completed to support the planning of subsequent sessions and the re-introduction at set points.

### **4.5.3 Post-intervention Analysis**

This type of analysis was conducted after the completion of the Change Laboratory sessions. The researcher reviewed all of the data collected from the video footage, backchannel text, generated artefacts and other sources, to identify key outcomes and summarise them to

form this thesis. This information was used to evaluate the overall effectiveness of the intervention. By conducting post-intervention analysis, I was able to identify areas that need further attention and make recommendations for future research or interventions.

After the completion of all Change Laboratory sessions, more detailed and rigorous analysis was undertaken as part of the thesis write-up using Haapasaari et al.'s (2016) approach to addressing how participants in change initiatives express transformative agency. One approach is to analyse speaking turns made during CL sessions using set categorisation for identifying different ways that agency can be expressed as shown in Table 4.4.

*Table 4.4 - Six Types of Expressions of Transformative Agency*

Type of expression	Identification criteria
Resisting	Resisting the change, new suggestions or initiatives. Directed at management, co-workers or the interventionist.
Criticising	Criticising the current activity and organisation. Change oriented and aiming at identifying problems in current ways of working.
Explicating	Explicating new possibilities or potentials in the activity. Relating to past positive experiences or former well-tried practices.
Envisioning	Envisioning new patterns or models in the activity. Future oriented suggestions or presentations of a new way of working.
Committing to actions	Committing to taking concrete, new actions to change the activity. Commissive speech acts are tied to time and place.
Taking actions	Reporting having taken consequential actions to change the activity in between or after the laboratory sessions

Further post-intervention analysis was undertaken using what Engeström et al. (2013) proposed, by identifying learning actions (discussed in Chapter 3) and their frequency in the Change Laboratory process. Augustsson's (2021:484) identified the criteria for analysis, outlined in figure 6, allows for clear identification of expansive learning actions, which align with specific task focus in the Change Laboratory sessions, making them directly relatable.

#### **4.6 Limitations**

As with all research projects, there are a number of limitations that must be signposted. First and foremost, the role of the researcher-interventionist and the vested interest in the study must be addressed. As set out in Chapter 3, personal involvement brings advantages such as access to the research site and participants, but also personal involvement that potentially steers the research in a direction that limits its generalisability into other institutions and situations. Selection bias (Robinson 2013) must be taken into consideration due to the researcher interventionist's relationship with the majority of participants.

Furthermore, the limited number of participants (8) in the Change Laboratory intervention could be seen as a detrimental aspect for wider generalisability too. Coupled with the time and work-related pressures of participants, this led to inconsistency in attendance on occasions. This inconsistency in attendance could be seen to have direct implications on the learning actions and transformative agency analysis on given sessions. Time pressures of the research interventionist must also be considered due to the planning and preparation work required for each CL session, with the need to complete first-order analysis consistently. This may have meant specific aspects of analysis were initially missed for subsequent sessions. The sequencing of sessions bi-weekly was planned to support both the participants and

research interventionist but lead to a large gap (previously discussed in Section 4.3) between sessions due to the Christmas and New Year period. Re-integration into the intervention could be seen as a detrimental aspect of the process.

The online venue for the CL being a relatively new concept with a lack of literature for guidance can be seen as a limitation, with little to no concrete examples of how to effectively plan and deliver the sessions in this way. Participants being conversant with the venue and associated tools supported the effective running of the CL sessions and activities, but consideration on replicability must be given. The research interventionist is experienced in using the range of tools and was able to support participants with minimal disruption to the intended activity, which may not be possible for less experienced users.

## **4.7 Ethics**

The Lancaster University Research Ethics process was followed, with all necessary documentation including consent forms and participant information being reviewed and passed to proceed. The following sections at detail to the variety of ethical considerations taken as part of this study, following BERA (2018) guidelines.

### **4.7.1 Consent**

Participants' voluntary informed consent (see Appendix 1) to be involved in a study was obtained at the start of the study, and the researcher interventionist remained sensitive and open to the possibility that participants may wish, for any reason and at any time, to withdraw their consent. It was made clear to participants that withdrawal at any point was possible without needing to provide an explanation. The research interventionist made every

attempt to ensure that all participants understood, as well as possible, what was involved in the study. They were told why their participation is sought, what they would be asked to do, what will happen to the information they provide, how that information will be used and how and to whom it will be reported. They were also informed about the retention, sharing and any possible secondary uses of the research data.

#### **4.7.2 Transparency**

The researcher interventionist aimed to be open and honest with participants. For this study that involved transparency around potential secondary data analysis by the same researcher to address new research questions. Contact details of the research interventionist and PhD supervisor were provided from the outset to allow participants to contact at any point throughout the study. It was made clear to participants that withdrawal from the study at any point was possible, however due to the nature of the recorded sessions, the captured data would still be used up to that point.

#### **4.7.3 Incentives**

No financial incentives were offered to participate in this study. However, participants were made aware that the output of the research may contribute to institutional approaches in the future.

#### **4.7.4 Harm Arising from Participation in the Research**

Participants demands were limited in the design and implementation of the study. In advance of data collection, and I as the researcher interventionist thought through my duty of care in order to recognise potential risks, and to prepare for and be in a position to

minimise and manage any distress or discomfort that may arise due to the subject matter and the research site. I was always ready to stop and immediately reconsider any actions occurring during the research process, Change Laboratory sessions and subsequent activities that appeared to cause emotional distress to participants. Recognition was given to concerns relating to the time and effort that participant involvement would require, leading to a shift from the traditional Change Laboratory design to the online bi-weekly approach.

#### **4.7.5 Privacy and Data Storage**

The confidential and anonymous treatment of participants' data was recognised as was their right to privacy, confidentiality and anonymity. This involved employing anonymity for participants as much as possible, whilst also making them aware that there may be a possibility that they could be identified due to the details of the institution and other recognisable factors. Participant voice and authentic response was discussed in relation to mirror material being created and re-used in subsequent sessions, which would not be anonymised within sessions. Data complied with the legal requirements in relation to the storage and use of personal data as stipulated in the UK by the Data Protection Act (1998). All data (video, transcriptions, chat, and artefacts) were kept secure through the use of a protected computer network with multiple factor authentication and password protection. No sharing of data via email, which is vulnerable to hacking, was undertaken.

#### **4.8 Conclusion**

This chapter sets out the Change Laboratory methodology and associated research design, building on the theoretical principles discussed in Chapter 3 in relation to how they can develop an understanding *with* teachers of how some practices might be developed and

changed in a given setting. It offers a more detailed perspective on how the online Change Laboratory was planned and conducted, with consideration given to the processes of site and participant selection in my role as an insider researcher interventionist. The chapter also highlights the methods of data collection and analysis, focusing on the importance of activity systems, learning actions and transformative agency at this point.

Chapter 5 aims to build on the description of the intended design and detail specifics of the whole Change Laboratory process, building on the session one overview in this chapter. The presentation of data collected on a session-by-session basis will structure the Chapter 5.

## **Chapter 5: Findings**

### **5.1 Introduction**

This chapter serves as a critical turning point within the thesis, marking the shift from theory and methodological groundwork to practical implementation and analysis of the Change Laboratory sessions. It introduces an original blended learning activity system model, 'Adaptive Blended Learning Ecosystem' (ABLE), developed by participants throughout the duration of the Change Laboratory sessions, employing Engeström's triangular framework. The ABLE highlights the adaptable and responsive nature of the activity system while emphasising the interconnectedness of various stakeholders and components within the higher education context for the successful implementation of blended learning initiatives.

With a clear focus on the new activity system, this chapter provides a comprehensive walkthrough of each Change Laboratory session in Section 5.2, highlighting how the participatory development of policy can empower stakeholders to engage effectively with it, as well as documenting and explaining how the ABLE activity system was developed. Each session's presentation will follow a consistent structure, comprising four sections. The first section, 'Session Context', will establish the specific context and purpose of each session. The second section, 'Session Design', will detail the intended plan for the session, outlining key tasks. The third section, 'Session Report', will describe what happened during the session and any deviations from the intended plan. This section will also attribute key quotes to each individual from this point, with randomised initials to maintain anonymity, whilst also providing the reader with a clear sense of the varied contributions throughout the process. Finally, the fourth section, 'Session Outcomes', will summarise what surfaced during the session and how this contributed to the ABLE activity system.



The chapter underlines the modifications between the actual proceedings of the sessions and the initial design intentions, previously outlined in the Research Design and Methodology chapter and Table 5.1, and the outcomes of the session linked to the production of the ABLE activity system. The discussion expands to cover the planning, content, and delivery that occurred between the Change Laboratory sessions. This serves not only to illustrate the implementation process but also to lay a foundation for the analyses to follow.

In subsequent chapters, the focus will shift towards examining key blended learning models and concepts that emerged and evolved during the Change Laboratory process. These developments will be set against the backdrop of existing literature in Chapter 6, scrutinising their potential contribution to knowledge.

To wrap up, this chapter analyses each element of the ABLE activity system, setting the stage for an exploration of the interactive relationships between them in later sections. The goal is to deliver a detailed portrayal of the Change Laboratory sessions and their implications, enriching our understanding of how a participatory policy development process can reinforce stakeholder agency.

## **5.2 New Blended Learning Activity System**

This section focuses on detailing the ABLE activity system (illustrated in Figure 5.1), exploring the integral components of the activity system triangle to clarify their roles and relationships within the system. By presenting this system, I aim to illustrate how the participants collaborated in the Change Laboratory sessions to construct this model, and to clarify the roles and interplay of its different components.

The rationale behind this detailed dissection of the ABLE activity system lies in its alignment with the research objectives. This will shed light on the collaborative process that led to the formation of this system, illustrating how a collective of stakeholders can shape TEL policies in line with their institutional context.

At the heart of the ABLE activity system lies a commitment to a context-sensitive and collaborative approach to shaping and implementing blended learning strategies within higher education. This system thrives on the integration of diverse stakeholder perspectives and is crafted to cater to the unique needs and conditions of the institution. In doing so, the ABLE activity system is geared towards fostering an innovative, sustainable, and adaptable learning environment.

This analysis not only underscores the significance of stakeholder participation and agency but also showcases the transformative potential of blended learning. By enhancing student engagement, satisfaction, and academic achievement, the ABLE activity system serves as an example of how blended learning can reshape the educational environment. Therefore, the focus of this section is to provide a foundation that will pave the way for a deeper understanding of the dynamic interplay within the ABLE activity system and its implications.

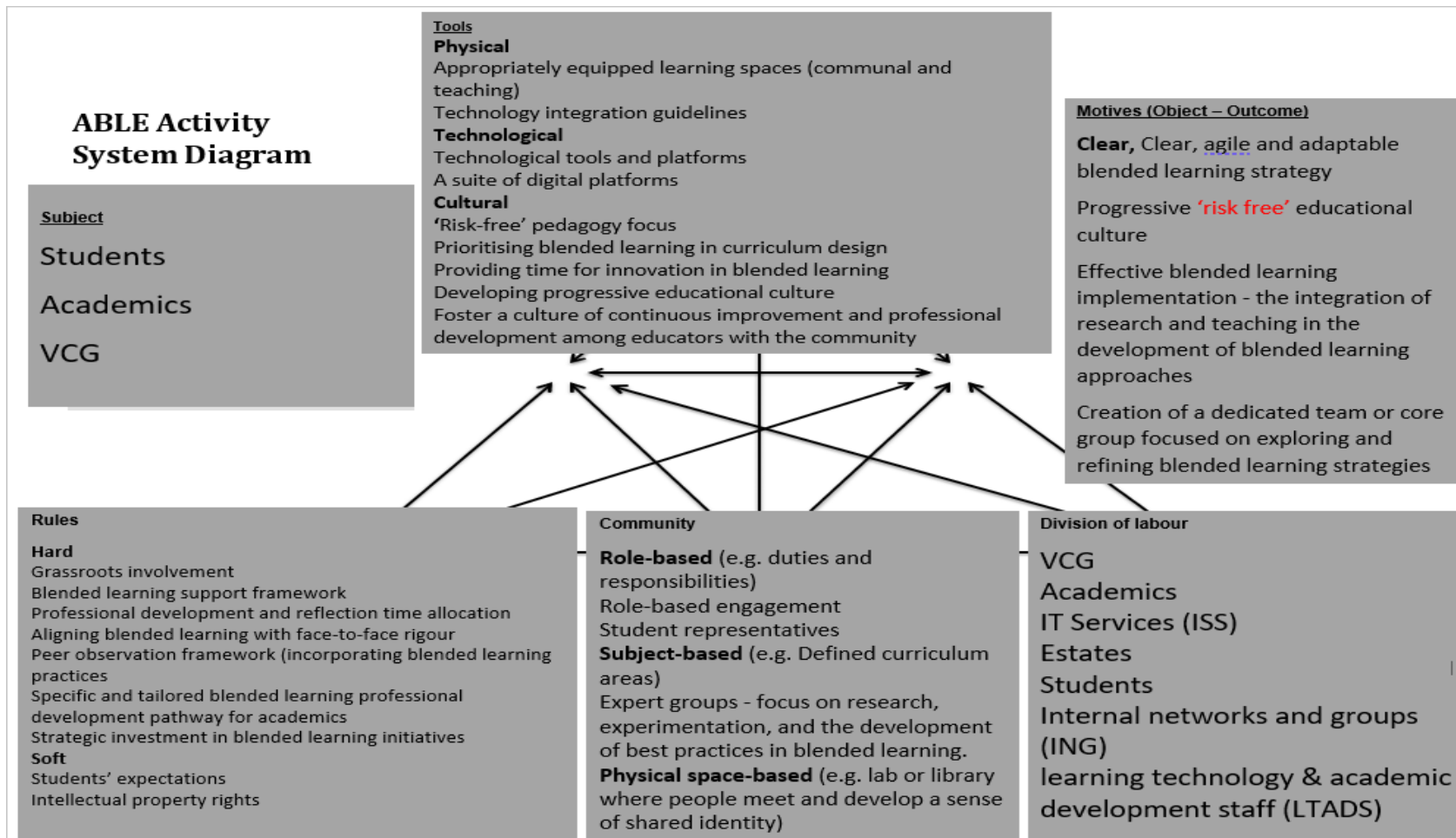


Figure 5.1 - Participant Created Blended Learning Activity System

### 5.2.1 Object

The development and management of an institutional activity system, specifically tailored around the establishment and regulation of the *Context-Responsive Blended Learning Framework* (CRBLF), was seen as crucial by the study's participants. The CRBLF is a dynamic model of blended learning designed to adapt to the unique needs, circumstances, and resources of individual institutions, departments, and learners. It emphasises the role of context in shaping and determining the most effective approaches to integrating digital and traditional face-to-face learning. The CRBLF incorporates multiple elements, including pedagogical strategies, technology usage, curriculum design, and evaluation mechanisms, among others. However, it is not prescriptive, instead it provides a flexible structure that can guide the design, implementation, and evaluation of blended learning initiatives.

One key feature of the CRBLF is its responsiveness to context. It acknowledges that blended learning is not a one-size-fits-all solution, and that successful implementation may vary depending on several factors, including institutional goals, available technology, faculty expertise, student needs and preferences, and the nature of the subject matter being taught. Another key aspect is its emphasis on continuous improvement and evaluation. The CRBLF encourages regular review and adjustment of blended learning practices based on feedback and outcomes to ensure ongoing effectiveness and relevance. This involves critical reflection and a commitment to keeping up to date with emerging technologies, pedagogical developments, and evolving learner needs. Lastly, the CRBLF places a strong emphasis on stakeholder engagement and collaboration. It recognises the importance of involving all

stakeholders, from educators and learners to administrators and IT professionals, in the development and implementation of blended learning initiatives. This collaboration fosters a shared understanding, enhances buy-in, and helps ensure that blended learning practices are effectively integrated into the broader educational environment.

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*"We need a framework that allows us to adapt to the unique challenges and opportunities our institution faces. One-size-fits-all solutions just won't work." (PD)*

*"Collaboration is key. We need input from various stakeholders, like academics, students, and support services, to create a comprehensive and effective approach to blended learning." (AC)*

*"...continuously informed by feedback and evaluation, so that we can keep improving and addressing the changing needs of learners and the University." (PD)*

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Participants emphasised the need for an approach to blended learning that is both holistic and flexible, capable of catering to the specific needs and situational context of their academic institution, as well as others within the broader spectrum of higher education.

In the participants' view, the CRBLF represents a model of adaptability and resilience, which can be calibrated to the unique challenges and specifications of various institutions, departments, and stakeholders. This resonates with their objective of creating a framework that can adjust to varying needs while also promoting an efficient and coherent management of the CRBLF on an institutional level. The CRBLF aims to convert abstract aspirations into concrete practices within an institutional context. The CRBLF, as an institutional policy and practice, encourages educators to tailor their blended learning approaches to their unique contexts. For instance, the framework might include a range of blended learning strategies and tools, with guidelines helping educators choose those that best fit their disciplines, teaching styles, and students' needs. This flexibility can be realised in the form of customisable lesson plans, adaptive learning platforms, or different assessment methods that accommodate the individuality of academics and students.

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*“... you have to allow that individuality of the academic to explore how best they connect with their students with their subject matter.”*

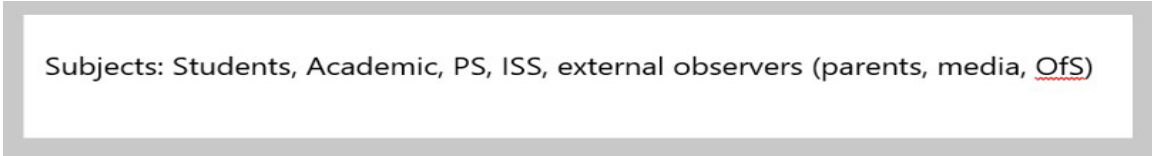
*(WT)*

*“Probably what works for one subject does not work to another and what works for a module does not work to another...The key thing is about caring about our teaching and learning quality and find the best way (also based on student's perspectives) to innovate and enjoy the process...”*

*Instead of adding extra tasks and responsibilities to staff...” (TB)*

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Concrete instances of participatory process can be seen in the structure of CRBLF development and implementation meetings. These may include diverse representation from across the institution and facilitate active involvement of all stakeholders. This could involve brainstorming sessions, focus group discussions, and interactive workshops where educators, administrators, and students have an equal voice. This process fosters a sense of ownership and agency among all participants, as seen in the screenshot from session 4 (Figure 5.2).



Subjects: Students, Academic, PS, ISS, external observers (parents, media, OfS)

*Figure 5.2 - Chat screenshot (Session 4) from breakout discussion around those involved in the process.*

Through a commitment to ongoing professional development and reflective practice. This could include institution-wide seminars to share best practices, a digital platform to share resources and experiences, and mandatory reflection sessions or logs for educators to continually assess and improve their approaches to blended learning.

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“I think we see these at least kind of from the steering committee perspective, almost like an opportunity like for people to come together and to share best practices in teaching and learning...”

(PD)

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*Policy and Practice Integration:* The CRBLF would concretely bridge policy and practice through detailed implementation guidelines that align with the institutional policies. Regular audits, feedback sessions, and interdisciplinary meetings could be held to ensure that practices on the ground match up with the institutional policies and the other way around. *The creation of a dedicated team or core group focused on exploring and refining blended learning provision* ensures need to constantly evaluate the changing educational landscape and create an environment that supports innovation and progression.

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*“...perhaps the term ‘blended’ has been hijacked by the pandemic perception.” (PH)*

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The CRBLF can ensure efficient use of resources by providing clear guidelines on what resources are necessary for different blended learning strategies, and how they can be allocated most effectively. This might involve a shared online space for educational resources, a clear budget plan for blended learning investments, and a dedicated team to manage and distribute these resources. With this capacity building, the CRBLF can facilitate this through promoting a culture of collaboration and knowledge-sharing among all stakeholders. Concretely, this could be in the form of an online community of practice, mentorship programmes for less experienced educators, or collaborative projects that encourage sharing of blended learning practices across different departments. By promoting these activities, the CRBLF



contributes to building the institution's capacity to respond to the changing landscape of higher education.

To drive forward the object of the activity, a coalition of subjects is required to establish clear objectives and milestones based on the principles of the ABLE activity system. These objectives would be communicated to all stakeholders, ensuring a shared understanding of the goals and expectations. Progress toward these objectives would be regularly monitored and evaluated, with adjustments made as needed to ensure continuous improvement. The coalition would exploit the strengths and resources of each subject group to address challenges and capitalise on opportunities. This would involve academics sharing their pedagogical expertise, students providing valuable feedback on their learning experiences, and IT Services offering infrastructure guidance, technical support, direction on emerging technologies, and their feasibility.

### **5.2.2 Subject**

In the ABLE activity system, the emphasis is on the involvement and collaboration of various subjects that bridge the gaps between their respective roles and responsibilities. This network can be thought of as a coalition, where academics, students, and IT Services (including learning technology specialists) work together toward a common goal of improving TEL experiences. Recruiting to promote the collaboration of these subjects is essential to establish and maintain the ABLE activity system.

Academics will be recruited from a range of different disciplines within the institution, responding to formal invitations or through calls for participation in institutional communications. There is also the potential for direct recommendations based on their expertise and experience in pedagogy, teaching approaches and digital learning practices. Direct departmental representation through nominations could be another means to recruit a broad and experienced group, which may align with teaching commendations are awards. Students can be recruited through a mix of student associations, departmental recommendations, and focused recruitment drives to ensure inclusion across a range of backgrounds and demographics. This diversity will support the work of the coalition and drive towards the object. IT services staff can be recruited through internal means, identifying individuals with specific skills sets and experience with learning technologies in various capacities (infrastructure to pedagogy).

By engaging these subjects in the development, implementation, and evaluation of the ABLE activity system, participants suggested this would promote collaboration, shared ownership, and mutual accountability among stakeholders, leading to more effective and context-appropriate TEL policies and practices in higher education.

Subjects outlined how this coalition, through a series of structured interactions and collaborative activities, could enable stakeholders to contribute their unique perspectives and expertise. No definitive approach to this coalition was set, but offering various forms, such as workshops, focus groups, or project teams, where stakeholders come together to discuss, plan, and implement blended learning

initiatives were all discussed. A selection of workshop quotes (below) highlights the importance of the subjects in this coalition and their role within it.

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*“...building the system around the students expectations... they're important in the process...” (WT)*  
*“We need to work together with students and IT services to develop a shared understanding of what effective blended learning looks like, taking into account the unique needs and preferences of our diverse learners.” (PD)*

*“...working closely with academics and students, we (IT Services) can ensure that the technology solutions provided are aligned with pedagogical goals and learner needs.” (PH)*

*“...take into account lots of different contexts, different offerings, different groups. You know, different student groups and all the rest of it...” (TB)*

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The coalition would exploit the strengths and resources of each subject group to address challenges and capitalise on opportunities. This would involve academics sharing their pedagogical expertise, students providing valuable feedback on their learning experiences, and IT Services offering infrastructure guidance, technical support, direction on emerging technologies, and their feasibility. To achieve this, collaboration and working together is key.

From the outset, establishing a shared vision and common goals will be imperative for the coalition. Furthermore, beginning with an environment of open communication is fundamental for effective collaboration. Participants must be encouraged to share their ideas, concerns, and views openly, without fear of recrimination. To foster this, clear guidelines on respectful and inclusive communication, active listening, respectful responses, and effective use of communication tools must be created and agreed to. Once created with participant buy-in, this will be the foundations for the coalition to work in unison.

Following the shared vision being established, subjects will be required to attend regular meeting to maintain the communication and collaboration. These can be collaborative discussions or workshops, aligning everyone's understanding of the purpose and objectives. These can be a mix of in-person and online to meet the needs and fit the schedules of those involved. In meetings, subjects would be assigned responsibilities and tasks associated with their expertise, also recognising opportunities for interdisciplinary tasks within the coalition. For instance, academics can co-operate with IT Services staff to delve into innovative ways to combine technology into teaching, while students can work in partnership with both academics and IT Services to co-create learning experiences that meet their needs. Participants should primarily work on tasks aligned with their expertise and areas of interest, which can lead to increased commitment towards the object.

### 5.2.3 Community

The inclusion of these diverse stakeholder groups as subjects in the ABLE activity system are essential to ensure it is responsive, comprehensive, and practical. Each stakeholder brings a unique perspective and skill set to the activity system and goes beyond the core subjects outlined above. These involve:

*Vice Chancellor Group (VCG):* As the top-level decision-makers, their buy-in is crucial to securing the necessary resources and institutional backing for the 'Context Responsive Blended Learning Framework'. They may also provide strategic direction to ensure the proposals align with the institution's broader objectives.

*Professional and Library Services:* Their involvement ensures that the CRBLF considers all the resources and services available to support teaching and learning. They can also contribute insights into how to effectively integrate these services into the blended learning experience.

*IT Technicians and IT services:* They provide essential technical expertise and support to the development and implementation of TEL strategies. Their contribution ensures that the CRBLF is technologically feasible and supports a smooth learning experience for students.

*Estates:* Their role is crucial in determining the physical spaces that can be used to support blended learning, such as designing adaptable learning spaces that can accommodate various teaching and learning approaches.

*OfS (Office for Students):* As the regulatory body, the involvement of OfS ensures that the CRBLF is compliant with relevant regulations and standards and that it addresses the expectations of students' rights and interests.

*Learning Technology and Academic Development Staff:* They bring expertise in pedagogical practices and the latest learning technologies. Their involvement helps to ensure that the CRBLF is pedagogically sound and makes the most effective use of available technologies.

*Parents:* As important stakeholders in students' learning journeys, their input can provide valuable insights into student needs and potential barriers to learning.

*Communities of Practice (CoP):* These diverse communities provide a rich source of experiential knowledge, offering on-the-ground insights that can inform the development of a more context-responsive and effective CRBLF. These communities include academic groups, faculty committees, academic support networks, role-based communities, subject-based communities, physical space-based communities, student communities, and education development groups.

Involving these stakeholders not only fosters a more inclusive and comprehensive approach to developing the CRBLF but also promotes a sense of shared ownership and commitment to the successful implementation of blended learning initiatives.

Each stakeholder's unique contribution ensures that the CRBLF will be both innovative and practically grounded, enhancing the potential for sustainable transformation in the institution's approach to blended learning.

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*“... various levels and other people engaging in the in the in the teaching online, and right people, learning technologists. They are really key in our in our group 'cause they set up a lot of the course content and know how to structure it.” (AH)*

*“... you can imagine expert groups and things like that within institutions, being the ones that are really on the cutting edge of research and disseminating the more proven things to others...”*

(AC)

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There are several types of communities of practice that can be part of the ABLE blended learning activity system. These include academic groups, faculty committees, academic support networks (online and in-person), role-based communities, subject-based communities, physical space-based communities, student communities, and education development groups. Academic groups refer to groups of faculty members who share similar academic interests or who are involved in similar research projects. Recruitment could happen through departmental meetings, academic forums, and inter-departmental collaboration initiatives. They should be interested in joining for staying abreast of the latest trends in their field and sharing knowledge. Their potential contributions lie in the shared academic interests and research focus, which can inform the blended learning pedagogy and policy. Their role would be to bring academic rigour and relevance to the BL

activities.

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*“It’s essentially keeping up to date with the field is essentially a lot of duplicate work between potentially hundreds and hundreds of individuals. So, if you have a smaller core of people who are completely dedicated to that and then they can disseminate out.”*

*(PD)*

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Academic support networks (online and in-person) are informal groups of faculty and staff members who provide support and guidance to one another in areas such as technology, teaching methods, and pedagogy. Recruitment could be assisted through existing support channels, teaching and learning workshops, and word-of-mouth. They should be interested in joining for peer-support, mentoring opportunities, and ongoing professional development. Their potential contribution is their collective experience and knowledge in areas such as technology, teaching methods, and pedagogy. Their role would be to provide ongoing support and guidance to other members in their blended learning journey. Role-based communities refer to groups of faculty and staff members who share similar roles or responsibilities within the University. Recruitment would typically occur through the administrative structures of the institution, such as role-based meetings or forums. They should be interested in joining to share best practices, develop new strategies, and enhance their work through collaboration. Their potential contributions include insights and strategies relevant to their roles. Their role would be to bring practical, role-specific insights into the design and implementation of blended learning strategies.



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*“...when this started in the E-Learning Folks Forum that \*\*\*\*\* and I attended we were saying, why doesn't university listen to us? Why don't they use this technology more?” (PH)*

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Subject-based communities are groups of faculty members who are involved in teaching or researching a particular subject area. Recruitment can occur through subject-based meetings, academic forums, and departmental initiatives. They should be interested in joining for collaboration and knowledge sharing relevant to their subject area. Their potential contributions are subject-specific insights and pedagogies that can enhance blended learning activities. Their role would be to ensure that blended learning activities are subject-relevant and pedagogically sound.

Physical space-based communities are groups of faculty and staff members who work in the same physical location, such as a department or building. Recruitment can occur informally due to shared physical locations and formal initiatives that bring together people working in the same location. They should be interested in joining for the informal communication and collaboration opportunities that enhance their work environment. Their potential contributions are insights and strategies that are unique to their shared physical location. Their role would be to foster a collaborative environment contributing to the development and implementation of BL initiatives.

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*“...so the goal the duties, talking together and sharing stuff you've got communities that are subject based. So within my department*

*I'm talking to the computer scientists and sharing values and expertise and stuff and you've got communities who are physical space based. That's where we all hang out and develop a sense of identity.” (PD)*

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Student communities are the groups of students who share similar interests or who are involved in similar extracurricular activities. Recruitment can occur through student groups, student forums, and other extracurricular activities. They should be interested in joining to enhance their engagement, communication, and overall learning experience. Their potential contributions include student perspectives, interests, and feedback on blended learning activities. Their role would be to ensure that student perspectives and interests are considered in the design and implementation of blended learning initiatives.

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*“...take into account lots of different contexts, different offerings, different groups. You know, different student groups and all the rest of it.” (WT)*

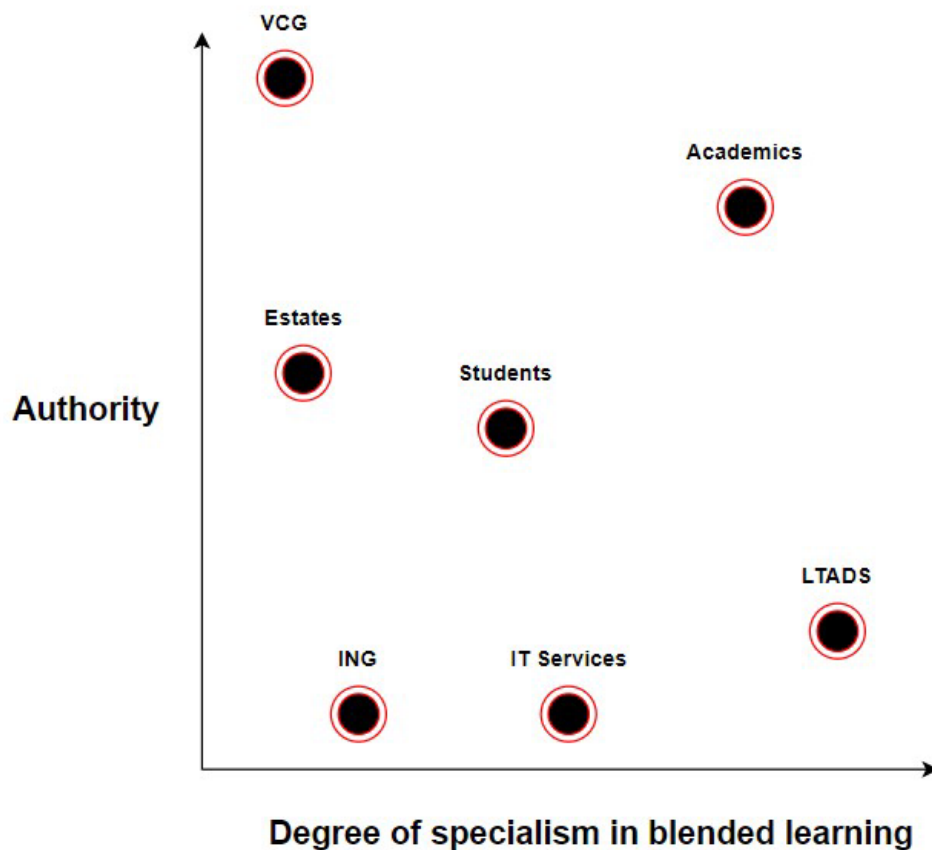
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Education development groups are formal or informal groups of faculty and staff members who are involved in the development and implementation of educational programmes and initiatives. Recruitment can occur through existing educational development initiatives, meetings, and workshops. They should be interested in joining to influence and enhance the educational programmes and initiatives at the institution. Their potential contributions include expertise in educational development, which can inform and enhance blended learning initiatives. Their role would be to

guide and support the development and implementation of blended learning initiatives. These groups can play a key role in the development and implementation of blended learning initiatives by providing guidance and support to faculty members who are involved in designing and delivering blended learning.

#### **5.2.4 Division of Labour**

The division of labour reflects the key roles of different stakeholders in the ABLE activity system and aligns closely with the categories defined in the community description. Each stakeholder group has a specific role or task in the process, which complements the roles of the other groups.



*Figure 5.3 - Division of Labour highlighting the roles and levels of authority and degree of specialisation in blended learning for each group*

across the various roles. Firstly, the conceptual framework for this figure emerged from the researcher's analysis of institutional documents, governance structures, and stakeholder roles in blended learning initiatives. This includes policies, strategic priorities, and organisational hierarchies that determine the levels of authority and specialisation of various groups. For example, the high authority and strategic influence of the Vice Chancellor Group (VCG) in shaping institutional priorities,

including blended learning, were evident from institutional records and policy frameworks.

Secondly, this positioning was validated and refined through data gathered during the Change Laboratory workshops. Task stimuli, such as mirror data and discussion prompts, encouraged participants to reflect on the roles of different stakeholder groups in the activity system. The placement of groups like academics, IT services, and students was informed by their contributions to these discussions. For instance, participants frequently highlighted the centrality of academics in implementing blended learning and the supportive yet specialized roles of IT Services and LTADS. Similarly, the relative autonomy and experiential knowledge of students emerged as significant in discussions on community involvement.

The figure, therefore, synthesizes both reflective and participatory inputs. Its construction is grounded in the qualitative data collected during the study, including recorded dialogues, artefacts, and participant-generated models. These data provided evidence for the relative positioning of each group in terms of their authority (e.g., decision-making power) and specialisation (e.g., expertise in blended learning). This dual approach ensures that Figure 5.3 is both conceptually robust and empirically grounded, aligning with the methodological rigour of the Change Laboratory.

The Vice Chancellor Group (VCG) is seen as a key stakeholder in the ABLE activity system as the top-level decision-making body, playing a strategic role in setting the overall direction and priorities for the university, including the development and

implementation of blended learning initiatives. This includes providing the necessary resources, funding, and policy support to ensure the success of these initiatives. The VCG must be responsible for providing leadership to the university community who can affect and instigate the use of blended learning to enhance the student learning experience, improve teaching effectiveness, and support the achievement of the university's strategic objectives. The VCG can take into account the viewpoints of the OfS and parents as external stakeholders. For instance, regulations and recommendations from the OfS can shape institutional policy-making. Moreover, VCG may consider feedback or concerns from parents, particularly those related to student learning outcomes, safety, and welfare, in shaping policies and strategies.

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*“...actually you need to have a strategy in a culture from the top down to fall to create the environment to which then you can then start to build it. So we, I think we've started to think that you have to have the investment. We had to have the culture and the strategy in place.” (TB)*

---

The VCG must also be responsible for ensuring that the university's blended learning initiatives align with its broader mission and values. This includes ensuring that blended learning activities are designed and implemented in a way that promotes academic integrity, equity, and inclusion, and that they support the university's commitment to sustainability and social responsibility. Overall, the VCG's strategic role in the ABLE activity system ensures that the university is able to develop and implement effective and sustainable blended learning initiatives that meet the needs

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and aspirations of its students, faculty, and other stakeholders.

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*“However, they must be informed by relevant stakeholders in the university, such as academics, learning technology & academic development staff, and IT services, to identify areas of need and develop strategies to address them due to their lack of specialisation in the area...we talked about strategy, and we've said, we think it would come from the bottom up?” (AH)*

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Academics play a crucial role in the ABLE activity system as they are responsible for designing and delivering the blended learning activities, which involves selecting the appropriate learning technologies, creating and curating digital content, and facilitating online and face-to-face interactions with students.

*“We don't get rules, we get guidance and we get kind of slogans. we want the academics to be agile and come up with how the implementation (of the strategy) actually hits the ground.” (PD)*

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Furthermore, they are tasked with constructing the course framework, a process that requires the alignment of pedagogical principles with the course's learning objectives. This involves making informed decisions about the structure of the curriculum, the sequence of topics, and the depth of coverage for each topic. Crucially, academics are tasked with ensuring the course's continuous improvement. Based on feedback from students, personal observations, and collaboration with

other faculty members or instructional designers, they regularly review and update the course. Finally, academics also engage with the wider community within the system. They connect with various stakeholders like IT services for technological support, academic development staff for pedagogical advice, and the administration for strategic alignment.

Collectively, these responsibilities reflect the extensive and diverse labour that academics undertake within the ABLE activity system. Their role extends far beyond instruction, encompassing course design, technology selection, facilitation, assessment, and continuous improvement while remaining engaged with the larger community within the system. This ensures that the blended learning experience remains effective and advantageous for all students.

Students play a critical role in regarding the division of labour that contribute to the overall function and success of the ABLE activity system and work towards achieving the CRBLF. They should be responsible for actively engaging in the blended learning activities, completing the assigned tasks and assessments, and participating in online and face-to-face discussions and activities with their peers and teachers. Through this interaction, students often help in identifying potential issues and areas for improvement in the digital learning environment, providing feedback on the blended learning activities to help improve future iterations, whilst being informed of the pedagogic benefits and value it can add. This may involve completing course evaluations, participating in focus groups, or providing feedback to their instructors through surveys or other feedback mechanisms. Furthermore, providing feedback is also an opportunity for students to reflect on their own learning experiences and



identify areas where they may need additional support or resources. By sharing their thoughts and opinions on the blended learning activities, students can help to create a more engaging and effective learning environment for themselves and their peers. In summary, the division of labour for students within the ABLE activity system encapsulates active participation in the learning process, feedback provision, technological engagement, and community contribution. These responsibilities mutually strengthen the students' importance to the functioning and continuous improvement of the blended learning experience.

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*“...the fact that Office for Students told the students only face to face is valuable and you should complain bitterly to your university if if if, if, if, if, if only that is provided or if there is a dual mode or something... They could see good and bad examples, but they they killed the good examples by saying, yeah it all has to be face to face, face to face is excellent.” (PD)*

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By working together with academics, learning technology & academic development staff, and other stakeholders in the activity system, students can contribute to the development and implementation of effective and sustainable blended learning initiatives that meet the needs and aspirations of the university community.

IT services (ISS) need to be a critical component of the ABLE blended learning activity system. They can play a crucial role in ensuring the smooth operation and success of blended learning activities with their multifaceted responsibilities.

Intersecting with many elements of the system to offer support, implementing improvements, and driving innovation are all crucial. Alongside these, managing the technology infrastructure that supports blended learning, including the learning management systems (LMS), video conferencing tools, online forums, and other digital platforms used for course delivery is essential in their division of labour. They will ensure these platforms are operational, accessible, and secure, addressing technical issues swiftly to avoid disruption to the learning process. ISS should also offer expertise on the capabilities and limitations of different tools, enabling the selection of technologies that effectively enhance the learning experience. Alongside this support, provide guidance to academics and students on how to use the digital tools and platforms effectively through workshops, online guides and self-service materials, and through one-on-one assistance, (face-to-face and online). ISS should also collect and analyse data on system performance and usage patterns, to support the future decisions on upgrades, modifications, and new technology acquisitions. This iterative feedback loop is key to maintaining a robust and effective blended learning environment.

Working closely with academics, ISS can help to understand the specific requirements of different disciplines and adjust the technical infrastructure accordingly. For instance, a engineering course may require the use of specialised software, while a language course may prioritise text-based discussion forums and document sharing tools. ISS services can help to identify and implement these specific solutions. They will also be required to collaborate with learning technology

& academic development staff (LTADS) to design training and support programmes. LTADS understand the pedagogical principles that should guide the use of technology in teaching and can work with IT services to ensure that the technical training provided is educationally sound and aligned with the teaching and learning goals of the institution. ISS need to work in coalition with the Vice Chancellor Group (VCG) and internal networks and groups (ING) at times. These groups are responsible for setting strategic goals and policies in the institution, and ISS should inform and support these decisions with their technological expertise. This can help ensure that technology strategies align with the broader institutional goals.

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*“We (ISS) focus a lot on the rules and regs angle and provide corporate tools but those, as somebody said, that there are not always the pedagogically best ones...I see it as a tech support vs learning support - ISS provide word but don't guide how to write a thesis. It seems the support for using tools better is lacking.” (PH)*

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As alluded to in session 3 (Figure 5.4), definitive roles within the division of labour are required to achieve the object and outcome of the ABLE activity system.

- fixing problems with the tech (support)
- teaching how to use the tech "appropriately" (guide)
- actually implementing something with the tech for us (developer)

*Figure 5.4 - Session 3 chat post during discussion on the future role of IT services*

Overall, IT services should play a critical role in the success of the ABLE activity system by providing the technical infrastructure and support necessary to enable effective delivery and management of blended learning activities. By working collaboratively with other stakeholders in the ABLE activity system, IT services can ensure that the learning technologies and platforms are reliable, secure, and accessible, and that faculty and students have the necessary support and training to use these technologies effectively.

Learning technology & academic development staff are a crucial part of the ABLE activity system. They are responsible for providing support and guidance to faculty in the design and implementation of blended learning activities, ensuring that the activities align with the University's pedagogical principles and goals. This support may take the form of workshops, consultations, and other training opportunities designed to help faculty members develop the skills and knowledge necessary to use learning technologies successfully. In addition to providing training and support, learning technology & academic development staff also play a critical role in evaluating the effectiveness and impact of the blended learning initiatives. They may use a range of methods to collect data, such as surveys, focus groups, and user analytics across the range of digital platforms to assess how well the activities are meeting their intended objectives and how they can be improved in the future. By evaluating the effectiveness and impact of blended learning initiatives, learning technology & academic development staff can identify best practices and share them with other faculty members, helping to build a culture of innovation and continuous

improvement across the university. This can lead to more effective and engaging blended learning activities, as well as improved student learning outcomes.

Internal networks and groups are an important aspect of the ABLE activity system, and these networks and groups include cross-disciplinary teams, communities of practice, and other formal and informal groups that support the development and implementation of blended learning initiatives.

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*“...like an opportunity like for people to come together and to share best practices in teaching and learning...Contributing to the enhanced, teaching and learning at Lancaster University.” (AC)*

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These networks and groups will provide opportunities for faculty and staff to share ideas, best practices, and resources related to blended learning. They may also provide a platform for collaboration and joint project development, allowing faculty and staff to work together on the design and implementation of blended learning activities that can enhance the student learning experience. Furthermore, these networks must encourage participation across the institution from those who are less engaged with such activities, as these are seen crucial to the success and standards required.

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*“When we talk about students who need help not coming to help sessions. The ones who didn't need it don't come in the ones who don't need it do come so the incentive we used to engage the*

*students in those situations is saying, well, you're going to need to pass this... Do we need to do something analogous to get staff to engage with this if we think it's really important.” (PD)*

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These networks and groups can also facilitate communication and engagement with students, allowing them to provide feedback and suggestions on the blended learning activities and how they can be improved to better meet their needs and preferences. By fostering a culture of collaboration and communication among faculty, wider staff, and students, these networks and groups can contribute to the development of more effective and engaging blended learning initiatives that meet the needs of the University. This can ultimately lead to improved student learning outcomes, higher levels of student engagement, and increased academic success.

### **5.2.5 Rules**

In the ABLE activity system, participants created a set of both ‘hard’ and ‘soft’ rules to govern the behaviour and actions of the stakeholders involved, being fully aware that a ‘one-size fits all’ rule would not meet the complex needs of ABLE and its constituent nodes.

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*“...one statement of policy that we had for for blended learning at Lancaster, it doesn't suffice to what the requirements are.” (PH)*

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Both hard and soft rules serve as guiding principles that determine how different elements within the system should cooperate with each other. Without these rules,

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the system could become chaotic, with different subjects, communities, and divisions of labour operating independently or even in conflict with each other, which would undermine the efficacy and impact of the system.

The 'hard' rules should include a set of formalised policies and regulations that provide consistency and accountability, as well as a support and safety mechanism for stakeholders. They are seen as essential to support the necessary behaviours and actions by stakeholders to successfully achieve the CRBLF. An education strategy, with digital and blended learning is an integral component of the University's educational approach, is key to enacting change.

*“I think it's (blended learning) going to end up kind of being thrown away. I don't feel empowered to be as ambitious as I would have been pre-pandemic. Ironically, after we've got all this experience of it, the students have the experience of it. I feel less, less empowered to take a risk of pushing on.” (WT)*

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The overarching strategy should establish a clear vision for blended learning at the institution and ensure everyone in the ABLE activity system understands their responsibilities and limitations. A well-defined education strategy is seen as a foundation for the successful uptake in blended learning.

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*“... like most strategies (current institutional strategy), it's carefully tuned to not say anything in particular. It's saying that what we need is tactics rather than strategy... we obviously want to use digital for*

*all the good things that can be used for. But then something like a strategy level document never covers any of that. It leaves it all very vague for other people to then work out the details of how do we do that. I mean, in a way, that's not a criticism of this, because that's what these documents are meant to be. But on the other hand, it's a damning indictment of the uselessness of them sometimes.” (PD)*

*“I'm wanting practical instructional techniques because if people aren't going to hit me with instructional techniques, they're just giving vague promises of future utopias.” (PD)*

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This rule provides a roadmap for all staff and stakeholders, directing them towards the adoption of these innovative teaching methods. It sets the tone for a standardised approach towards blended learning across different faculties and departments, ensuring that all stakeholders align their efforts towards a common educational goal.

The creation of a blended learning support framework in ABLE would support this and provide a set of guidelines and best practices for designing and delivering blended learning activities. This rule is seen as crucial to provide the necessary backing for academics and students to engage with blended learning effectively.

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*“The strategy and associated planning has to be appropriate for colleagues to buy into.” (TB)*

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Without this rule, there might be inconsistencies in the level and type of support available, leading to potentially inequitable student experiences and outcomes.



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The professional development reward and recognition system is essential to acknowledge and incentivise faculty members who invest time and effort in ongoing learning and development activities to develop their skills in blended learning.

*“...you're thinking about how do I integrate the whole journey, which is a lot of thought, especially if you don't understand the technology properly.” (PH)*

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By focusing a hard rule on professional development and recognition there is a clear emphasis on fostering a culture of lifelong learning within the institution.

Furthermore, the rule would promote excellence and innovation in teaching.

Rewarding and recognising the efforts of academics in their professional development activities towards teaching practice and blended learning was seen to a potential avenue to boost their morale and increase job satisfaction. It would establish appreciation for their hard work and dedication, making them feel valued and respected.

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*“It's almost like a little bit difficult to promote that (blended learning) because it will be adding extra (responsibility) unless you have it on the promotion criteria. Ticking the boxes off.” (AC)*

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Academic freedom is central to pedagogic choices, meaning that faculty members have the autonomy to make decisions about the design and delivery of their courses, as long as they align with the broader pedagogical principles and goals of the university. Academic freedom is a cornerstone principle in higher education and plays

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a crucial role in the ABLE activity system, allowing educators to experiment with various pedagogical approaches, including blended learning techniques.

*“I think we're still managing it and also treating the teachers not as employees on the production line but as individuals and giving us this freedom. So what you said earlier about providing the toolbox then allowing us the freedom to do things. That's spot on!” (WT)*

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This freedom can lead to innovative and creative teaching methods that enhance student learning outcomes, as well as acknowledging the diversity. In the context of academic freedom, acknowledging this diversity means that the ABLE activity system supports and encourages educators to integrate blended learning in ways that best align with their unique teaching values, practises, and the specific needs of their students. This can range from how they use technology in their teaching, to the types of synchronous or asynchronous activities they use to engage students, to how they structure their courses to facilitate both in-person and online learning. As previously discussed, a uniform or standardised approach does not effectively foster engagement and acceptance, so academic freedom towards blended learning approaches is imperative in the ABLE activity system.

The soft rules, on the other hand, focus on fostering a sense of community and shared responsibility among the stakeholders in the activity system. Community guidance provides a set of principles and best practices for faculty members and staff to follow when engaging with the broader university community around blended learning activities. Student expectations outline the behaviours and actions that

students are expected to exhibit when participating in blended learning activities, such as active engagement and timely completion of assigned tasks.

Together, these hard and soft rules provide a framework for the development and implementation of effective and sustainable blended learning activities at Lancaster University. By providing clear guidance and expectations for the behaviour and actions of the stakeholders involved, the rules help to ensure that the activity system functions smoothly and that the needs and preferences of the community are met.

### **5.2.6 Artefacts**

The ABLE activity system includes a range of cultural, technological, and physical artefacts. Cultural artefacts refer to both tangible and intangible elements of a society or group that reflect their values, beliefs, and customs. Technological artefacts refer to the physical tools, platforms, software, and hardware used to facilitate or enhance activities within a system. In the context of the ABLE activity system, technological artefacts include learning management systems, video conferencing software, and multimedia resources. Additionally, hardware such as laptops, tablets or smartboards, educational apps, and other digital tools and resources that facilitate blended learning activities fall under the technological artefacts. These technological artefacts play a crucial role in the success of the blended learning activity system by enabling effective and efficient delivery of teaching, learning, and assessment activities and should not just be limited to a small selection directed by IT services but driven by pedagogic value.

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*“...it should be the ones (IT tools and applications) that are in the pedagogical winners of kind of some competition. But a lot of the time it's just what we have a license for.” (PD)*

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Physical artefacts refer to the tangible objects such as buildings, furniture, equipment, tools, and other physical resources that are used by participants in the ABLE activity system. Physical artefacts shape the ways in which participants interact with each other and with the environment and influence the outcomes of the activities taking place within the system.

In the context of the ABLE activity system, the concept of developing a risk-free pedagogy culture is an artefact that encourages the exploration and implementation of innovative teaching and learning practices without the fear of failure or reprisal. It signifies a supportive culture that acknowledges that failure is an inherent part of the innovation process, and that trial and error can lead to significant learning and improvement. This involves several associated tangible artefacts to achieve this. A range of digital learning platforms like Learning Management Systems (LMS) or newer platforms like Google Classroom or Microsoft Teams, will be required to provide educators with a choice and flexible framework to create and implement their teaching strategies and allow experimenting with different teaching and assessment methods. A repository of teaching guides and toolkits must be created and accessible to provide practical guidance and ideas for educators to innovate in their teaching. For example, a 'blended learning toolkit' might include examples of successful blended learning strategies, case studies, templates for course design,

tips for integrating technology, and more. Professional development workshops offering hands-on support and guidance need to be created, focusing on innovative teaching methods, new technologies, and best practices in blended learning. These workshops can also serve as a platform for academics to share their experiences, learn from each other, and collaborate on new ideas.

Funding and time for innovation in blended learning can manifest as various tangible artefacts. Specific grants or funding opportunities earmarked for blended learning innovation should be established in the ABLE activity system. Academics could apply for these funds to explore and implement new blended learning strategies, purchase new technology or software, or attend training and conferences to further develop their pedagogic approaches. It is also important to consider the employment status of the academic staff involved. Ensuring funding is available to make sure that staff have permanent contracts, as opposed to being on fixed-term or hourly paid contracts, has several significant benefits in relation to the wider ABLE activity system.

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“Because you're right (name), if you've got a lot of part time kind of hourly paid staff who are on unsecured contracts the the amount of, kind of upskilling and and digital capabilities they would need to involve themselves in would probably exceed what they're actually going to be teaching. *If possibly in the rules that could be it within the rules section around what what the institution does for staff...*”

(AC)

Permanent contracts offer staff greater job security, which can have a significant impact on their ability to plan and commit to long-term initiatives, such as blended learning programmes. With the assurance that their employment will continue, staff can dedicate the necessary time and energy towards the thorough implementation and development of blended learning approaches. Retaining experienced and welltrained staff is vital for the success of long-term initiatives such as blended learning and the success of the ABLE activity system.

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*“They (permanent staff) have time to be creative so that that there's one contradiction that sort of links with the casualisation and everything else.” TB)*

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Time blocks specifically set aside within academics' schedules for professional development and innovation in blended learning should be institutionalised. These may form part of contract agreements, ensuring educators are granted the time to develop and innovate their teaching methods without overloading their workload.

Investment into physical spaces like innovation labs or centres equipped with state-of-the-art technologies and resources will foster experimentation and collaboration in blended learning. Alongside this it is essential that dedicated personal in associated roles are created. Hiring instructional designers, IT professionals, learning technologist, digital learning facilitators, and other support staff to assist in the implementation and troubleshooting of blended learning initiatives can also be a form of funding allocation.

Prioritising blended learning into curriculum development and course re-appraisal will materialise into the several tangible artefacts. A set of recommendations or a handbook that directs how to incorporate blended learning into the curriculum design process. This could provide steps, methods, and best practices for developing blended learning modules, as well as key considerations to ensure blended learning aligns with course objectives. A selection of standardised course design templates that include spaces for blended learning elements (like online modules, discussion boards, interactive multimedia content) would make it easier for course developers and conveners to incorporate these aspects into their courses, with the confidence in the underlying principles. With regards to course re-appraisal, the process should involve a clear focus on the integration and development of blended learning practices.

### **5.3 Constructing the Change Laboratory**

#### **5.3.1 Preliminary Work**

Prior to starting the Change Laboratory session there was some key preliminary work done to lay a strong foundation for the process. This foundation was essential in setting the stage for activities that would follow, and in ensuring that the Change Laboratory would be productive and efficient.

During the foundation stage of the process, both detailed and spontaneous discussions about the state of blended learning at the institution were undertaken in my role as the insider researcher. These conversations involved various stakeholders, including academics, students, administrators, and IT services, among others. Through these conversations, I gathered insights on the successes and

challenges associated with blended learning which helped identify the key areas of focus and provided a broader context for the Change Laboratory sessions. For example, discussions with faculty members revealed challenges such as the lack of technical support and inadequate training for using digital tools, while conversations with managers and more senior figures highlighted the varying levels of digital literacy in both staff and students. During departmental discussions, it was evident that some departments were implementing blended learning effectively without institutional guidance. Conversely, it was evident that some departments were severely deficient in their blended learning offering, which needed addressing. These discussions served as a catalyst to enhancing the blended learning practices across the institution.

Alongside the discussions, the assembly of mirror data began. The mirror data included student feedback, academic reflections on their teaching practices and experiences with blended learning, as well as the review of institutional strategies and policies related to blended learning. Figure 5.23, Dual Mode Guidance is one example of mirror data that was captured during the preliminary work, which would provide opportunities to use this as a resource to review and discuss in the CL sessions. Examination of institutional policies offered insights into the formal framework guiding blended learning adoption. The institutional education strategy was seen as a key document in establishing the institutional approach to blended learning, meaning it was to play a key role in the Change Laboratory sessions.

Furthermore, the terminology and wider educational focus were seen as key areas that would require attention throughout the process.



This data collection was essential to provide a clear picture of the present events. This early gathering of mirror data was crucial at providing an objective basis for discussion during the Change Laboratory sessions, underpinning the expansive learning actions, and supporting the effective planning of the sessions that would follow. This preliminary work also directly impacted the starting point for the project. Awareness of the varied approaches across the institution meant exploring the participants' views on blended learning from the outset was key. This coupled with the awareness of various institutional documentation related to blended learning meant it was key to gauge the awareness and impact of these policies and processes from the outset.

### **5.3.2 Planning the Sessions**

Workshops within the Change Laboratory were planned in accordance with the cycle of expansive learning actions. Each workshop had a key goal and content, created to align with the specific expansive learning phase in focus. Table 5.1 summarises an overview of the plan for the Change Laboratory workshops prior to beginning.

*Table 5.1 - Summary of Change Laboratory Sessions Linked to Expansive Learning Actions*

Session	Expansive Learning Action (EL)	Key goal	Content
1	<i>Questioning</i>	Consider and discuss the concepts of blended learning in relation to project HE institution.	<p>Mentimeter poll to create participant word clouds for additional discussion points, prominent and less prominent key words. Explaining the way of working in the Change Laboratory.</p> <p>Beginning the expansive learning process by discussing the mirror data about problematic aspects of the current practice, questioning and problematising aspects of current practices. Share institutional education strategy and question practice in relation to stated aims.</p>
2	<i>Analysis</i>	Participant construct History Walls.	Individually charting own experiences with blended learning. This will lead to additional group discussion and questioning. Use NSS and module evaluation as mirror data and question applicability to current blended learning approaches.
3	<i>Analysis</i>	<p>Examine how LU strategy impacts:</p> <p>Redesigning pedagogy</p> <p>Redesigning curriculum</p> <p>Redesigning assessment</p>	Identifying current issues, outlining tasks for analysis, reviewing "Digital Transformation in UK Universities," exploring "LU Dual mode teaching guidance," and introducing the concept of activity systems through an overview video.

Session	Expansive Learning Action (EL)	Key goal	Content
4	<i>Modelling</i>	Addressing how to overcome contradictions in a new activity system.	The use of a Mentimeter word cloud from Session 1 to gauge participant perceptions of blended learning at LU from sessions 1-5. It includes the use of a UCT blended learning activity system for comparison. Additionally, participants gather data on historical changes and the current state of the activity system.
5	<i>Examination</i>	Participants consider what learning and teaching look like now and beyond? Also, what possible new solutions are Lancaster University not currently addressing and should be?	Reference previous session generated activity systems. Near future teaching scenarios are used to provoke debate and discuss scenarios in groups and discuss the differences between these and pre-pandemic and current situation.
6	<i>Implementation</i>	Review created activity system. Where are we in relation to achieving this at LU currently?  Participants complete diamond 9 template in Whiteboard and associated 9 'Learning and teaching reimagined: a new dawn for higher education?' prompts	Drafting a vision of the future form describing the possible characteristics of the changes to learning and teaching in the upcoming years. Session chat excerpts used to reflect back the current sentiments being discussed. Previous session quotes used to focus on the disparity between face-to-face and blended learning provision at LU.
7	<i>Process reflection</i>	Participants to share any discussions around blended learning they've had between sessions.	Provide a list of challenges, contradictions or concerns related to blended learning implementation that have been shared or discussed in previous sessions.

Session	Expansive Learning Action (EL)	Key goal	Content
8	<i>Consolidation</i>	<p>Reviewing the Change Laboratory process – How people have found this process?</p> <p>What, if anything, as a result of these CL sessions has changed with regards to blended learning?</p>	<p>Consider next steps post research and Change Laboratory intervention.</p> <p>Introduction of mission statement (Arden University) and strategic plan (LU) overview – comparing university approaches.</p>
Ongoing			<p>Leave all session materials, recording and mirror data available in the Teams space for access.</p>

A vital aspect of the Change Laboratory was the ongoing availability of all session materials, recordings, and mirror data within the Teams space. This transparency was designed to ensure that all participants had equal access to the information and could engage with it both during and between sessions.

The Change Laboratory workshops aimed to allow for iterative learning and continuous reflection, promoting a culture of questioning, analysis, modelling, and implementation. By aligning each workshop with a particular stage in the expansive learning cycle, the process aimed to ensure a comprehensive approach to developing the new blended learning model. This structure also allowed for gradual development and refinement of the model, with continuous feedback and reflection at each stage. This method served to recognise the complexity of blended learning and

the variety of stakeholders involved. Each session was designed to both acknowledge this complexity and work towards the development of a more effective and sustainable blended learning model.

#### **5.4 Designing the ABLE Activity System**

In the next section the breakdown of individual sessions will be explained with the 'session context', 'session design', 'session report' and 'session outcomes' structure previously explained. While the previously outlined planned sequence and content of sessions served as the initial framework, the following section will illustrate how the actual progression, goals, and content were influenced and adapted based on various factors throughout the process. It will also clearly address how the ABLE activity system was constructed throughout the sessions.

##### **5.4.1 Session 1 Context**

The first session was intended to start off the Change Laboratory with a focus on the questioning phase of the expansive learning cycle, to foster a critical mindset among participants related to blended learning. The timing of the first Change Laboratory session was scheduled played a significant role in setting the tone for the meeting. It was important to choose a time when the academic workload was relatively low, allowing participants to engage fully without the pressures of assessment deadlines or exams. The beginning of an academic term after welcome week was considered optimal for this project. In the first session, the focus was on laying a strong foundation for the collaborative work ahead by encouraging a sense of community amongst participants, which can sometimes be troublesome in online environments. To achieve this, participants would introduce themselves and share their

backgrounds, experiences, and areas of expertise. This was seen to be particularly important due to the diverse group of stakeholders involved, who be working together to explore and address complex issues related to blended learning in higher education and specifically Lancaster University. Furthermore, by establishing a supportive and inclusive environment from the outset, it was felt that participants were more likely to share openly, take risks, and contribute to potential solutions.

#### **5.4.2 Session Design**

In session one was structured around three tasks (1.1-1.3) designed to collectively foster a critical understanding of blended learning, especially within the context of Lancaster University (Table 5.2). Task 1.1 aimed to instigate questioning and critical thinking about blended learning concepts. Task 1.2 was designed to engage participants in historical analysis by reflecting on their personal experiences with blended learning. Task 1.3 aimed to consolidate the session by identifying areas for further focus in subsequent sessions, allowing participants to make evidence-based choices about potential improvements and changes to future sessions.

Table 5.2 - Summary of design for session 1.

<b>Session 1 Plan</b>			
<b>Expansive learning action:</b>	<b>Questioning</b>		
<b>First Stimuli</b>	<b>Mirror data</b>	<b>2<sup>nd</sup> Stimuli</b>	<b>Social Organisation</b>
<p><b>Task 1.1</b></p> <p>Mentimeter used to create participant word clouds for additional discussion points, prominent and less prominent key words.</p> <p>Consider and discuss the concepts of blended learning in relation to project HE institution.</p>	<p>Institutional 'Minimum Expectations for Teaching Events' document shared with participants.</p>	<p>Watch 'Education 4.0' JISC clip to spark discussion.</p>	<p>Individual work and contributions, with subsequent group discussion.</p>
<b>Expansive learning action</b>	<b>Historical Analysis</b>		
<p><b>Task 1.2</b></p> <p>Consider a timeline of blended learning in your own teaching practice/working scope.</p> <p>What is your earliest memory of encountering blended learning?</p>	<p>Jisc Learning and teaching reimagined selected survey results.</p>	<p>History wall exercise, individually charting own experiences with blended learning. This will lead to additional group discussion and questioning.</p>	<p>Individual blended learning history wall in prepared Whiteboard templates, leading to group discussion and questioning.</p>

Session 1 Plan			
Expansive Learning Action	Empirical Analysis		
<p><b>Task 1.3</b></p> <p>What are the areas from the session that the group feel warrant additional focus?</p>	Re-introduction of constructed 'History Wall'	History wall exercise, individually charting own experiences with blended learning. This will lead to additional group discussion and questioning.	Individual blended learning history wall in prepared Whiteboard templates, leading to group discussion and questioning.

Task 1.1 was aligned with the 'questioning' phase of the expansive learning cycle.

The goal was to prompt participants to critically examine and discuss the concepts of blended learning, first in general terms and then specifically in relation to Lancaster University. The use of Mentimeter to create word clouds was a deliberate choice, as it allowed for the visualisation of participants' thoughts and highlighted both prominent and less prominent keywords. This visual representation was intended to facilitate focused discussions around their contributions. Another reason for using Mentimeter was the option to re-use the generated word clouds in future sessions as mirror material. The introduction of the 'Minimum Expectations for Teaching Events' document as mirror data was chosen to provide a concrete example of Lancaster University's approaches, thereby grounding the discussion in real practices.

Additionally, the JISC clip titled 'Education 4.0' was selected for its provocative nature, intended to stimulate active participation and provoke key discussion points.

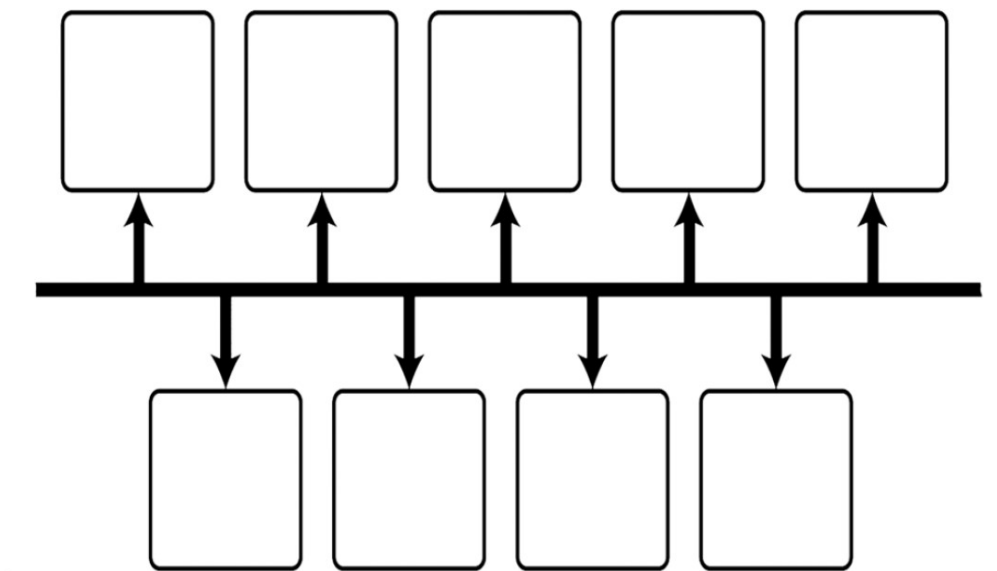
Task 1.2 was designed to move participants into the historical analysis phase of the expansive learning cycle. Participants were to be asked to reflect on their personal experiences with blended learning and synchronously add to a timeline template (see



Figure 5.5), adding significant events or developments. The Whiteboard application in Microsoft Teams was chosen as a collaborative tool that would enable participants to visually represent their experiences. The sharing of selected survey results from Jisc's 'Learning and Teaching Reimagined' was intended to provide external perspectives and provoke further discussion. This task was crucial for understanding the evolution of blended learning practices and identifying historical patterns that could inform future actions.

### **Change Laboratory Blended Learning Timeline**

Chart your own timeline with regards to blended learning in your teaching, learning or professional practice.



*Figure 5.5 - Individual blended learning timeline template planned for use in session 1.*

Task 1.3 focused on drawing the first session to a close while continuing an element of questioning. The intent was to consolidate the insights gained during the session and identify areas that warranted further exploration in later sessions. This task was designed to allow participants to collectively reflect and make decisions regarding the

direction of future activities. This was deemed vital for ensuring that the Change Laboratory remained responsive to the participants' interests and concerns.

### **5.4.3 Session Report**

Due to the depth of discussion and collaborative working, only Task 1.1 was undertaken during this session.

Table 5.3 - Task 1.1 overview and associated themes and participant quotes.

Expansive learning action:	Questioning		
First Stimuli	Mirror data	2 <sup>nd</sup> Stimuli	Social Organisation
<p><b>Task 1.1</b></p> <p>Mentimeter used to create participant word clouds for additional discussion points, prominent and less prominent key words.</p> <p>Consider and discuss the concepts of blended learning in relation to project HE institution.</p>	<p>Institutional</p> <p>'Minimum Expectations for Teaching Events' document shared with participants.</p>	<p>Watch</p> <p>'Education 4.0'</p> <p>JISC clip to spark discussion.</p>	<p>Individual work and contributions, with subsequent group discussion.</p>

### Theme 1: Technical Barriers and Compatibility

A recurring challenge identified in Task 1.1 was the difficulty participants faced in engaging with institutional systems for blended learning. This issue was highlighted by one participant who remarked, *"I find the systems very difficult to engage with...It's just very clunky and can take up a lot of my time."* This statement reflects a widespread frustration with the inefficiency of existing technologies, which impacts both staff workload and the overall teaching experience.

Another participant expanded on this point by emphasizing the compatibility challenges faced by technical teams, noting, “...*not only was it a problem for staff and students, it’s a problem for the technical teams because we’ve got a lot of technology that we don’t always know how appropriate it is for learning and teaching. And a lot of bits to sort of put together that aren’t necessarily compatible.*” This highlights a secondary contradiction within the activity system, where the tools designed to support teaching and learning instead create inefficiencies due to misalignment with institutional needs.

## **Theme 2: Mixed Messaging and Institutional Alignment**

Participants also identified inconsistencies in the institutional messaging around blended learning. One participant stated, “*I felt the message coming from the institution was quite mixed. It wasn’t clear about what we would go to now that we were going to have face-to-face...*” This suggests a lack of clarity and cohesion in the institution’s transition strategies, leaving staff uncertain about expectations and standards for blended learning delivery.

Another participant underscored the challenge of maintaining alignment between in-person and online teaching, explaining, “*Things need to be coherent, like all coming together, like in-person and online teaching. And sometimes it’s also difficult to keep that alignment as well, because then students that attend in person sometimes don’t attend online or are not blended.*” This reflects a tertiary contradiction, where institutional expectations for seamless integration of blended learning are undermined by inconsistent student engagement.

### **Theme 3: Limitations of Blended Learning Tools**

A third theme that emerged centred on the appropriateness and adaptability of tools used in blended learning. One participant observed, *“We’ve seen it with distance learning, and probably even more so with blended learning, that sometimes the tool isn’t always appropriate for your audience, and it’s hard to spot that.”* This highlights a significant challenge in identifying and implementing tools that align with the needs of diverse student populations.

Another participant added, *“You know there is no software that does everything for us,”* further emphasising the limitations of current technological solutions in meeting the complex demands of blended learning environments.

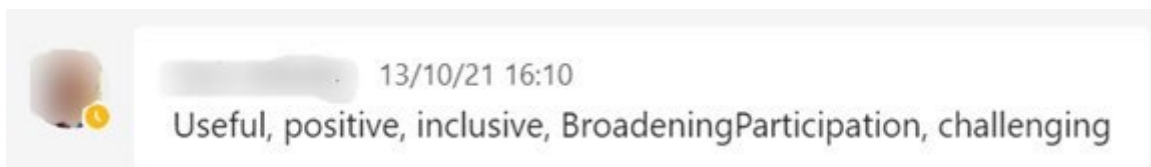
Through individual contributions and group discussions, Task 1.1 surfaced key contradictions within the blended learning activity system. Participants highlighted issues with technological inefficiencies, mixed messaging from the institution, and the misalignment of tools with user needs. These findings illustrate the questioning phase of expansive learning, where participants critically reflected on the gaps and challenges in their current practices. By presenting these themes alongside direct quotes, this analysis contextualises the participants’ perspectives and demonstrates the complexity of addressing these systemic issues.

The opening portion of the session was dedicated to participants introducing themselves and explaining their roles within the institution (Figure 5.6), allowing individuals to familiarise themselves with each other and gain a better understanding of the dynamics within the group.



*Figure 5.6 - Session one introductions in MS Teams CL workshop.*

Once introductions were complete the session moved on to Task 1.1, which centred around the use of a Mentimeter poll to engage participants in questioning and discussing blended learning concepts. The task aimed allowed participants question, consider, and discuss the concepts of blended learning in general and then in relation to Lancaster University. The majority of participants were able to access and engage with the poll. However, one participant faced difficulties, initially perceived as technical issues but later identified as user-related. This participant resourcefully used the chat feature (Figure 5.7) in Microsoft Teams as an alternative to the poll, which proved to be equally effective for capturing their contributions, which I was able to add to the Mentimeter on their behalf.



*Figure 5.7 - Participant chat message as Mentimeter poll substitute.*

Despite this minor setback, the poll proved to be an effective method of collecting input from participants, likely informing the structure and priorities of the activity system in future sessions and creating mirror data for these (Figures 5.8 & 5.9).

### What 5 (single) words do you associate with blended learning?

Mentimeter



Figure 5.8 - Mentimeter participant contributions on words associated with blended learning using Mentimeter word cloud.

### What 5 words would you use to describe blended learning at Lancaster University?

Mentimeter



Figure 5.9 – Mentimeter participant contributions on words associated with blended learning at Lancaster University.

During the poll, participants shared their thoughts which led to a comprehensive discussion about the challenges encountered in finding appropriate tools that effectively support blended learning and support the diverse needs of both staff and

students, emphasising the importance of carefully selecting and implementing tools that align with the goals and requirements of staff and students.

During the word cloud discussions one participant shed light on students' struggles with the lack of structure in teaching, the upskilling required by staff and its impact on the learning experience. This served as a reminder to prioritise the creation of a clear and well-organised framework within the new blended learning activity system. By providing structure and guidance, the system can support students in navigating their learning journey effectively and maximising their educational outcomes.

One participant emphasised the importance of integrating and ensuring compatibility among the tools employed in the activity system. This insight directs the focus toward the technological infrastructure necessary for the new system, underscoring the need for seamless integration of different tools and platforms to facilitate smooth and efficient blended learning experiences.

This was echoed by another participant who introduces the concept of coherence in blended learning, particularly in aligning in-person and online teaching components. This aspect highlights the importance of creating a harmonious and interconnected learning environment, where both modalities complement and enhance each other. Additionally, the participant further emphasises the need for flexibility and adaptability in the design of the new activity system.

Participants emphasised the difficulties faced with specific software platforms, underscoring the importance of carefully selecting and implementing the correct tools that align with the goals and requirements of the staff and students. This consideration ensures that the technological component of the system facilitates



rather than hinders the learning process, enhancing the overall experience for both staff and students.

The participants expressed the need for extensive support for students in adapting to the new modality of blended learning. They emphasize the importance of not expecting students to navigate this transition on their own and highlight the challenges of fitting a large amount of content into limited timeframes. They stress the necessity of both students and educators being willing to embrace and explore new approaches to make blended learning successful.

Furthermore, the participants discussed the perspective of students regarding blended learning at Lancaster University, questioning how they felt about it since it was imposed on them post-pandemic. Feelings that the institution's message regarding the transition to blended learning was unclear and mixed adding to uncertainty about the future and the return to face-to-face teaching.

The introduction of the mirror data ('Minimum Expectations for Teaching Events 20/21' document) shared via the screen Figure 5.10), focused on two core questions:

1. How effective was the institutional response to the pandemic enforced delivery model?
2. How did the minimum expectations impact the blended learning in practice?

# Lancaster Minimum Expectations for Teaching Events 20/21

**Minimum Expectations for Teaching Events 20/21**

Given the measures that we in place to slow the spread of COVID-19, Lancaster University remains committed to the delivery of a distinctive educational experience in 2020/21 that aligns with our reputational status. Accompanying the move to greater online delivery, we must ensure we protect the student experience in all its forms, and we have developed a broader standard (minimum expectations) for online and blended delivery of teaching. This standard covers a range of teaching events and is wide-ranging to capture disciplinary requirements, in preparing this document, we have undertaken an extensive consultation process with representatives from teaching of Faculties (A&S, some HE&S), OS, Registry, IT, Student Union, digital technology and online support officers etc.

Departments are strongly advised to use this as they develop and prepare teaching materials for 2020/21. In doing so, please ensure that:

1. Academic delivery for 20/21 meets programme level educational aims and learning outcomes (see page 1 and 2 of the approved process)
2. Consideration is given to how teaching events, online, and access, modules are supported by support design and learning access programmes.
3. Any revision to academic delivery for COVID-19 reasons, even if temporary, are identified and Lancaster University processes for revisions are followed and documented (see approved process documentation). Please liaise with your QMDF about these processes, including the need for student consultation.

This document will help you with your prioritisation and preparation of teaching events, and the Associate Deans for Education/Teaching will support departments through the online faculty groups.

<b>Asynchronous teaching/learning</b>	Forms of teaching/learning that do not occur at the same time, whereby learning can take place without the constraints of time or place (e.g. through the use of pre-recorded teaching events, discussion forums etc.)
<b>Synchronous teaching/learning</b>	Forms of teaching/learning that require students to engage in learning at the same time and location in the same place (e.g. through the use of live lectures, seminars or tutorials, or the use of live webinars broadcast at a single time, etc.)
<b>Mix</b>	This word, or the terms 'Hybrid' or 'Blended', mean that the definition is an absolute requirement.
<b>Should</b>	This word, or the adjective 'Recommended', mean that there may well well reasons in particular circumstances to depart a particular item, but the full implications must be understood and carefully weighed before choosing a different route.

**Other considerations**

1. Departments must consider single one and single two approval process (programme and module learning outcomes)
2. Departments must clearly articulate to students what they are expected to engage in, when and how they evidence that they have completed tasks
3. The timing between modes of delivery (and lockdowns) face to face with social distancing/without social distancing will take time for students (this may not be an option in Fall 20)
4. Departments must consider the practicality of delivering academic for example where students and staff are socially distant from each other (e.g. student supervision, safety etc.)
5. Departments must ensure good practice has a flexible space, with an associated capacity reserve (i.e. Departments should consider safety assessments in Moodle to protect students about their activities for the following week)
6. Core information should be displayed uniformly across modules especially in the same programme. The use of the standard Moodle pages should be considered and the relationship between Moodle, Teams, etc. should be articulated to students.
7. Departments may choose to identify a digital learning and teaching ambassador to assist.
8. Departments should ensure teaching events within and across modules are connected to support design and learning access programmes.
9. Departments must ensure teaching events meet D3/accessibility requirements. Staff who have not completed the online accessibility course must be asked to complete this. Departments may consider engaging their Departmental Disability and/or D3 team in collaboration with their digital learning and teaching ambassador to enable D3.
10. Departments may consider asking students to complete an online accessibility course to assist when working with peers or staff.
11. If Teams is used, Departments must set up and manage the membership of groups and channels as there is an integration with LMS.

- How effective was the institutional response to the pandemic enforced delivery model?
- How did the minimum expectations impact the blended learning in practice?

Figure 5.10 - Shared screen view in Teams meeting session 1 (participants covered for anonymity)

Mirror material prompted many in the group advocating for retaining innovations developed during the pandemic for blended learning and suggested the positive impact that sharing good examples could have to inspire others. The group acknowledged the difficulty in formalising expectations due to changing circumstances but how a proactive approach can prepare staff and students for change and dealing with different scenarios.

Towards the end of the session, I provided an overview and consolidated the key points that emerged during the discussions. While this summary was intended to wrap up the session, it led to a question regarding the 'Minimum expectations for teaching events' from the previous year and if similar expectations were in place for the current year. While this extended the discussion, it was important to address this query to ensure everyone had a shared understanding of the context in which the eventual designed activity system would operate.

#### **5.4.4 Session Reflection**

The outcomes of Task 1.1 exceeded my expectations and signalled a positive start to the Change Laboratory journey. The insights gained from this phase will be instrumental in informing the development of the new activity system. However, it also became evident that managing time effectively and troubleshooting technical issues promptly would be essential in future sessions. Moving forward, it will be crucial to build on the insights gained during the questioning phase. The next steps will involve delving deeper into the identified areas, exploring innovative solutions, and collaboratively working towards the development of a blended learning activity system that is responsive to the needs of both staff and students at Lancaster University. There was a deviation from the intended plan due the rich discussions needing more time than initially planned. This meant only Task 1.1 was achieved and Task 1.2 and 1.3 had to be replanned into subsequent sessions. Task 1.1 achieved its goal of initiating a dialogue about blended learning and worked effectively at laying the foundations for the Change Laboratory sessions.

An unplanned yet effective element of the session was the use of the Teams meeting chat feature. Participants utilised the chat function to share ideas when not speaking (Figure 5.11), and as a facilitator, I was able to direct questions towards those contributing via this method. This additional layer of communication and collaboration was welcomed and enriched the session and increased participation. The session concluded on a high note, with participants expressing appreciation for the value of the engagement.

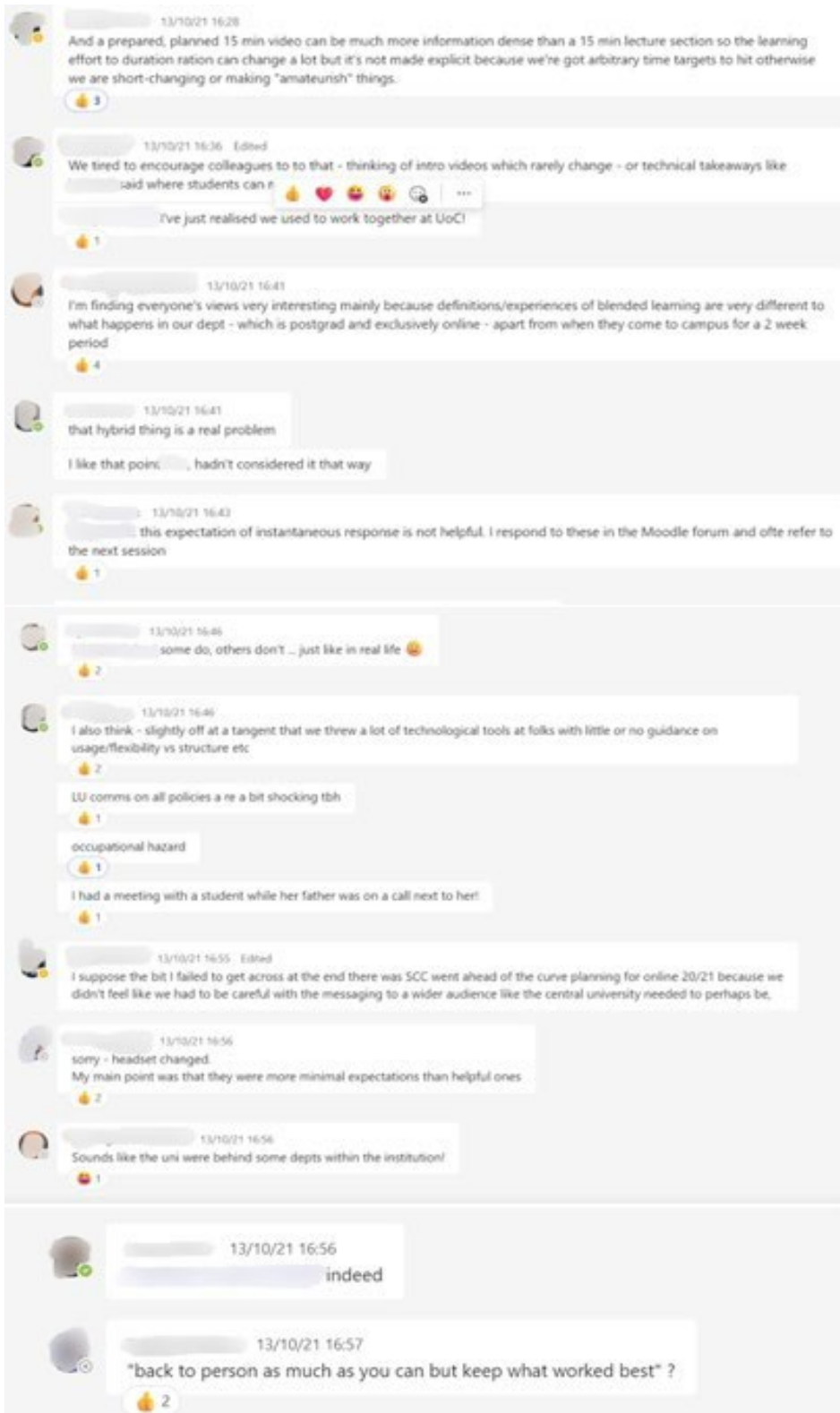


Figure 5.11 – Anonymised session 1 chat interaction between participants.

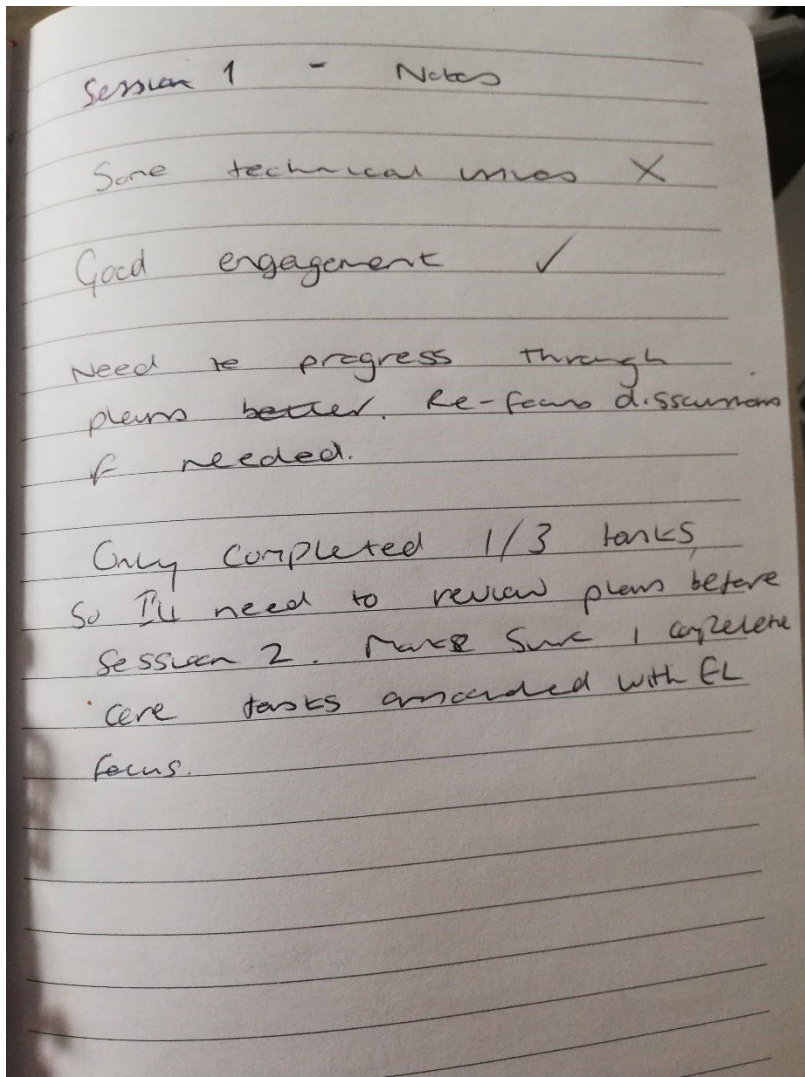


Figure 5.12 - Researcher diary/session notes from session one.

I felt that Task 1.1 played a pivotal role in setting the stage for the development of the new blended learning activity system. The open discussions and critical reflections provided valuable insights into the existing practices and highlighted areas that needed attention. The upcoming Session 2 was briefly addressed, though not in detail. Participants were encouraged to continue their discussions in the intervening period via the chat facility, paving the way for ongoing engagement and preparation for the next meeting.

#### **5.4.5 Session Outcomes**

Task 1.1 of the session was centred around the questioning phase of the expansive learning cycle. This phase was instrumental in shaping the development of the new blended learning activity system (Figure 5.13) at LU. This task was not just about understanding blended learning as a concept but examining its specific implications and applications in higher education, particularly within the context of LU.

One of the critical aspects that surfaced during this session was the importance of considering the perspectives of both staff and students. Participants acknowledged the significance of understanding the student experience and engagement in blended learning. This acknowledgment led to a shift in thinking towards student centred approaches and highlighted the necessity of including student voices in shaping the activity system. Furthermore, the task facilitated a critical analysis of the existing tools and technologies used in blended learning at Lancaster University. Participants questioned the integration and compatibility of these tools and emphasized the need for coherence and alignment in blended learning practices. This questioning was crucial in identifying gaps and areas for improvement in the current system. The starting point of the new activity system can be seen in Figure 5.13, clearly demonstrating the work ahead in future sessions to collate and complete.

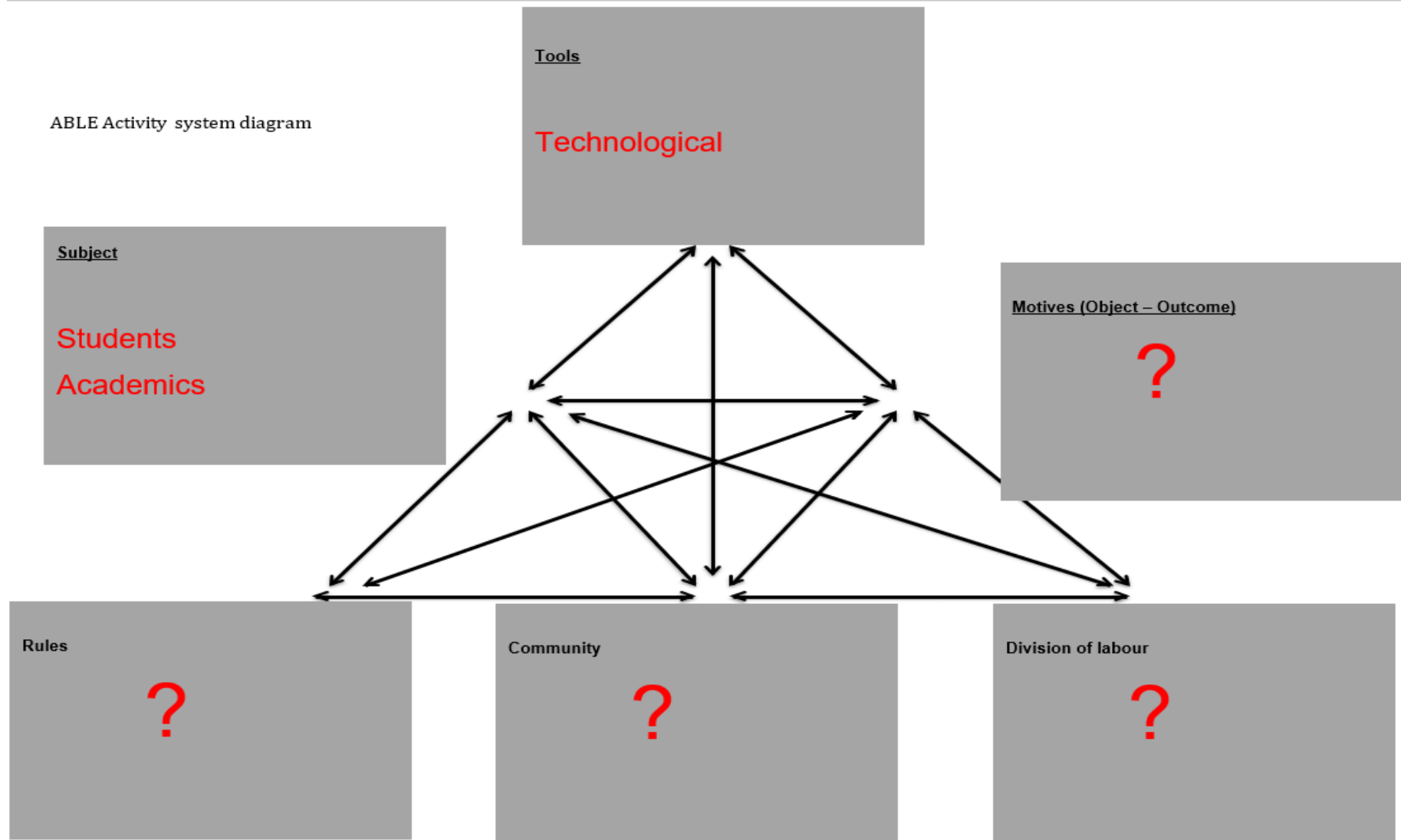


Figure 5.13 - Session one activity system progress

### **5.5.1 Session 2 Context**

The second session took place two weeks after the first workshop had concluded. This was planned to build upon the insights and discussions from the first workshop. The first workshop served as an icebreaker where participants shared their initial thoughts on blended learning. The second session aims to delve deeper into questioning and critical analysis of learning and teaching approaches, with a focus on the redesign of pedagogy, curriculum, and assessment. Participants have been encouraged to consider discussions from the first session and come prepared with thoughts and questions. This inter-session reflection is expected to ensure that the second session is more focused and that participants are actively engaged in the discussions throughout.

Questioning will continue be a central theme in this session. The first workshop raised several issues, and the second session is an opportunity for participants to question why these issues exist and how they can be addressed. It was expected that session two will be a pivotal moment in the journey towards developing an effective blended learning system at Lancaster University. The session is designed to be interactive and reflective, with activities and discussions that build on the insights gained during the first workshop. Through critical questioning and collaborative discussions, the session aims to lay the groundwork for future actions and improvements in teaching and learning approaches.

### **5.5.2 Session Design**

This Change Laboratory session was planned with two core tasks. Task 2.1 focused on questioning and analysis phases of the expansive learning cycle and was



designed to is to provoke critical thinking and discussions around how Education 4.0 can be translated into practical strategies for redesigning pedagogy, curriculum, and assessment. Task 2.2 will be focused on drawing the session to a close, concentrating on aspects of examining current and proposed approaches to inform the new activity system. It is aimed to consolidate the session by identifying areas that the group feel warrant additional focus in the next session. Participants will be invited to discuss and determine the specific aspects from the session, allowing for collective reflection and decision-making regarding the direction of subsequent activities.

*Table 5.4 - Summary of design for session two.*

<b>Session 2 Design</b>				
<b>Expansive learning action/s:</b>	<b>First Stimuli</b>	<b>Mirror data</b>	<b>2nd Stimuli</b>	<b>Social Organisation</b>
Task 2.1  <b>Questioning &amp; Analysis</b>	Education 4.0 JISC video to provoke debate	Learning and Teaching Reimagined 2020 stats overview.  What does this mean in practice? Consider the following: <ul style="list-style-type: none"> <li>• Redesign pedagogy</li> <li>• Redesign curriculum</li> <li>• Redesign assessment</li> </ul>	History wall exercise, individually charting own experiences with blended learning. This will lead to additional group discussion and questioning.	Groups discussion, leading to Individual blended learning history wall completion in pre-prepared Whiteboard templates. Then back to group discussion and questioning.

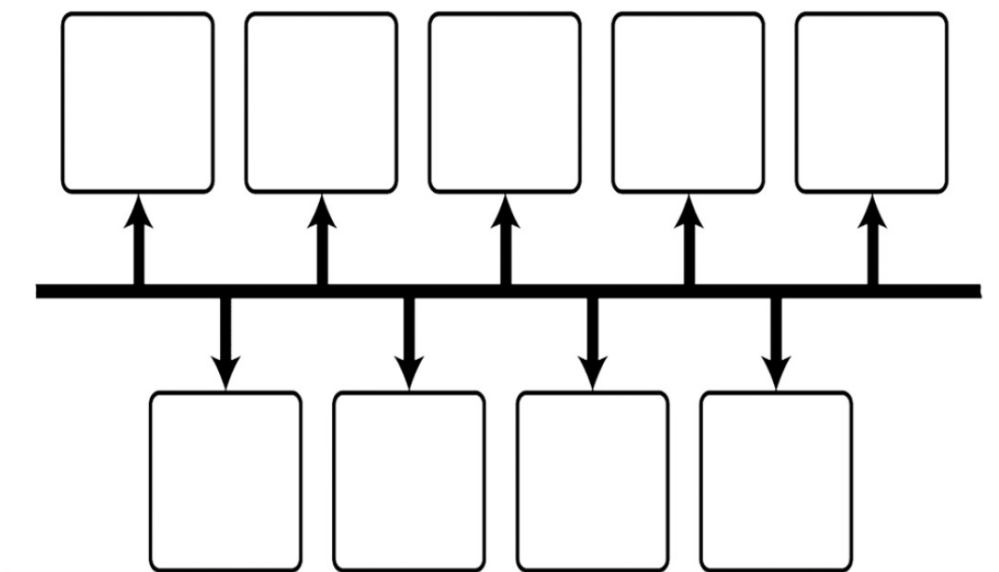
<b>Session 2 Design</b>				
<b>Expansive learning action/s:</b>	<b>First Stimuli</b>	<b>Mirror data</b>	<b>2nd Stimuli</b>	<b>Social Organisation</b>
<b>Task 2.2</b> <b>Examining</b>	What are the areas from the session that the group feel warrant additional focus?	Participant constructed History Walls	Chat excerpts from session, Learning and Teaching Reimagined 2020 statistics	Whole Group

Task 2.1 aims to use a first stimuli, where participants watch the JISC ‘Education 4.0 – transforming the future of education (through advanced technology)’ video clip, with the aim of stimulating questioning around the practical implications of modern education. This video aims to provide insights into the concept of Education 4.0 and its potential impact on teaching and learning practices. The mirror data, ‘The Learning and Teaching Reimagined 2020’ excerpts will be used as mirror data and aim to engage participants in questioning and explore the practical implications of LU's approach to blended learning. They will be asked to consider three key aspects: redesigning pedagogy, redesigning the curriculum, and redesigning assessment. This overview presents statistics and trends related to innovative learning and teaching

approaches. Participants will analyse this data to gain a deeper understanding of emerging practices and their implications for the redesign of pedagogy, curriculum, and assessment. The second stimuli are the introduction of the history wall in Microsoft Whiteboard. Participants will individually chart their own experiences with blended learning on pre-prepared Whiteboard templates in the Teams meeting via the interactive screensharing facility. This activity encourages reflection and introspection, allowing participants to document their successes, challenges, and lessons learned from previous encounters with blended learning. Following this individual reflection there will be group discussions where participants can share their insights and engage in further questioning.

### **Change Laboratory Blended Learning Timeline**

Chart your own timeline with regards to blended learning in your teaching, learning or professional practice.



*Figure 5.14 - Individual blended learning timeline template as shown in MS Whiteboard*

After the group discussions, participants will return to their individual blended learning history wall and will have the opportunity to further refine and develop their reflections based on the group discussions. This process of individual and group engagement intends to foster social organisation, promote collaboration, shared understanding, and collective knowledge construction.

Task 2.2 will focus on the questioning phase of the expansive learning cycle, with the group asked what areas they feel require additional focus. The second stimuli in the form of chat excerpts from the session as well as targeted statistics from the Learning and Teaching Reimagined 2020 document intend to refresh and refocus the direction. Mirror data in the form of the constructed history walls will be shared on screen with participants to further engage the analysis around specific elements that may have been overlooked in task 2.1.

### **5.5.3 Session Report**

Beginning the session with a recap of the Mentimeter word cloud (Figure 5.15), the focus was on the participants' words associated with blended learning and specifically related to blended learning at Lancaster University worked well to establish session 2.

# Last Session

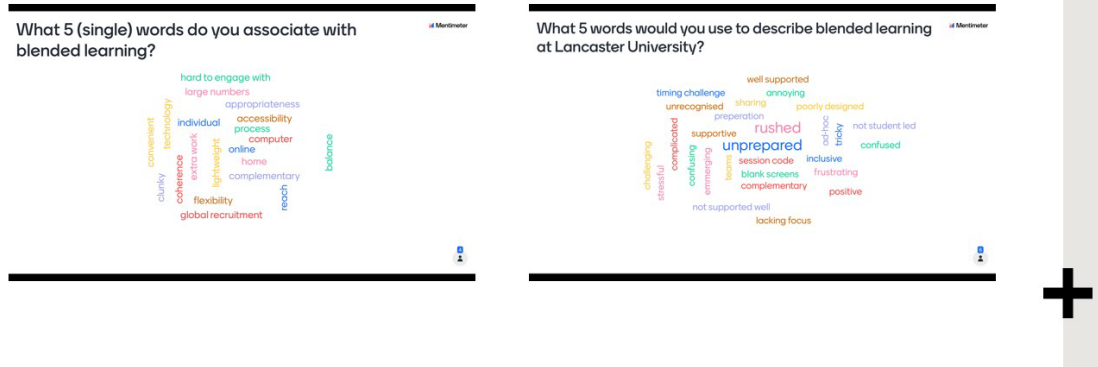


Figure 5.15 - PowerPoint slide recapping session one Mentimeter word clouds

Table 5.5 - Task 2.1 overview and associated themes and key quotes.

Expansive learning action/s:	First Stimuli	Mirror data	2nd Stimuli	Social Organisation
Task 2.1 Questioning & Analysis	Education 4.0 JISC video to provoke debate	Learning and Teaching Reimagined 2020 stats overview.  What does this mean in practice? Consider the following: <ul style="list-style-type: none"> <li>• Redesign pedagogy</li> <li>• Redesign curriculum</li> <li>• Redesign assessment</li> </ul>	History wall exercise, individually charting own experiences with blended learning. This will lead to additional group discussion and questioning.	Groups discussion, leading to Individual blended learning history wall completion in pre-prepared Whiteboard templates. Then back to group discussion and questioning.

## **Theme 1: Tensions Between Technology and Pedagogy**

A prominent theme in Task 2.1 was the tension between reliance on technology and the pedagogical design of blended learning. WT expressed concern about a simplistic transition to technology-driven teaching, noting, *“I’m concerned there you go from chalk and talk to laptop and Teams. And there’s the IT. It’s about the structure of the cost and the design of the course. And the skill of the lecturer and the team that support the lecturer as much as any technology.”* This reflects a secondary contradiction where the introduction of technology challenges existing practices without fully addressing the structural and pedagogical needs of educators.

PH reinforced this idea, stating succinctly, *“The tools follow the ideas in my view. OK, that’s it!”* This quote highlights a shared perspective that technology should serve pedagogy rather than dictate it, emphasising the importance of designing teaching practices that lead the adoption of tools.

## **Theme 2: Inclusivity and Relevance**

Inclusivity emerged as a key issue, with participants critically reflecting on whether current approaches and proposed tools were meeting the needs of diverse learners. AC pointed out, *“And a lot of the stuff in that video might not work for everybody, and I thought we were supposed to be, you know, building inclusive and accessible ways of doing things. And also, it’s, I mean, things like a lot of that wasn’t relevant...”* This underscores a tertiary contradiction where institutional strategies for inclusivity and accessibility may not align with the practical realities of blended learning design.

### **Theme 3: Workload and Staff Capacity**

Participants also highlighted the challenges of workload and capacity for staff tasked with implementing blended learning. TB noted, *“...I’m happy to do it, but I don’t want to impose that on staff that have huge workloads and are under huge pressure to publish, bring in income, grants...”* This reflects a structural contradiction between the demands placed on academic staff and their ability to engage meaningfully in blended learning initiatives. TB’s sensitivity to colleagues’ workloads also points to a broader issue of institutional support and prioritisation.

### **Theme 4: The Need for External Structures**

PD raised the importance of external frameworks to support learner engagement in blended learning, stating, *“...I need to have stuff timetabled, so it forces me to go to something and sit in a room and listen to it. So it seems a huge number of learners actually need that bit of just external framework.”* This observation highlights a contradiction in the blended learning model: while flexibility is a key advantage, some learners require structured environments to engage effectively.

The history wall exercise and subsequent group discussions in Task 2.1 facilitated critical questioning and analysis of participants’ experiences with blended learning. The session revealed key contradictions, including tensions between technology and pedagogy, challenges to inclusivity, workload pressures, and the need for external structures to support learners. These insights align with the expansive learning actions of questioning and analysis, enabling participants to surface systemic issues and begin envisioning improvements to the blended learning activity system.

The introduction of JISC's 'Education 4.0 – transforming the future of education through advanced technology' (Figure 5.16) ran into a minor technical issue with sound for one participant, but it was quickly resolved by sharing the link in the chat, allowing them to watch the video on their device.



*Figure 5.16 - Screen share image in Teams Meeting of JISC video – participants anonymised.*


The video provoked a reaction and engaged the participants in heated debate. The rhetoric within the video was challenged and contested by all, leading to some very poignant analyses on the current and future approaches in higher education teaching and learning.

The conversation evolved into discussions around the significance of engagement and the design of curricula. Participants highlighted the need for supporting infrastructure to effectively include technology in learning. This infrastructure was seen to focus on the *Tools*, along with the prioritising blended learning and time for staff to upskill in the area. They also addressed the diverse student population and how technology can support but also exclude certain groups. The importance of designing accessible education was highlighted during these early discussions and



can be seen in the new activity system in the *Rules*. Discussions emphasized the importance of listening to students' preferences, noting that many students still value face-to-face interaction alongside the digital aspect, again populating the *Rules* of the new activity system.

Open dialogue with students was seen as fundamental in order to foster an effective culture at the institution, explaining the learning curve that both staff and students go through.

27/10, 16:02  
<https://youtu.be/aVWHp8FsV1w>  
 Education 4.0 – transformin...  
04:04 | 67.5K views | 2 years ago  
youtu.be

27/10, 16:07  
similar with textbooks

27/10, 16:07  
and slides can be regurgitated on a PC jsut the same

27/10, 16:13  
agreed, it was not what the students wanted, it is what the industry wants ... sell more gadgets 1

27/10, 16:13  
I did think that especially when VR was mentioned 2

Edited  
Agreed - and it helps folks understand the computers aren't magical tools - they need rules and logic and a process to code

27/10, 16:17  
Of course \_\_\_\_\_, coding is also about problems. It is a language in which we express our questions. So yes, we need to read in order to ask the questions that matter, but coding helps us to answer these questions. Yes, you could call what I do data science .. 2

27/10, 16:19  
"digital skills " is a bit like "must be able to drive" 1

Figure 5.17 – Anonymised screenshot of session 2 chat from MS Teams meeting.

The second stimulus, the history wall activity (Figure 5.18) enables each participant to complete the task synchronously.

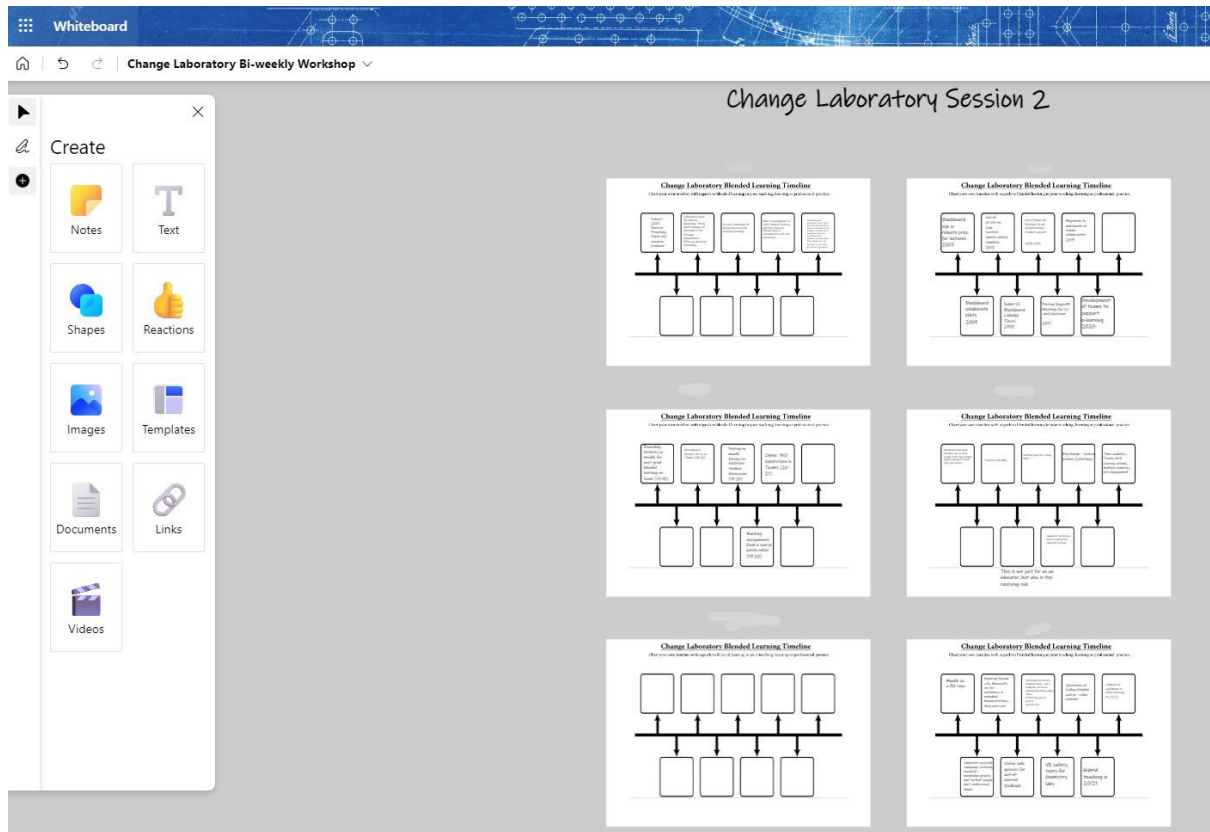


Figure 5.18 - History Wall Whiteboard second stimulus activity screenshot.

Conversation after completion of the history wall task centred around the topic of adapting education to online and blended models, especially in the wake of the COVID-19 pandemic. The participants reflected on their experiences transitioning to this new mode of teaching and the challenges they faced. The shift from a traditional classroom setting to an online setting and then to a blended approach, which involved both online and in-person classes during and post-lockdown were addressed by all. Contributions focused on the mixed messaging and rhetoric and the

institutions post-pandemic/lockdown modification to a more institutionalised approach to blended learning, with additional regulations on what tools can and should be used to facilitate learning. The role of the VCG was seen as a key *Subject* in the new activity system, and with *Division of Labour* responsibilities. Participants proceeded to discuss the role of institutional policies and strategies in shaping blended learning practices. This again focuses on top-level decision-making influences required in the shaping of a new blended learning activity system. Final points of task 2.1 were around the expectations and limitations with regards to providing good, blended learning. Participants were mindful of the time and effort required to create effective blended learning, understanding that this can be a barrier for some due to external or institutional pressures. Here, professional development allocation was seen as crucial for the *Rules* in the new activity system.

The introduction of the mirror data, 'Learning and Teaching Reimagined 2020' statistics (Figure 5.19) lead some participants to question the definition of blended learning and whether it truly encompassed the integration of technology in meaningful ways. This led to a clear focus in the rules around a blended learning support framework, to ensure effective approaches were scaffolded from an institutional level.

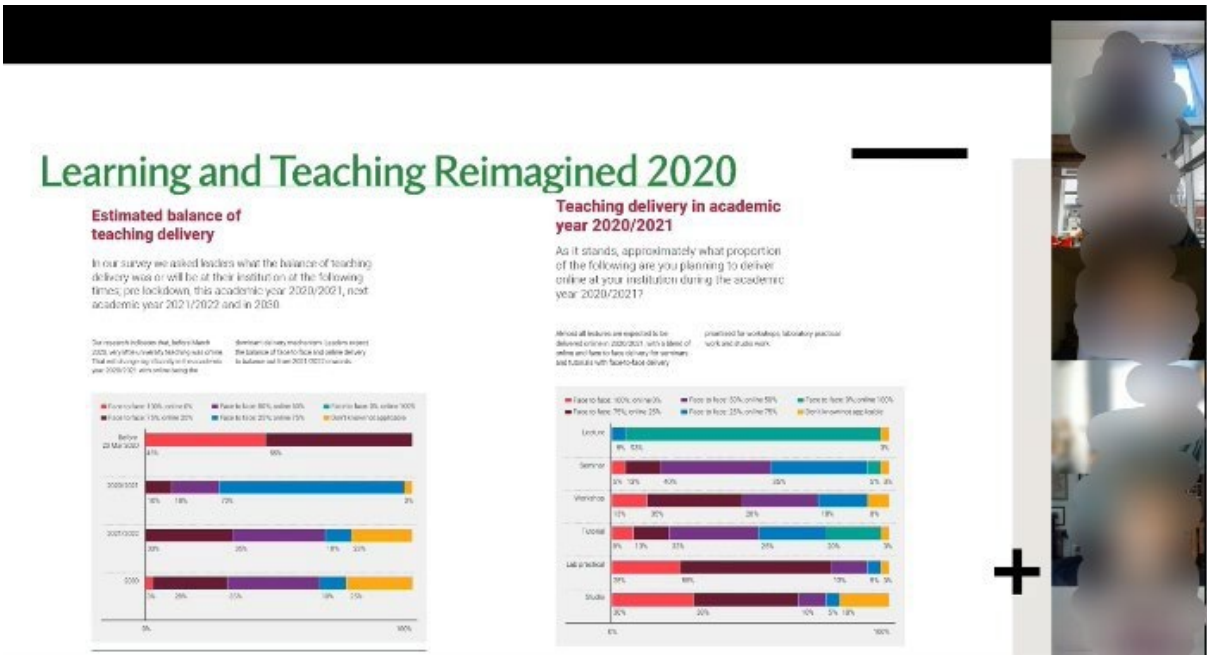


Figure 5.19 - Image of stats shared with participants in the Change Laboratory session.

The participants also stressed the need for structure with blended learning approaches, which aligns with previous additions to the new activity system centring around the blended learning framework and the *Subject* and *Division of Labour* sections.

Task 2 (Table 5.5) consolidated the previous task (2.1) and offered opportunities to address any key areas in need of highlighting of delving deeper into.

Table 5.5 - Task 2.2 overview

Expansive learning action/s:	First Stimuli	Mirror data	2nd Stimuli	Social Organisation
<b>Task 2.2 Examining</b>	What are the areas from the session that the group feel warrant additional focus?	Participant constructed History Walls	Chat excerpts from session,  Learning and Teaching  Reimagined 2020 statistics	Whole Group

Task 2.2 allowed participants to focus on some areas not addressed in task 2.1, with the role of communication and language on key documentation given precedence. Participants identified how the new activity system requires clear messaging from senior figures within the institution, which may combat the mixed messages students access through various other communication means (e.g. social media, media outlets, OfS etc.) There was also a clear sense that academics should be given opportunity to create a learning environment to meet the needs of their students and not be restricted too heavily with set tools. This was not fully explored but noted to address in more depth at a subsequent session.

#### 5.5.4 Session Reflection

During task 2.1 the history wall exercise was particularly effective in allowing participants to reflect on their personal experiences. The mirror data provided a valuable context for understanding the current state of blended learning and identifying areas for improvement. However, there were a few aspects that did not go

as planned. For instance, there was a slight technical issue with the sound during the JISC video presentation. Although it was resolved quickly, it did cause a brief interruption. Additionally, the session was packed with activities and discussions, and time management became a challenge for me as a facilitator, knowing when to wrap up discussions and move on. Some participants felt that additional time for individual reflection and to delve deeper into certain topics would be useful, although I felt the chat feature in Teams worked well at offering this avenue. Diary notes from the session (Figure 5.20) allowed me to pick up on key quotes made by participants both in session and to use for future mirror material.

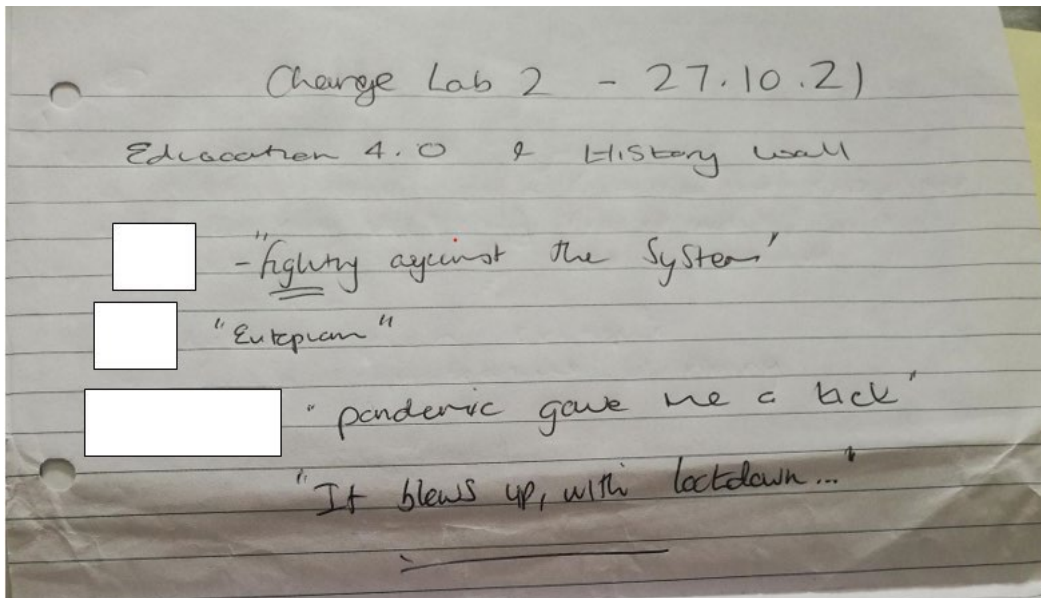


Figure 5.20 – Anonymised notes taken during session identifying key quotes to review later.

### 5.5.5 Session Outcomes

The current session continued the expansive learning cycle focus, shifting from the questioning phase into examining the existing challenges and possibilities in blended

learning. The session explored various aspects of blended learning, including institutional approaches, student expectations, intellectual property concerns, and the strategic use of both digital and traditional resources, updating the *Rules* section of the ABLE activity system. New additions are highlighted in red, and blue symbolises a change in terminology.

Key topics included the educators' roles and the perceived quality of teaching based on the resources used, the importance of considering different teaching approaches, addressing accessibility, and understanding students' needs and preferences. This session also surfaced some of the complexities of transitioning to an effective blended learning model and provided a deeper understanding of the intricacies involved. The session also touched on students' expectations in blended learning settings, emphasising the significance of managing student expectations and highlighting the importance of understanding the narratives surrounding online and blended learning. These all contributed to new aspects of the ABLE activity system being amended and added (Figure 5.21), with only the *Community* yet to be addressed.

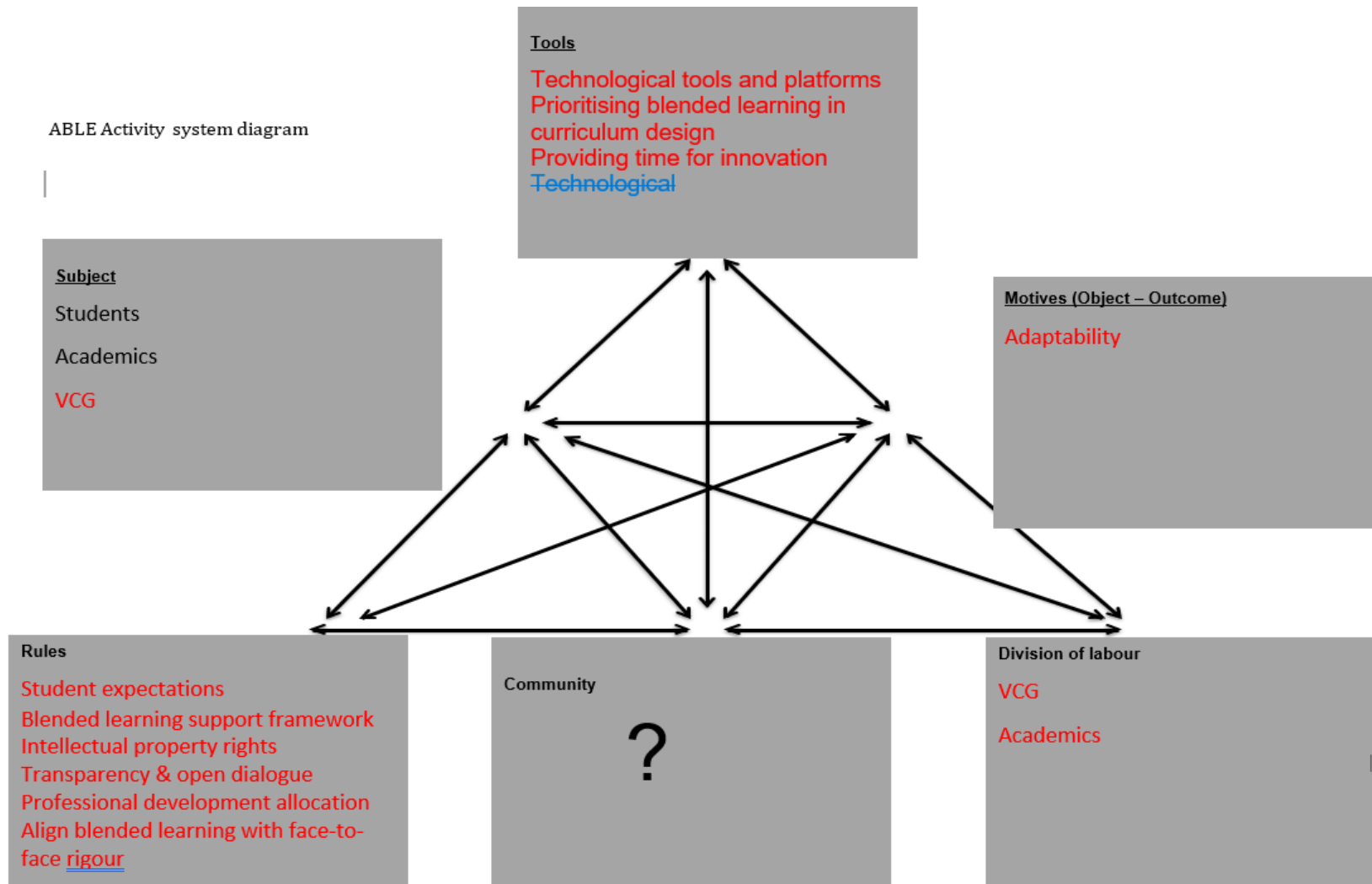


Figure 5.21 - Session 2 ABLE Activity System Progress.



### **5.6.1 Session 3 Context**

In session 3, the Change Laboratory continues to delve into the intricacies of blended learning, this time with a sharp focus on assessing Lancaster University's readiness for a post-pandemic digital learning landscape. Session 3 is also planned to tackle the expectations of the academic sector regarding digital transformation, shedding light on the required steps Lancaster University needs to take to fulfil these anticipations. Throughout this session, there is a focus on reviewing and analysing the guidance provided by Lancaster University, assessing its impact and identifying areas for refinement to better equip faculty and students for the challenges and opportunities that blended learning presents. A critical part of this session is the introduction of the activity system model, a tool we will employ extensively in the following sessions. This model will guide the collective thinking and decision-making, laying the foundation for a methodical and effective approach to blended learning. Just as the first session established our group dynamic and the second provoked critical examination of existing practices, this third session drives us into a detailed examination of our preparedness for the future.

### **5.6.2 Session Design**

Task 3.1 was designed to focus on the institution's preparedness for post-pandemic blended learning. Session 3 (Table 5.6) aimed towards moving into modelling in the expansive learning cycle, through effective questioning and analysis. Through task 3.1, I aim to delve into whether LU's existing policies and infrastructure are adequate to support the shift towards blended learning. Task 3.2 seeks to explore whether the

institution's strategies are aligned with the evolving needs of students and the broader educational landscape.

*Table 5.6 - Summary of design for session three.*

Expansive learning action:	Session 3 Design			
	First Stimuli	Mirror data	2nd Stimuli	Social Organisation
<b>Task 3.1</b> <b>Analysis</b>	Mentimeter – How would you explain (LU) institutional preparedness for post pandemic blended learning?	Institutional 'Minimum Expectations for Teaching Events' document shared with participants.	Video - Digital Transformation in UK Universities	Individual completion of Mentimeter. Whole group for video and discussion phase.
<b>Task 3.2</b> <b>Modelling</b>	How does LU strategy impact: <ul style="list-style-type: none"> <li>• Redesigning pedagogy</li> <li>• Redesigning curriculum</li> <li>• Redesigning assessment</li> </ul>	Introduction to activity systems –  Overview video	LU Dual mode teaching guidance	Group discussion and questioning.

In task 3.1, the Mentimeter poll will serve as a tool to gauge the general sentiment among the participants regarding LU's readiness and then generate associated discussion around individual points. The second stimulus, the 'Digital Transformation in UK Universities' has Simon Guy (PVC Digital a LU) discussing LU at Times Higher Education online conference and is sought to generate tensions with current

thoughts on the state of the institution. The mirror data, institutional 'Minimum Expectations for Teaching Events' document will be used in efforts to reconstruct and interpret the dynamics of the ongoing change process at the institution, reflecting to them what is happening in reality.

Through Task 3.2, participants will be given an excerpt of the LU Education Strategy (Figure 5.22), focusing on the blended learning provision and an active link to the full document. They will read through and then be asked 3 questions to open the group discussion (Figure 5.23).

## LU Education Strategy - 'Embrace the opportunities to extend digital and blended provision present'

– [Lancaster University Education Strategy](#)

Embrace the opportunities that extended digital and blended provision present

Working with partners and employers we will develop the principles, professional development and inclusive delivery models necessary to support our staff and students to participate to their fullest potential in online and hybrid modes of learning and knowledge transfer. We will also examine the opportunities that digital technology provides to build personalised learning, support learners using analytics, offer asynchronous delivery and connect more effectively with our global campus network and our alumni around the world.



*Figure 5.22 - Session three PowerPoint screenshot.*



*Figure 5.23 - Questioning participants screenshot from session three.*

These questions aim to spark discussion and debate amongst participants, with a clear focus on how strategy and guidance can play a role in the development of blended learning and the subsequent required activity system. The second stimulus 'LU Dual mode teaching guidance' (Figure 5.24) aims to trigger participants into debate around their effectiveness in practice and their adherence to these rules. Here, the hope is that rules of the activity system come to the fore and the participants see the benefits and limitations of such rules within an activity system.

# Lancaster University – Dual Mode Teaching

## Dual-mode teaching

Dual-mode teaching is the practice of delivering a course where some students physically attend teaching sessions and others are taught online. This might involve teaching both groups of students at the same time or teaching each group separately. Lancaster is implementing dual-mode teaching primarily in response to Covid-19, with a particular focus on Michaelmas 2021, when we anticipate a significant minority of students may not be able to attend in person because they must isolate or are still in their home countries.

During summer 2021, all teaching spaces will be updated to ensure you can conduct dual-mode teaching on campus but depending on the size and configuration of the room, there are a few things to be aware of:

1. All rooms will allow remote attendees to hear the tutor, and most will have a camera so they can see the tutor too.
2. Some rooms will allow remote attendees to hear the audience using microphones embedded into the ceiling, table-top boundary microphones, or handheld roving microphones (in larger spaces). When using handheld roving microphones, please ensure a student has the microphone before they ask their question. If a room doesn't have any form of audience microphone, you should repeat the question out loud so the remote attendees can hear it, before answering.
3. You can check the configuration of all rooms on the [Room and Equipment list](#).

**Looking for help with Dual Mode teaching?** In addition to the guidance below, training videos are currently in development and ISS will be running a series of training sessions to walk you through the process of dual mode teaching (covering the three scenarios below). These are due to take place August – October.

### Guidance for specific teaching events and processes

Record an in-person lecture or large teaching event using Panopto for on-demand viewing

Stream an in-person lecture or large teaching event for online attendees to join via Microsoft Teams

Run an in-person small group teaching event with remote attendees

Using a visualiser with Microsoft Teams

Using your own laptop (classroom in a box)

### Frequently Asked Questions

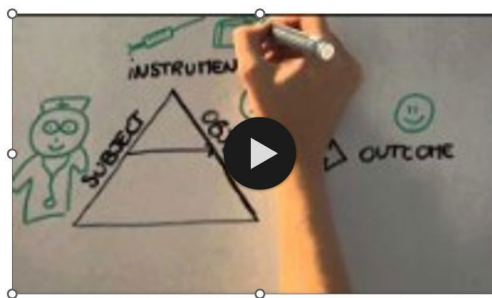
What options do I have for Dual Mode Teaching?

Figure 5.24 - Dual mode guidance PowerPoint screenshot from session three.

The introduction to activity systems will serve as a theoretical framework to understand the complex interactions within the educational environment. This is a significant component of this session as it provides participants with a theoretical framework to understand the complex interactions and equipping participants to map out the current activity systems in Session 4. Understanding activity systems is essential for identifying challenges and pressures within the existing practices and for imagining new models of blended learning. The introduction to activity systems video as mirror data (Figure 5.25) aims to provide participants with a model to inform their thinking and offer an external context. The focus of the video is on a medical setting, demonstrating how the activity system is formed and what the core elements are. The hope is participants resonate with this example and can address similarities

and differences with their own engagement in a blended learning activity system at Lancaster University.

## Activity System



– Whiteboard Activity

– Engestrom

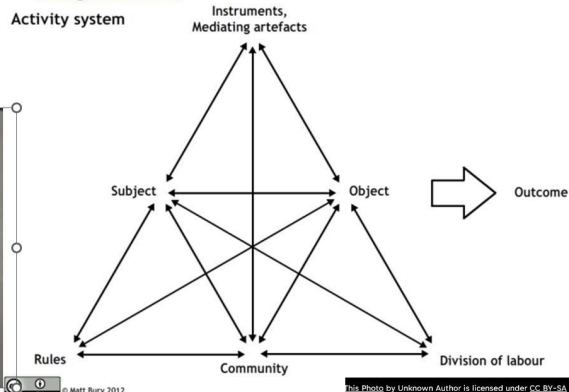


Figure 5.25 - PowerPoint screenshot from session four activity system focus.

### 5.6.3 Session Report

Task 3.1 started with an interactive Mentimeter poll, where participants were encouraged to be honest in their responses, as this would help in understanding the real attitudes and concerns regarding LU's preparedness. As responses started coming in, they were displayed in real-time on the shared screen. This allowed for an interactive and dynamic exchange, as participants could see each other's responses. I facilitated a discussion based on specific responses and asked participants to elaborate where possible (Figure 5.25) and encouraged a dialogue amongst the group.

Table 5.7 - Task 3.1 overview and associated themes and key quotes.

Session 3 Design				
Expansive learning action:	First Stimuli	Mirror data	2nd Stimuli	Social Organisation
<b>Task 3.1</b> <b>Analysis</b>	Mentimeter – How would you explain (LU) institutional preparedness for post pandemic blended learning?	Institutional ‘Minimum Expectations for Teaching Events’ document shared with participants.	Video - Digital Transformation in UK Universities	Individual completion of Mentimeter. Whole group for video and discussion phase.

### Theme 1: Resource Constraints and Assumptions about Technology

A theme in Task 3.1 was the disparity between institutional expectations and the resources available to support blended learning. PH noted, “...*you just don’t have those resources available to hand and there’s an assumption that the tech makes it*

*work because that's what we see... We don't have that level of technology and we don't have that level of resource that we can commit as academics and as technicians.*" This highlights a systemic contradiction where the assumption of technological adequacy clashes with the actual resource limitations faced by staff, revealing gaps in institutional preparedness.

## **Theme 2: Confusion in Strategic Direction**

Participants expressed frustration with perceived inconsistencies in the institution's strategic priorities for blended learning. WT observed, *"...we have come back to a lot of stuff from I would say senior management about that the campus offering is the way to go and that's our USP. So it seems very confused I think is what I was trying to say."* This reflects a tertiary contradiction between the promotion of innovative practices and a reversion to traditional campus-centric approaches, increasing confusion among staff.

PD provided a sharp critique of institutional strategies, stating, *"...I think like most strategies, it's carefully tuned to not say anything in particular... what we need is tactics rather than strategy... it's a damning indictment of the uselessness of them sometimes."*

This quote underscores a sense of disillusionment with the lack of actionable plans, which hinders meaningful progress in implementing blended learning.

## **Theme 3: Implementation Challenges and Logistics**

Participants identified logistical issues as a significant barrier to successful implementation of blended learning. TB shared, *"...one of the biggest problems now is they're fine with the idea of having different things in different modes but just the logistics... So the actual implementations... are causing problems."* This



statement highlights the operational challenges of managing blended learning modalities and underscores the need for coherent systems and processes to support staff and students.

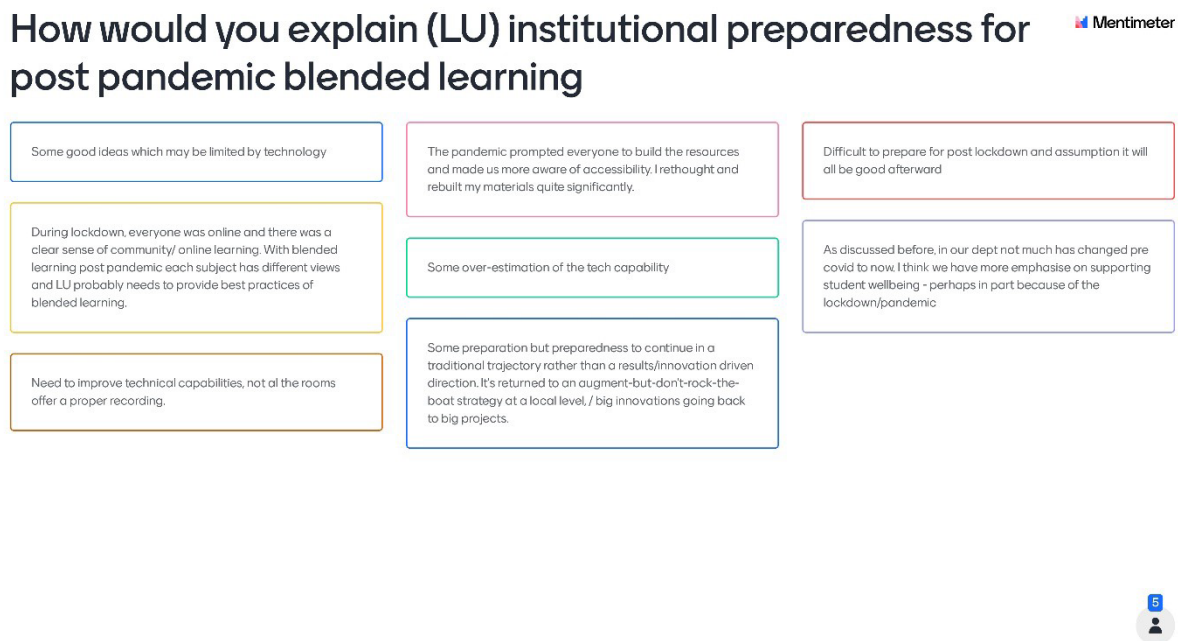
#### **Theme 4: Retrofitting Physical Spaces for Blended Learning**

WT reflected on the lack of foresight in infrastructure development, pointing out, *“...they started developing this new lecture theatre not long before the pandemic... in this day and age they wouldn't have factored blended learning and building in that tech. It just strikes me as quite surprising and a bit of a short-sighted [decision], really.”* This quote highlights a contradiction between long-term infrastructure planning and the emergent demands of blended learning, where physical spaces often lag behind pedagogical and technological innovations.

#### **Theme 5: Staff Skills and Support**

The need for staff training and support emerged as a crucial issue. One participant noted, *“...all of this is only viable if staff are kind of like skilled up and supported really. But there's sort of scant mention of that...”* This emphasises a secondary contradiction where institutional goals for blended learning are not matched by investments in staff development, limiting the feasibility of these ambitions. The group discussions in Task 3.1 provided valuable insights into the institutional challenges surrounding blended learning. Key contradictions emerged, including resource constraints, logistical barriers, inconsistent strategic direction, and the disconnect between infrastructure and pedagogy. These discussions align with the expansive learning actions of analysis, enabling participants to surface and critically evaluate systemic issues. The session also highlighted opportunities for targeted interventions, such as clearer strategies, enhanced logistical support, and improved staff training.

The first stimulus, Mentimeter poll (Figure 5.26), exposed concerns about blended learning guidance, workload management, support, and resource understanding. Participants sought clearer guidance, training, and innovation culture for an effective activity system. Challenges emerged regarding technology capabilities, digital and physical infrastructure, and limitations in remote and in-person learning setups.



*Figure 5.26 - Screenshot from Mentimeter results in session 3.*

Participants highlighted two key aspects regarding institutional preparedness for post-pandemic blended learning. Firstly, there was an overestimation of technology capabilities, coupled with limitations in available technologies for effective blended learning. Secondly, the underestimation of necessary digital and physical infrastructure, crucial components within the Tools section of the activity system, posed challenges in achieving successful blended learning at the institution.

The second stimulus provided insights into the insufficient digital infrastructure, encompassing issues like unreliable internet, limited device access, and inadequate technical support for online platforms. Meanwhile, the physical infrastructure aspect considered spaces for in-person sessions, resource access, and the learning environment's overall design. This requires new activity system to have clearer guidance and support in using the various resources and modes of learning in a more effective way. These insights contribute to the development of the new activity system by emphasising the importance of providing students and staff with the necessary tools, strategies, and support to navigate the blended learning environment successfully.

The mirror data (Figure 5.27) served as a reference point to understand the existing requirements and guidelines set by the institution for teaching activities.

## LU Education Strategy - 'Embrace the opportunities to extend digital and blended provision present'

Embrace the opportunities that extended digital and blended provision present

Working with partners and employers we will develop the principles, professional development and inclusive delivery models necessary to support our staff and students to participate to their fullest potential in online and hybrid modes of learning and knowledge transfer. We will also examine the opportunities that digital technology provides to build personalised learning, support learners using analytics, offer asynchronous delivery and connect more effectively with our global campus network and our alumni around the world.

Our innovative use of digital technologies will be critical to securing a competitive edge. We will think and act digitally, embracing digital technology in all our activities. This will support us to improve our connectivity to partners and deliver innovative digital learning environments for our students and alumni. It must also deliver efficient and highly effective digital ways of working for our staff. Embracing digital opportunities will enable us to better build communities across our global organisation.

Supported by a data and analytics strategy, our use of digital technologies will be central to our reimagining of the campus and to:

- **Focusing on student journeys** - to enhance the student experience, deliver support and wellbeing services and ensure a smooth and seamless student experience from the point of initial enquiry to graduation.
- **Hamessing opportunities in digital provision** - to support delivery across campuses in support of a global student experience, as one aspect of our reduced carbon emissions and to support 'micro-credits' and other forms of short programmes which encourage life-long learning and career development.

— [Lancaster University Education Strategy](#)

Figure 5.27 - LU Education Strategy excerpts shared during session 3.

This allowed participants to examine the current expectations and standards in place. It provided a basis for discussion and analysis of how these expectations align with the experiences and challenges discussed so far in the session. Participants compared their own practices and experiences with the institutional expectations, identifying numerous gaps and areas of improvement. The need to foster a culture of ongoing innovation and exploration within teaching practices was a key feature addressed for any future blended learning activity system, with participants sharing a range of view around the value in this supportive approach.

*Table 5.7 - Task 3.2 overview and associated key quotes.*

<b>Session 3 Design</b>				
<b>Expansive learning action:</b>	First Stimuli	Mirror data	2nd Stimuli	Social Organisation
<b>Task 3.2 Modelling</b>	Teams Poll - How does LU strategy impact: <ul style="list-style-type: none"> <li>• Redesigning pedagogy</li> <li>• Redesigning curriculum</li> <li>• Redesigning assessment</li> </ul>	Introduction to activity  systems –  Overview video	LU Dual mode teaching guidance	Group discussion and questioning.

### **Theme 1: Time Constraints and Access to Resources**

A central theme in task 2 was the difficulty participants experienced in finding the time and resources necessary to adapt to blended learning requirements. AC noted, “...*the thing is like having the time and to search for that and kind of understanding what do I really need.*”

This highlights a secondary contradiction where the demand for educators to innovate is

constrained by limited time and resources. This lack of structured support inhibits the ability of staff to effectively engage with and implement blended learning practices.

### **Theme 2: Facilitating Collaboration and Knowledge Sharing**

Participants emphasised the need for systems that facilitate collaboration and the sharing of best practices among staff. RB reflected on this during the discussion, stating, “...*I think the last thing that we want is like those people being overwhelmed and not being able to share... you can have more like sharing best practices easier across the staff members as well.*” This contradiction points to the systemic challenge of fostering a culture of collaboration, where fragmented practices and siloed knowledge hinder collective progress in adopting blended learning strategies.

### **Theme 3: Impact of Institutional Strategy on Teaching and Assessment**

The modelling phase of the task involved exploring how LU’s strategy impacts pedagogy, curriculum design, and assessment. The Teams Poll and subsequent discussions revealed participant concerns about the alignment of institutional strategies with the realities of teaching practice. For example, participants questioned whether dual-mode teaching guidance effectively addressed the practical needs of diverse student populations and whether institutional goals prioritised efficiency over pedagogical depth.

The group discussions and modelling exercise revealed systemic contradictions in BL practices, particularly the tension between institutional expectations and the lived realities of educators. Time constraints, insufficient resources, and fragmented collaboration emerged as significant barriers to effective implementation. These insights align with

expansive learning actions of questioning and modelling, as participants critically examined their context and collaboratively envisioned solutions to address these challenges.

The first stimulus in task 3.2, a series of Microsoft Teams Forms polls (Figure 5.28), captured participants' perceptions of support in blended learning. It gave structured quantitative insights and a foundation for assessing existing support, gaps, challenges, and opportunities. The second poll fuelled Change Laboratory discussions, using the initial data for reflective dialogue. The third poll sought input on desired support forms, visually summarised in a word cloud, guiding ongoing discussions.

In the second poll discussions, a participant advocated for learning advisors, akin to academic advisors, to enhance accessibility and awareness of digital learning and teaching support. This approach addressed division of labour and stakeholder involvement for an effective blended learning activity system. Concerns about overwhelming support staff emerged, underscoring the need for best practice sharing systems within the Rules or Tools sections.

Chat discussions during the polls (Figure 5.29) revealed distinctions between technical and learning support, indicating a need for comprehensive guidance beyond tools. Participants recognised multifaceted support aspects, from troubleshooting to pedagogical guidance and technological development. The stimulus highlighted the complex nature of blended learning support, emphasising its multifaceted dimensions.

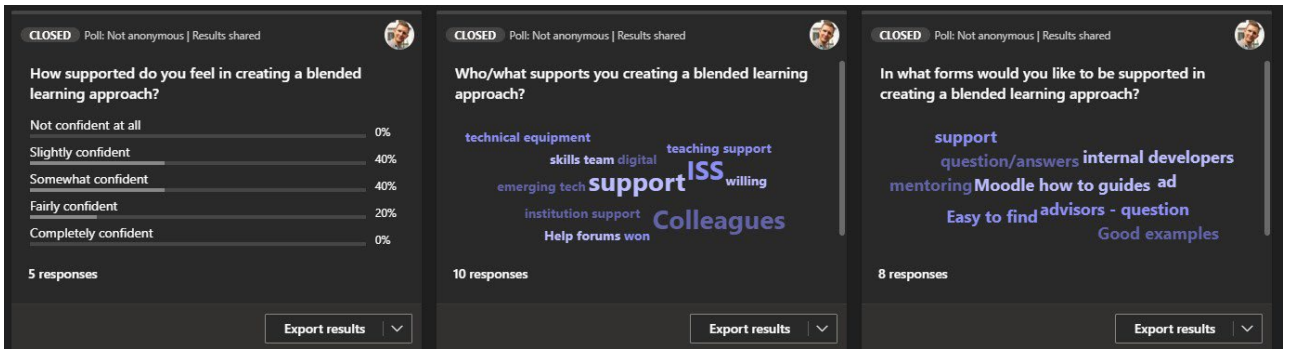


Figure 5.28 - Combination of session 3 Forms polls used as first stimulus.

[16:36] [redacted]

I see it as a tech support vs learning support - ISS provide word but don't guide how to write a thesis

[16:36] [redacted]

it seems that support for using the tools better is lacking

{1 liked}

[16:39] [redacted]

- o fixing problems with the tech (support)
- o teaching how to use the tech "appropriately" (guide)
- o actually implementing something with the tech for us (developer)

Figure 5.29 – Anonymised chat discussion as the verbal discussion was unfolding in session 3.

The second stimulus (Figure 5.30) served as a prompt to discuss and explore the institutional approach to dual mode teaching and its implications for creating a new activity system.

# Dual-mode teaching

Dual-mode teaching is the practice of delivering a course where some students physically attend teaching sessions and others are taught online. This might involve teaching both groups of students at the same time or teaching each group separately. Lancaster is implementing dual-mode teaching primarily in response to Covid-19, with a particular focus on Michaelmas 2021, when we anticipate a significant minority of students may not be able to attend in person because they must isolate or are still in their home countries.

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3. You can check the configuration of all rooms on the [Room and Equipment list](#).

**Looking for help with Dual Mode teaching?** In addition to the guidance below, training videos are currently in development and ISS will be running a series of training sessions to walk you through the process of dual mode teaching (covering the three scenarios below). These are due to take place August – October.

## Guidance for specific teaching events and processes

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[Run an in-person small group teaching event with remote attendees](#)

[Using a visualiser with Microsoft Teams](#)

[Using your own laptop \(classroom in a box\)](#)

## Frequently Asked Questions

[What options do I have for Dual Mode Teaching?](#)

*Figure 5.30 - Dual mode teaching guidance shared via PowerPoint in session 3.*



Participants used provided guidance to assess its effectiveness for blended learning outcomes. This led to critical evaluation of institutional strategies and discussions on improving the current approach. Alignment with needs, identifying gaps, and generating ideas for a more effective blended learning activity system ensued.

The second stimulus discussions focused on university guidance in general, not just dual mode teaching. Participants revealed diverse viewpoints, showcasing awareness and implementation differences across departments. Contradictions between university and departmental directives highlighted potential interpretation inconsistencies. Variation in departmental perspectives, shaped by history and experience, showcased contextual influence on guidance interpretation. This stresses the need for clear communication to ensure consistent guidance implementation across the institution in the new activity system.

The mirror data to serve as a reference point for analysis and discussion within the Change Laboratory. In this case, the YouTube video was employed to enhance participants' understanding of activity systems and to stimulate their thinking about how activity systems could be applied in the context of blended learning and building on the discussions already carried out during session 3. The video provided examples, visual representations, and a case study in a medical context to illustrate the different elements and relationships within an activity system. This aimed at providing a foundation for subsequent discussions and collaborative sense-making in the Change Laboratory sessions to follow.

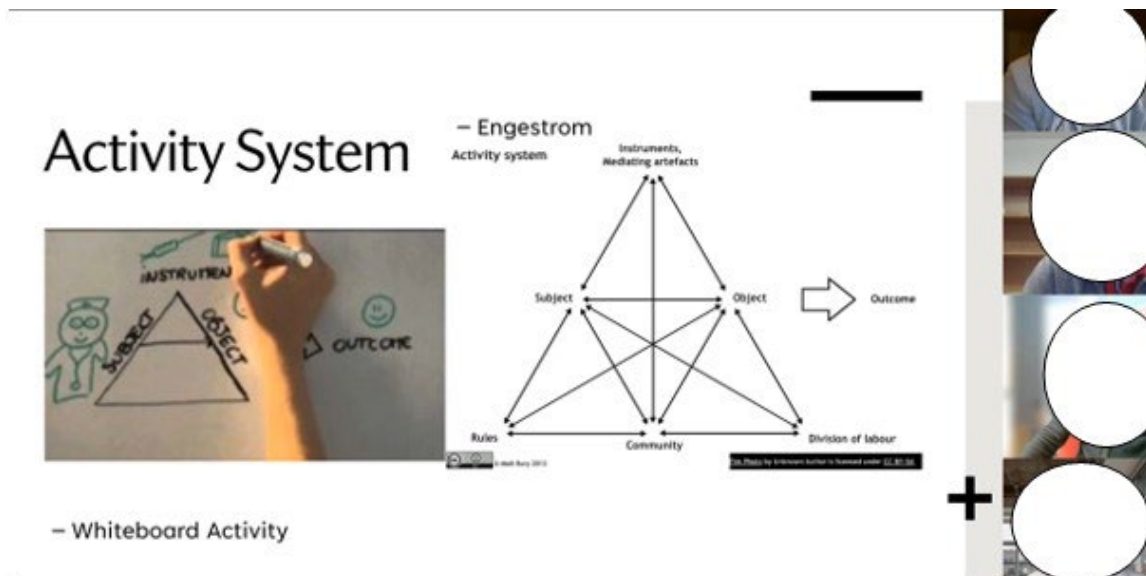


Figure 5.31 – Anonymised screenshot from Change Laboratory meeting, sharing mirror data (activity system video overview).

### 5.6.4 Session reflection

Task 2 focused on gathering participants' perceptions of their support in creating blended learning approaches and identifying the forms of support they felt was needed. The use of Microsoft Teams Forms polls as the first stimulus worked well to collect and analyse data, allowing for quantitative and qualitative insights quickly. The dual mode teaching guidance was very effective in encouraging discussions around the challenges and complexities associated with implementing guidance at Lancaster University in general, not just on this specific element of guidance. The participants' comments revealed different interpretations and experiences and the variations in institutional approaches and the need for clearer guidance and consistent implementation across the university. The mirror data, 'Introduction to Activity Systems', video provided participants with a framework to discuss and analyse the current state of blended learning and the desired changes in the activity system. It

served as a starting point to explore the different components of the existing system, such as roles, rules, tools, and community, and to identify areas for improvement in future sessions. The video facilitated a deeper understanding of the intricate dynamics involved in designing and implementing blended learning approaches.

### **5.6.5 Session Outcome**

Session 3 focused on exploring the challenges and possibilities of blended learning within the context of the expansive learning cycle. Participants engaged in discussions and activities that shed light on various aspects of blended learning, including institutional approaches, and student expectations. The examination of the Lancaster University Education Strategy and the Dual Mode Teaching guidance as mirror data. Participants explored these documents and shared their thoughts on the clarity, alignment with their experiences, and implications for their own blended learning practices and the wider institution.

Participants highlighted the need for guidance and support in using digital tools effectively, and the importance of understanding student needs and preferences for blended learning to be successful at Lancaster University. The session aimed to contribute to working towards developing a new activity system for blended learning, addressing the gaps, challenges, and potential. Session 3 contributed to a deeper understanding of the complexities surrounding blended learning, providing a foundation for participants to collaboratively work towards designing an effective blended learning activity system in later sessions (Figure 5.30).

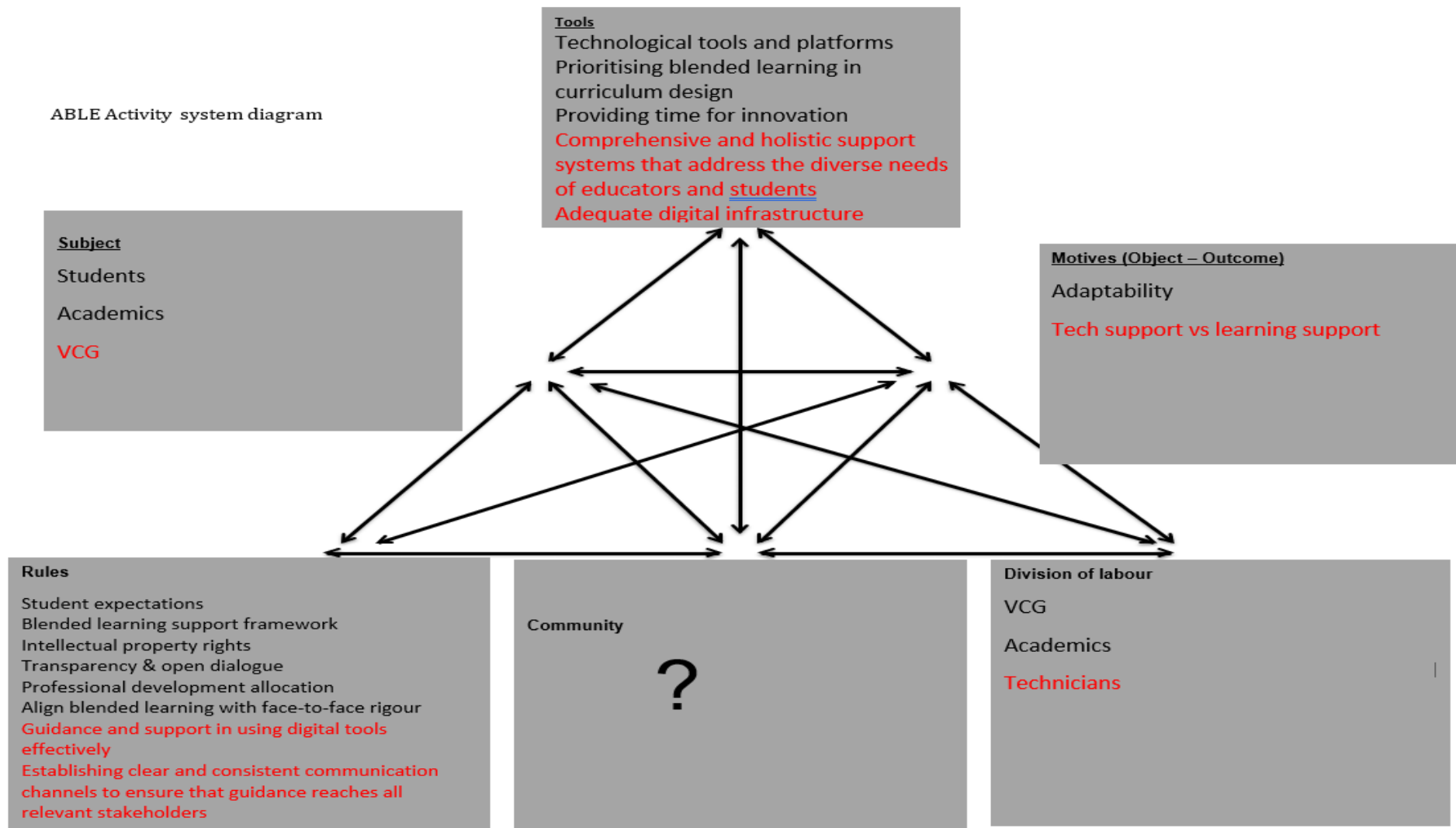


Figure 5.32 - ABL activity system progress after session three.

### 5.7.1 Session 4 Context

The overall aim of Session 4 is to critically analyse the current LU activity system, identify contradictions, and begin thinking about what an ideal blended learning activity system should encompass. Through questioning and historical analysis, the session is designed to foster a shared understanding among participants and lay the groundwork for the development of a new activity system.

### 5.7.2 Session Design

Session four (Table 5.8) was structured around three tasks (Task 4.1), which aims, in turn to review LU’s current blended learning activity system, start to generate a new activity system, and address the contradictions within.

Table 5.8 - Summary of design for session 4

Session 4 Plan			
Expansive learning action:	Questioning		
First Stimuli	Mirror data	2 <sup>nd</sup> Stimuli	Social Organisation
<b>Task 4.1</b>  Video overview of an activity system in medical context, designed to provide participants with an external perspective of an activity system.	Address key additions to activity system template to reflect back to groups what is happening beneath the surface.	Activity System blank template with defined structure designed to elicit participants' thoughts on what an ideal activity system should encompass.	Whole group initially, moving to two breakout groups during the introduction of the second stimulus.

Expansive learning action	Analysis		
<p><b>Task 4.2</b></p> <p>Consolidate ideas from 2 groups on what a blended learning LU activity system involves.</p>	<p>Breakout group's completed templates shared and discussed with whole group.</p>	<p>Direct quotes/sections of the activity system selected for deeper analysis</p>	<p>Bring group back together and discuss. Facilitator to document suggestions on the Whiteboard.</p>
Expansive Learning Action	Empirical Analysis		
<p><b>Task 4.3</b></p> <p>Address contradiction in the created activity system</p>	<p>Participant breakout room created activity systems shared on screen to whole group</p>	<p>Sannino and Engestrom's (2018) overview of contradictions</p>	<p>Whole group</p>

Task 4.1 was designed to provoke participants to address what a blended learning activity system looks like at Lancaster University. The aim was thus to stimulate critical analysis and questioning of the existing ways of doing things. Participants challenge the assumptions, norms, and practices that underpin the current activity system. This questioning helps to identify contradictions or tensions that hinder the optimal functioning of the activity.

Task 4.2 was designed to consolidate ideas from the two breakout groups on what a blended learning LU activity system involves. The aim was to focus on analysis,

concentrating on specific aspects of the activity system that come into conflict with each other, creating tensions that require resolving. A second stimuli, an overview of contradictions (based on Sannino and Engestrom 2018, Figure 5.33), aimed to clearly define the parameters and intention of the task to participants. Mirror data was designed to elicit collective insights and foster a shared understanding based on each groups created activity system.

The screenshot shows a video player interface with a slide titled "Contradictions". The slide features a central diagram of an activity system represented as a triangle with six nodes (Subject, Instruments, Results, Rules, Community, Division of Labor) and arrows indicating interactions between them. Each node is accompanied by a list of contrasting elements.

**INSTRUMENTS:**  
Technology as a generic working tool  
vs. Technology as a pedagogical extension

**SUBJECT:**  
Teacher as an employee with homogeneous competencies  
vs. Teacher as an autonomous and free thinker

**RESULTS:**  
Measurability of employee performance  
vs. Teacher's work invisibility and intangibility

**RULES:**  
Institutional standardization  
vs. Locally negotiated disciplinary orientations

**COMMUNITY:**  
Institutional membership  
vs. Distributed research ecosystem

**DIVISION OF LABOR:**  
Individualistic organizational setting  
vs. Collaborative work requirements

**OBJECT:** Student as a customer vs. Student as learner

**Contradictions**  
Sannino and Engeström (2018) identify four levels of contradictions within and between activity systems. Primary contradictions can exist within a node of the activity (eg, within the division of labour where a particular task might be assigned to two different groups who have conflicting views about priorities). The secondary level involves contradictions that clearly involve two or more nodes within the activity (eg, between tools and rules as may occur if the ICT tool provides inadequate privacy or security to the subject and is contrary to organizational rules or national laws). Tertiary contradictions may arise exist between a newly established version of the activity (how things are done now) and remnants of the previous version. This often occurs when a radical change is made such as the introduction of an entirely new information system where the tendency is naturally to go back to the more familiar old way of doing things. The most advanced level refers to the third generation of Activity Theory Engeström, 1999) where the two interacting activity systems are in conflict.

Change Laboratory Workshop 4 - 24.11.21

Figure 5.33 – Anonymised screenshot of second stimulus during session 4.

Task 4.3 was designed to provoke participants to identify and highlight systemic contradictions in the activity system they had started to analyse in task 4.2. The aim was thus to stimulate actions of actual-empirical analysis. To do so, the task presented a first stimulus which asked participants to address contradictions in their created activity system.

### 5.7.3 Session Report

Table 5.8 - Task 4.1 overview, associated themes and participant excerpts.

Session 4 Plan			
Expansive learning action:	Questioning		
First Stimuli	Mirror data	2 <sup>nd</sup> Stimuli	Social Organisation

<p><b>Task 4.1</b></p> <p>Video overview of an activity system in medical context, designed to provide participants with an external perspective of an activity system.</p>	<p>Address key additions to activity system template to reflect back to groups what is happening beneath the surface.</p>	<p>Activity System blank template with defined structure designed to elicit participants' thoughts on what an ideal activity system should encompass.</p>	<p>Whole group initially, moving to two breakout groups during the introduction of the second stimulus.</p>
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#### Theme 1: Physical Space and Its Overlooked Role in Blended Learning

Group discussions during Task 4.1 highlighted the often-overlooked role of physical infrastructure in supporting blended learning. RB from Group 1 noted, "...artefacts that you don't think about with blended learning is the kind of physical space." This observation underscores the contradiction between the focus on digital tools and the neglect of physical environments that play a critical role in facilitating blended learning experiences.



Similarly, AH in Group 2 expanded on this theme, emphasising the input of Estates departments: "...the buildings and how they're equipped and how they set up, that all ties into it." This connects the activity system to institutional planning, highlighting a gap where blended learning considerations are not fully integrated into infrastructure design.

### **Theme 2: Flexibility and Agility in System Design**

Agility emerged as a key requirement for creating activity systems that cater to diverse needs. AH observed, "...there's a need to be agile, isn't there? And how these things are written to cater for all the different things... different faculties, different departments." This reflects a systemic challenge where institutional processes need to accommodate variability across disciplines while maintaining coherence and effectiveness.

### **Theme 3: Risk-Free Approaches to Teaching and Learning**

RB from Group 1 highlighted a desire for risk-free approaches in blended learning, stating, "...I'm looking for some risk-free approach that is encouraged in terms of teaching and learning activities." This reflects a secondary contradiction where the institution's push for innovation is met with apprehension among staff, who prefer safe and reliable methods to ensure successful implementation.

### **Theme 4: Questioning Rules and Community Guidance**

In Group 2, participants questioned the validity and applicability of existing rules and guidance for blended learning. PH remarked, "*We were starting to discuss whether they were really rules or not, and if the community guidance is that... is that real possibly?*" This suggests a tertiary contradiction where institutional policies and

guidelines fail to align with the lived realities of academic and administrative staff. The activity system template and associated discussions in Task 4.1 facilitated a deeper exploration of the structural and contextual factors underpinning blended learning. Key contradictions were identified, including the neglected role of physical spaces, the need for greater flexibility in system design, and the tension between innovation and risk aversion. Participants also critically evaluated the relevance of institutional rules, reflecting the expansive learning action of questioning. These discussions provided a platform for envisioning more inclusive and adaptable activity systems, paving the way for future interventions.

In breakout room 1 of Task 4.1, participants emphasised the ABLE activity system's need to promote risk-free, developmental blended learning with flexibility in its online components. They acknowledged roles and frameworks in blended learning and acknowledged inter-institutional differences. Stakeholders like students, academics, support staff, and more were identified, emphasizing the need for diverse perspectives and community considerations. The choice of tools and physical spaces was discussed, stressing adaptability for various platforms and the role of estates and infrastructure.

Breakout room 2 participants discussed the language of guidance documents, balancing clarity and flexibility. They acknowledged blended learning's complexity due to various elements like infrastructure, technologies, and platforms, requiring careful planning and coordination for an effective learning experience. The larger

community and home learning environment's roles were recognised, advocating for adaptive course design to address diverse student needs and locations.

*Table 5.9 - Task 4.2 overview and associated participant excerpts.*

Expansive learning action	Analysis		
<p><b>Task 4.2</b></p> <p>Consolidate ideas from 2 groups on what a blended learning LU activity system involves.</p>	<p>Breakout group's completed templates shared and discussed with whole group.</p>	<p>Direct quotes/sections of the activity system selected for deeper analysis</p>	<p>Bring group back together and discuss. Facilitator to document suggestions on the Whiteboard.</p>

### **Theme 1: Defining and Interpreting Rules within the Activity System**

Task 4.2 explored the role of rules in the blended learning activity system and revealed varying interpretations among participants. PH questioned the validity of certain guidelines, stating, *"...we were starting to discuss whether they were really rules or not, and if the Community guidance is that is that a real possibly?"* This critique highlights a contradiction where ambiguity in institutional rules complicates their application and effectiveness in blended learning practices.

RB expanded on this point, emphasising the contextual differences between institutions: *"...we were thinking in terms of rules as in the framework in which we are working, teaching and learning and you know basically to put it bluntly, Lancaster University is not the Open University and this is a completely different context in which we have to work in."* This comment underscores the need for context-sensitive

rules that reflect the unique operational and pedagogical realities of different institutions.

### **Theme 2: The Multidimensional Nature of Communities**

Another key theme was the multifaceted nature of communities within the activity system. PD reflected on the diversity of community structures, noting, “...*in my mind, you've got communities that are role-based, so the duties talking together and sharing stuff. You've got communities that are subject-based, so within my department, I'm talking to the computer scientists and sharing values and expertise and stuff, and you've got communities who are physical space-based.*” This insight highlights the contradiction of managing and integrating these overlapping community structures to ensure cohesive collaboration and knowledge sharing.

### **Theme 3: Context-Specific Challenges in Blended Learning**

Participants also discussed how Lancaster University’s unique context shaped its approach to blended learning. RB’s observation about the differences between LU and the Open University reflected a broader challenge: balancing institutional identity with the adoption of blended learning strategies that align with external benchmarks and expectations. This tension highlights the need for tailored frameworks that address the specific needs and constraints of the institution.

Task 4.2 facilitated critical discussions about the conceptual and practical underpinnings of blended learning at Lancaster University. Key contradictions emerged, including the ambiguity of rules, the complexity of community structures,

and the challenges of contextualising blended learning within a specific institutional framework. These insights align with expansive learning actions of analysis and modelling, enabling participants to critically evaluate and consolidate ideas for a more coherent and context-responsive blended learning activity system.

During Task 4.2, participants collectively consolidated their breakout room work. They highlighted the diverse expectations and contexts of blended learning across institutions, necessitating an agile activity system. Communities were categorised into role-based, subject-based, and physical space-based, aiding understanding of community formation in blended learning initiatives.

Tools and artefacts were discussed in terms of their roles within the activity system, including physical, technological, and cultural aspects. The 'risk-free' pedagogy approach was explored, promoting psychological safety, active engagement, and critical thinking. The discussion also covered physical and technological artefacts' cost implications, institutional support, and effective integration into the system.

Rules were examined, encompassing 'hard' and 'soft' rules, institutional guidance, and associated division of labour. Participants deliberated how guidance influences division of labour and debated the need for clear, adaptable policies that move beyond slogans.

Table 5.10 - Task 4.3 overview and associated participant excerpts.

Expansive Learning Action	Empirical Analysis		
<p><b>Task 4.3</b></p> <p>Address contradiction in the created activity system</p>	<p>Participant breakout activity systems</p>	<p>Sannino and Engestrom's (2018) overview of contradictions</p>	<p>Whole group</p>

### Theme 1: Ambiguity of Rules and Guidance

A central theme in Task 4.3 was the ambiguity of institutional rules and guidance in the blended learning activity system. PD reflected on this lack of clarity, stating, “...we don’t get rules. We get guidance and we get kind of slogans like how many times have we heard that Lancaster is not the OU, you know, and we’ve got to be the ones to translate into what that means or what we’re doing.” This highlights a secondary contradiction where institutional flexibility, while intended to empower academics, often creates confusion and inconsistency in interpreting and implementing policies.

WT further emphasised the impact of this ambiguity, noting, “*The contradictions mainly appear in the rules and regulations I fear.*” This underscores the need for clearer, context-specific frameworks that provide both flexibility and concrete guidance, ensuring alignment between institutional goals and academic practices.

### Theme 2: Agile Implementation vs. Systemic Constraints

Participants also discussed the expectation of academic staff to be agile in implementing blended learning strategies despite systemic constraints. PD highlighted this challenge, remarking, “...we want the academics to be agile and

*come up with how the implementation actually hits the ground.*” This reflects a tertiary contradiction where the institutional drive for innovation places the burden of translating broad policies into practical strategies disproportionately on individual staff members, often without adequate support or resources.

PH added to this discussion by comparing Lancaster’s approach to that of the Open University: *“...there was an expectation that we would make do and deliver courses that we have designed already... whereas the OU design courses from the ground up to be accessible in multiple ways, and I think that that’s the difference for me.”* This highlights the structural misalignment between the expectations placed on academics and the foundational support required to meet those expectations.

The breakout group discussions in Task 4 T3 revealed key systemic contradictions in Lancaster University’s blended learning activity system. These included the ambiguity of rules and guidance, the challenges of translating institutional expectations into actionable strategies, and the disparity between aspirational goals and practical constraints. Participants emphasised the need for institutional clarity and tailored frameworks that support academic agility without imposing undue burdens. These insights align with the expansive learning actions of empirical analysis and modelling, providing a foundation for refining blended learning practices at Lancaster.

In the session, participants focused on contradictions (Figure 5.34), leading to the identification of key areas. They highlighted the contrast between slogans or rhetoric and actual guidance and policy documentation for institutions. The ongoing struggle between expectations and realities in blended and traditional learning was also

underscored. The idealistic view of seamless integration clashed with practical implementation challenges in blended learning. By addressing these contradictions, participants pinpointed areas for improvement, including guidance and policy documentation. Blended learning's unique dimensions call for adaptable policies that cater to diverse contexts and student groups. Ensuring equitable access to blended learning opportunities was emphasised as a priority amidst these contradictions.



Figure 5.34 - Snapshot of contradictions for participant developed activity system in MS Whiteboard.

### 5.7.4 Session Reflection

Reflecting on the session, the tasks and associated stimuli and mirror data were effective across the three set tasks. The overview video successfully focused the direction and expectations of the task, as well as giving a different context for an activity system. This was referenced in one of the breakout rooms as a useful tool to help navigate the task. Task 4.1 breakout room groups were successful in eliciting critical thinking and fostering a questioning mindset among the participants. This exceeded expectations, with some key elements being addressed and discussed. In task 4.2, the completion of task 4.1 and the reintroduction of created artefacts as mirror data was extremely effective in structuring and directing the discussion. In the



future, I would look to consolidate the two groups' contributions into one document for ease of access and shareability in the online environment. I had to move between the two whiteboards, which was not ideal but did work.

During task 4.3, while it was successful in identifying contradictions, there was limited progress in resolving them and therefore this will have to be a focus for future sessions. Time management on tasks is difficult, not wanting to interrupt or stop the flow of discussions. This can lead to limited time on some planned tasks and related activities, but the data collected is valuable so worth the adaptations and amendments to the plan.

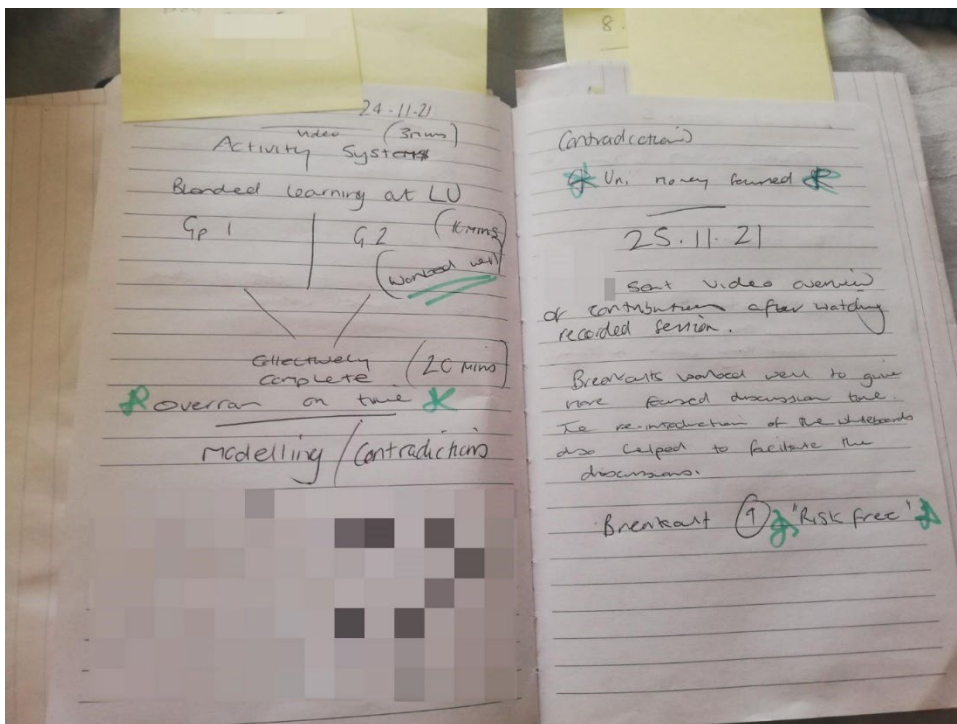


Figure 5.35 – Anonymised diary entry/session notes from session 4.

### 5.7.5 Session Outcome

Session 4 marked a significant step forward in various activity system areas (Figure 4.4). The *Tools* section was given far more structure with three underlying key areas; physical, technological and cultural. Here, the focus on creating a 'risk-free' pedagogical approach throughout the institution was added as a fundamental cultural tool.

In the *Community*, participants again saw the value in addressing this element of the activity system into sub-categories; role-based, subject-based, and physical space based, all having their core constituents.

The *Rules* section was given additional structure with a focus on both 'hard' and 'soft' rules. Participants expressed hard rules in the context of institutional standards, processes and requirements for the successful implementation of blended learning. Soft rules were aligned more closely to community guidance and the general advice to support staff and students effectively engaging in blended learning activities.

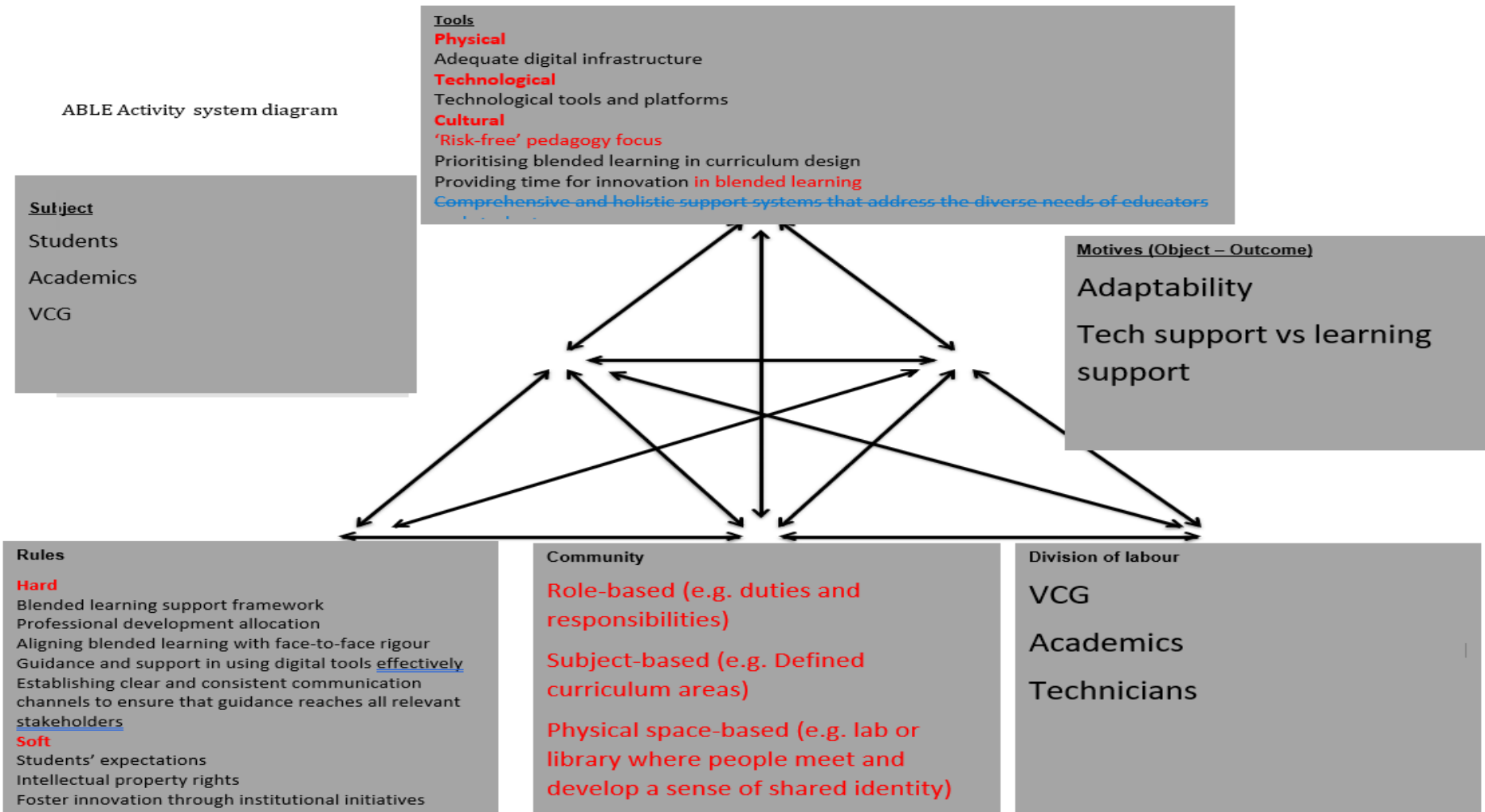


Figure 5.36 - Session 4 ABLE Activity System Progression.

### **5.8.1 Session 5 Context**

Session 5 was designed to build upon the insights and discussions from the previous sessions, with a particular focus on expansive learning actions of modelling and examining. The session is structured to facilitate a reflective environment where participants can critically analyse the existing blended learning activity system at Lancaster University (LU) and explore ways to overcome the identified contradictions and suggest effective structure to a new blended learning activity system.

Session 5 is expected to be a pivotal step in the Change Laboratory process, empowering participants to actively contribute to the transformation of the blended learning system at LU. By questioning, analysing, and modelling, participants are encouraged to envision and shape a more effective and inclusive blended learning environment and overcome the numerous contradictions highlighted in session 4.

### **5.8.2 Session Design**

Session 5 is structured around two main tasks (Table 5.11), each focusing on a different aspect of expansive learning cycle: questioning & analysis, and modelling & examining respectively.

Table 5.11 - Summary of design for session five.

Expansive learning action:	Session 5 Design			
	First Stimuli	Mirror data	2nd Stimuli	Social Organisation
<b>Task 5.1</b>  <b>Questioning and Analysis</b>	Session 1 Mentimeter word cloud used to question participants on perceptions from session 1-5 on blended learning at LU.	Selected sections of session 4 created activity system	Two video clips of Session 3 & 4 participant voice recordings from Education 4.0 discussion and contradictions focus	Full group
<b>Task 5.2</b>  <b>Modelling and Examining</b>	How do we overcome contradictions in a new activity system? Blank template in Whiteboard	Breakout groups' created activity systems shared on screen to pinpoint specific areas of focus	Sample activity system - UCT blended learning activity system to promote comparison and opposition	Two breakout groups, then returning to whole group

Task 5.1 is structured to take an expansive learning approach to questioning and analysis. The task aims to revisit the participants' perceptions and the discussions from the first few sessions to make a collective analysis on blended learning at LU. The Mentimeter word cloud from session 1 will be revisited to stimulate discussions and generate collective analysis on the participants' perceptions about blended learning at LU. The second stimuli for this task are the video clips of participants discussing contradictions in the activity systems from sessions three and four. These

videos aim to reintroduce the topics and contradictions discussed in those sessions, serving as a platform for further questioning and analysis. The mirror data for this task are selected sections of the activity system created during session 4. This will be used to remind participants of the discussions and observations from the previous session and encourage them to analyse those sections considering their current understanding. The social organisation of this task is planned for the full group, allowing all participants to share and converse.

Task 5.2, on the other hand, is designed to model and examine new activity systems that can potentially overcome the contradictions identified in earlier sessions. The first stimulus for this task is a blank template on a Whiteboard with the question 'How do we overcome contradictions in a new activity system?'. This is intended to provoke the participants to imagine and model new systems that can address the contradictions identified in the previous sessions. The second stimulus is a sample blended learning activity system of University of Cape Town (UCT). The sample activity system serves as a contrasting example to stimulate discussions on what could be incorporated or avoided in their models. The mirror data for this task are the activity systems created by the breakout groups in this and previous sessions. These will be shared on screen to stimulate discussions and provide points of comparison for the newly modelled activity systems. The social organisation for this task will start with two breakout groups, after which the participants will return to the whole group to present and discuss their proposed activity systems and the potential solutions to the identified contradictions.

### 5.8.3 Session Report

Task 5.1 ran into technical issues with the access to the second stimulus, and after trying to resolve on the spot, I made the decision to limit the disruption and move to task 5.2. Once completed, I would return to task 5.1 and the required stimuli.

*Table 5.12 - Task 5.2 overview and associated key themes and contributions.*

Expansive learning action:	Session 5 Design			
	First Stimuli	Mirror data	2nd Stimuli	Social Organisation
<b>Task 5.2</b>  <b>Modelling and Examining</b>	How do we overcome contradictions in a new activity system? Blank template in Whiteboard	Breakout groups' created activity systems shared on screen to pinpoint specific areas of focus	Sample activity system - UCT blended learning activity system to promote comparison and opposition	Two breakout groups, then returning to whole group

#### **Theme 1: Balancing Simplicity and Expectations**

Breakout Group 1 discussed the challenge of balancing simplicity and efficiency in BL tools with meeting both staff and student expectations. A notable tension emerged in how participants perceived these expectations. For instance, PD remarked, *"You then have to have something that is efficient and simple for the staff*

*to use and students.*” This statement reflects an underlying contradiction in the activity system, where the simplicity of tools is prioritised at the expense of fulfilling diverse user expectations.

TB added another layer to this discussion by suggesting, *“Maybe we’ve got to look at our own expectations of what blended learning can give.”* This highlights a reflective turn in the dialogue, suggesting that addressing contradictions may require not only revising tools but also rethinking stakeholders’ assumptions about the outcomes of blended learning.

## **Theme 2: Contradictions in Staffing and Engagement**

Breakout Group 2 focused on the role of teaching associates and temporary staff in blended learning initiatives, identifying contradictions related to casualisation. AC noted, *“These are staff members who are usually on temporary contracts. So their engagement will necessarily be limited.”* This statement underscores a key structural issue: reliance on temporary staff limits opportunities for innovation and sustained engagement in blended learning practices.

WT expanded on this point by stating, *“They have time to be creative so that there’s one contradiction that sort of links with the casualisation and everything else.”* This perspective connects employment structures to broader systemic contradictions, including the alignment of institutional expectations with staff capacity.

The modelling and examination phases of Task 5.2 facilitated critical reflection on the systemic contradictions inherent in designing blended learning activity systems. Key



tensions included the balance between efficiency and expectations, the impact of casualisation on staff engagement, and the challenge of accommodating diverse mindsets. These discussions aligned with the expansive learning actions of modelling and examining, as participants collaboratively explored solutions to overcome these contradictions. The insights gained from these reflections stressed the importance of addressing structural inequities and fostering adaptability in the design of blended learning frameworks.

In breakout room 1, participants delved into challenges of institutional compliance in content creation, academics' roles, risk-free blended learning, roles involved, external influence, tool selection, and spatial considerations. They documented their discussions on a shared online Whiteboard template. Breakout room 2 discussed teaching principles, blended learning complexity, community importance, and adaptive course design. They used an online post-it note approach on Whiteboard to organise thoughts. After, both groups merged to consolidate their activity system work.

Table 5.13 - Task 5.1 overview and associated participant excerpts.

Expansive learning action:	Session 5 Design			
	First Stimuli	Mirror data	2nd Stimuli	Social Organisation
<b>Task 5.1</b>  <b>Questioning and Analysis</b>	Session 1 Mentimeter word cloud used to question participants on perceptions from session 1-5 on blended learning at LU.	Selected sections of session 4 created activity system	Two video clips of Session 3 & 4 participant voice recordings from Education 4.0 discussion and contradictions focus.	Full group

### Theme 1: Challenges of Standardisation vs. Personalisation

A recurring theme in Task 5.1 was the tension between standardising blended learning tools and addressing diverse needs. PD remarked, “...*this one size fits all for the students. Probably not, the tension, infrastructure wise, is to standardise on one thing.*” This highlights a secondary contradiction where institutional pressures to streamline resources conflict with the reality of varied student requirements and subject-specific needs.

WT reinforced this perspective, noting, “...*we have students with individual learning and support plans. We have students coming from different types of schools... There*

*won't be one size fits all.*" This underscores the importance of developing adaptive frameworks capable of addressing the array of students' backgrounds, a gap that current standardised models fail to fill.

## **Theme 2: Role-Specific Knowledge and Collaboration**

Participants also identified a gap in role-specific knowledge and collaboration in delivering quality blended learning experiences. PH highlighted this issue, stating, *"...to deliver the quality of teaching in a blended way, so that the teacher knows what their developer's doing and the developer understands how the teacher wants it... it's very difficult to do that if people are changing roles and coming and going."* This comment reveals a tertiary contradiction where frequent staff changes hinder the establishment of collaborative expertise between technical and pedagogical roles, negatively impacting the quality of blended learning delivery.

## **Theme 4: Subject-Specific Needs and Cultural Shifts**

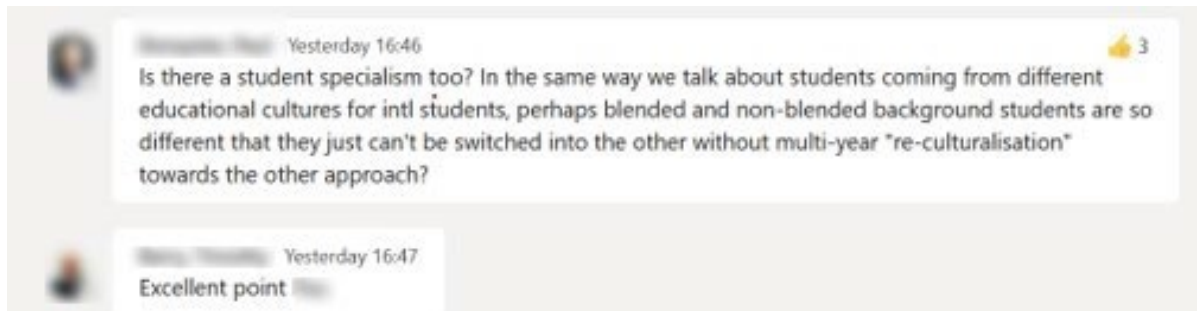
The diversity of academic disciplines and their unique requirements further complicated the implementation of blended learning. AC observed, *"...it's kind of subject specific in a way that every subject had different understandings, different needs..."* This points to a contradiction between the generalised approach to blended learning and the specialised demands of different fields.

RB expanded on this theme, discussing the cultural shifts required for effective implementation: *"...it is a completely new culture and one that they have not necessarily been based in as much as you know. We call them digital-natives. Then it's something I'm actually not too sure what it actually entails these days."* This

highlights the gap between assumed and actual digital competencies, both among students and staff, requiring targeted interventions to bridge these cultural and technical divides.

Task 5.1 explored systemic contradictions in the implementation of blended learning frameworks, revealing critical tensions between standardisation and flexibility, collaboration and role clarity, and the institutional neglect of professional development. Participants emphasised the need for adaptable, discipline-specific approaches and an institutional culture that supports continuous learning and collaboration. These discussions align with expansive learning actions of questioning and modelling, highlighting the necessity of inclusive, responsive systems to address the diverse and evolving needs of higher education stakeholders. The video clips from previous sessions supported critical analysis around the expectations and contexts in which blended learning operates, focusing on the categorisation of communities, the role of tools/artefacts in a blended learning activity system, and the importance of clear, agile, and adaptable rules across the curriculum areas of the university. One particular post (figure 5.37) to the chat during these discussions revolved around the role of 'educational cultures' and blended and non-blended backgrounds of students, which can be an additional focus of future session discussions to unpack and elaborate in the context of a new blended learning activity

system.



*Figure 5.37 - Chat screenshot from session 5.*

#### **5.8.4 Session Reflection**

The initial delay due to sound issues did not impact the overall session too detrimentally but did cause a longer than expected delay from the outset.

Additionally, I was forced to flip the planned session and complete task 5.2 in full before task 5.1, which was not ideal. However, this did give me a focus on future sessions to have a back-up ready and make note of some technical issues that can be overcome quickly, should they arise again.

The transition straight into the breakout groups worked well and the structured approach to task 5.1 was not needed to achieve the overall aim of the session, as the core components were still addressed in a different order. Notes from my diary (Figure 5.38) address some of the key aspects of the session that drew my attention as the session progressed, as well as areas that required additional focus in session 6 and beyond. Group 2 not using the set template to create the activity system was not planned but did make it easy to pinpoint areas to focus the discussions.

Although, the plan to use their created activity system in future sessions as mirror data was hampered by their approach.

During the session, I noted down some aspects of the discussions and chat that I wanted to address in more detail, which also worked effectively at points during the session. Although, due to time constraints I did not to delve deeper into all areas noted, they will be used for planning future sessions and establishing key questioning too.

5.12.21 Session 5  
Creating activity system that works.

vLT "Tom between ..."

[redacted] - The how?  
How they learn  
How they want to learn.

Blended vs non-blended student backgrounds

Assessment focus - chat in session [redacted]

Need to focus on future B2 in session 6!!

Figure 5.38 – Anonymised session 5 diary/notes entry.

### 5.5.6 Session Outcome

Session 5 revealed various contradictions within the blended learning system, such as challenges related to institutional compliance, the role of academics in content creation, and the need for risk-free approaches. Additionally, the influence of external observers, and the importance of considering physical and learning spaces was discussed. Throughout the tasks and associated debate and discussion, participants adapted the categorisation of communities and the role of tools/artefacts in a blended learning activity system. The important role of 'educational cultures' was a crucial development in this session, alongside the thoughts on the blended and non-blended backgrounds of students and how this shapes the activity system. The overarching outcome of this session centred around exploring and emphasising the importance of clear, agile, and adaptable rules in blended learning, which was added to the *Object*, along with some modifications identified in Figure 5.39. Additionally, contradictions related to expectations and reality in various areas of blended and traditional learning were identified, emphasising the need for better guidance and policy documentation, in turn leading to a progressive educational culture.

The *Division of Labour* was amended, with technicians being subsumed by the larger IT Services (ISS). This was to address the vast number of different skills and roles within ISS that are required to connect other areas of the activity system. Estates were also added to this section of the activity system as participants clearly stated the role they play in creating the physical infrastructure, working with ISS to properly facilitate blended learning at the institution.



The session also focused on identifying contradictions in the current system, such as the gap between expectations and reality in various areas of blended and traditional learning, and the need for clear and focused guidance or policy documentation.

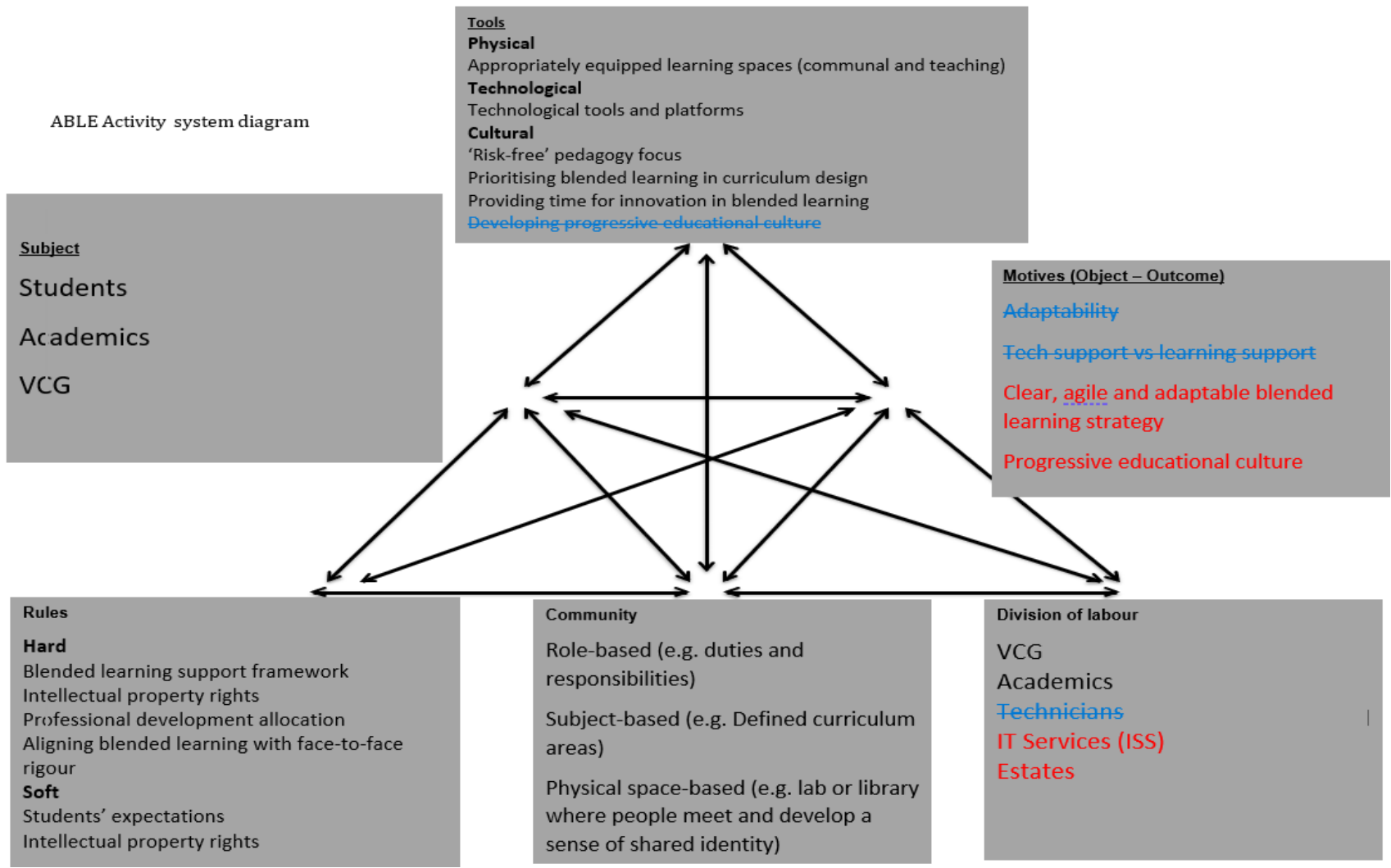


Figure 5.39 - Session 5 activity system development

### **5.9.1 Session 6 Context**

Session 6 aimed to focus the viewpoint of blended learning at the institution in the future, concentrating on an ideal approach. The session is focused around one task, centring on the modelling stage of the expansive learning cycle. The use of fictional case studies and idealistic approaches is intended to spark discussion and debate around the practicalities and realities of blended learning at Lancaster University.

The stimuli and mirror data are carefully considered in relation to the intention of the session, as is the social organisation to get the most from the session.

### **5.9.2 Session Design**

Session 6 of the Change Laboratory aims to focus on modelling to continue to develop the new activity system. The intention is to have one central task, based on the time constraints faced in previous sessions, to engage participants in discussions about learning and teaching at their university in 2022 and beyond in two breakout groups.

Table 5.14 - Summary of design for session six.

Session 6 Design			
Expansive learning action:	Modelling		
First Stimuli	Mirror data	2 <sup>nd</sup> Stimuli	Social Organisation
<p><b>Task 6.1</b> Two key questions posed on screen to participants:</p> <ol style="list-style-type: none"> <li>1. What does learning and teaching look like at your university in 2022 and beyond?</li> <li>2. What possible new solutions are Lancaster University not currently addressing and should be?</li> </ol>	<p>Reference previous session generated activity systems. Show on screen to make visible for all participants.</p>	<p>Near future teaching scenarios</p> <p>Consider 2 scenarios in your group and discuss the differences between these and pre-pandemic and current situation.</p>	<p>Two breakout groups for first and second stimuli, moving to whole group for mirror data introduction.</p>

Task 6.1 planned to start by asking participants:

1. What does learning and teaching look like at your university in 2022 and beyond?
2. What possible new solutions are Lancaster University not currently addressing and should be?

These questions aimed to engage the participants in discussion and debate surrounding the current state of learning and teaching at the university, then continuing to address potential solutions to any lack of progress in any areas highlighted. The second stimulus, the near-future teaching scenarios taken from

JISC's Learning and Teaching Reimagined: A New Dawn for Higher Education?

(2020), are intended to provoke heated debate between participants due to the ideological and utopian views expressed in the scenarios. These are to be shown on screen for participants, but also posted into the files section to allow individuals to open on their own device and ensure there was no visual issues that may occur in presenting on screen. Scenario one (Figure 5.40) was focused on a more traditional higher education approach, incorporating technology as supplemental. The first scenario discusses TEL supplementing traditional lecture led synchronous experiences, offering a broader range of learning opportunities to students and increasing confidence in the university experience. Staff are encouraged to enhance their digital skills, leading to technology-enabled excellence in the curriculum.

## Blended Learning – Modelling the Ideal...

What learning and teaching look like at your university in 2022 and beyond?

Consider these (2) scenarios in your group and discuss the differences between these and pre-pandemic and current situation.

What possible new solutions are Lancaster University not currently addressing and should be?

### Scenario One

Here technology-enhanced learning supplements a 'traditional', lecture-led, synchronous learning and teaching experience.

It feels familiar to students, while offering a broader range of learning opportunities. Significantly it offers confidence in the resilience of the university experience.

Staff continue to be supported to enhance their digital skills and with new confidence are beginning to focus on technology-enabled excellence in the curriculum.

Leaders are increasingly aware of the benefits of technology-enhanced learning and recognise the efficiencies gained from supplementing their preferred campus-based models.

Investment is maintaining student satisfaction and has begun to deliver efficiencies in use of physical space on campus.

The distinctive features of change here include:

#### Learners

- Face-to-face contact prioritised for small groups or practical sessions
- Fewer, shorter, or extended time tabling of practical learning sessions
- Remote provision for students on and off campus
- Digital skills and equipment assessment at onboarding

#### Lecturers

- Staff allocated time for digital skills development
- Staff receive incentives and recognition for excellence in technology-enhanced learning and teaching
- Staff working patterns adapted to accommodate smaller learning groups
- Staff designing synchronous learning experiences, combining face-to-face classrooms with online engagement

#### Leaders

- Operational resilience as a leading strategic priority
- Building culture of resilience
- Technology-enhanced learning is a feature of institutional strategy
- Digitally aware leaders

#### Investment

- Improving off campus access for students
- Shifting from reliance on print to digital resources
- Investing and enhancing the digital estate
- Exploring accessibility by design

Figure 5.40 - Scenario one screenshot.

Scenario two (Figure 5.41) reflects a 'step change' in the higher education offering and its intention is to provoke participants to challenge the standard conceptions of a blended learning activity system. During discussions both during and after the scenarios, the participants will be urged to contemplate the consequences of this scenario for Lancaster University and the broader higher education sector, beginning with the learner's perspective. A whole group discussion after the breakout room discussions is aimed to consolidate ideas and continue to build the new activity system for Lancaster University, with the introduction of the mirror data. The transition to a whole group from the breakouts is to facilitate a wider discussion on the areas covered. The mirror data introduction, activity systems generated during previous sessions, aims to prompt participants into critical analysis of their previous modelling activities, expressing changes and new solutions.

## Scenario Two

This scenario reflects a **'step change' in the higher education offering.**

Students experience flexibility and convenience of learning, increasing enabling adaptive and self-directed learning, with more active learning opportunities.

Staff continue to be supported to enhance their digital skills, with new resourcing models enabling multi-disciplinary teams support the learning experience: blended learning by blended teams.

Leaders are increasingly fluent in technology-enhanced learning and appreciative of the opportunities to adapt their offering to reach wider range of markets.

Investment has begun to improve the quality and coherence of the learning and teaching experience, increasingly appealing for a diverse student population with a more inclusive and accessible experience.

The distinctive features of change include:

### Learners

- Students are clear on the benefits of technology-enhanced learning
- Face to face contact prioritised for small groups or practical sessions
- Students increasingly experience active learning sessions
- Students receiving frequent 'pulse' surveys with managed approach to areas for improvement
- Skills and equipment assessment at key course transition points
- Access to community, wellbeing, and online safety support within learning experience

### Lecturers

- Staff receive incentives and recognition for excellence in technology-enhanced learning and teaching
- Staff working patterns and programme teams are adapted to support asynchronous learning
- Staff increasingly designing online practical sessions
- Staff receiving frequent 'pulse' surveys with managed approach to areas for improvement
- Staff engaged in course re-design and delivery of asynchronous learning
- Staff increasingly using social media and collaborative platforms to strengthen learning community experience

### Leaders

- Technology-enhanced learning is the leading institutional priority
- Digitally fluent leaders
- Leaders investing to strengthen data infrastructure and capabilities
- Leaders investing to strengthen digital design capabilities
- Quality processes enhanced for dual delivery and assessment

### Investment

- Enabling use of local spaces to 'connect' with technology, resources, and learning communities
- Investing in multimedia resources
- Simplifying and streamlining the digital estate
- Standards established for learning and teaching technologies and equipment

*Figure 5.41 - Scenario two screenshot.*



### 5.9.3 Session Report

Due to lower-than-expected attendance, due to other commitments, five participants attended, with the decision made to not use the breakout activity, instead completing as a whole group.

*Table 5.15 - Task 6.1 overview and associated themes and key contributions.*

Session 6 Design			
Expansive learning action:	Modelling		
First Stimuli	Mirror data	2 <sup>nd</sup> Stimuli	Social Organisation
<p><b>Task 6.1</b> Two key questions posed on screen to participants:</p> <ol style="list-style-type: none"> <li>1. What does learning and teaching look like at your university in 2022 and beyond?</li> <li>2. What possible new solutions are Lancaster University not currently addressing and should be?</li> </ol>	<p>Reference previous session generated activity systems. Show on screen to make visible for all participants.</p>	<p>Near future teaching scenarios</p> <p>Consider 2 scenarios in your group and discuss the differences between these and pre-pandemic and current situation.</p>	<p>Two breakout groups for first and second stimuli, moving to whole group for mirror data introduction.</p>

#### **Theme 1: Training and Support for Educators in Blended Learning**

A theme in Task 6.1 centred on the need for explicit scaffolding and professional development to equip educators for blended learning. PD emphasised this gap, stating, “...if we are going to increasingly move to a fancy blended model, we need to then provide a lot more explicit scaffolding and training to say this is not the environment you’ve been learning in before and we need to recognise that.” This

highlights a secondary contradiction where institutional ambitions for innovative teaching models are not matched by adequate training or resources for educators.

TB expanded this critique, questioning the assumption that academic qualifications automatically confer teaching expertise: *“I now wonder if any profession where you just assume because you’ve been very good at studying and doing a master’s and PhD that then suddenly you have this incredible skill set to be able to educate somebody.”* This perspective underscores the need for targeted professional development tailored to the blended learning environment.

### **Theme 2: Institutional Standards and Their Limitations**

PD further critiqued institutional standards for digital learning, suggesting that senior leadership should reflect on their expectations: *“...you’re wanting us to have all these standards to do things these ways... with digital. Why don’t you try and do that with non-digital?”* This quote reflects a tertiary contradiction where digital initiatives are held to higher standards than traditional methods, creating inequities and additional burdens for staff engaging in innovative practices.

### **Theme 3: The Need for Mid-Term Strategic Vision**

RB identified a structural issue with the institution’s short-term perspective on strategic changes, noting, *“...we have a short-term perspective on how we work in and something like that doesn’t work over a couple of years, so it has to be a mid-term change.”* This critique highlights a systemic contradiction between the rapid implementation of new models and the need for sustained planning and investment to achieve long-term success. The modelling phase of expansive learning in Task 6.1

facilitated discussions about the challenges of implementing blended learning at scale. Participants identified key contradictions, including the lack of structured training for educators, inequities in institutional standards, and the need for longer-term strategic planning. These insights reflect the importance of designing sustainable systems that support both staff and students, aligning with the expansive action of modelling. The discussions emphasised the importance of mid-term vision and reasonable standards to create a more effective and supportive environment for blended learning.

The initial questioning of participants as the first stimuli worked well to engage participants in a broad discussion around the current situation at the institution and building on the misconceptions touched on in the last two sessions. Here, reference was made to last session when discussing the support for teaching qualifications and the overreliance on subject specialism over teaching expertise and the issues this can cause. Furthermore, participants started to consider possible solutions and other issues raised. Here, the second stimuli were introduced, scenario one first. Figure 6.1 was shown to participants which lead to debate around what students want. Discussions focused on the desire for face-to-face as a priority, but only when appropriate for them.

The introduction of scenario two (Figure 5.41) forced the participants consider the more utopian view, comparing and contrasting to scenario one. The possible implications of both scenario one and two for Lancaster University and the wider education sector, were discussed in relation to each element of the scenario.

Insights from the scenarios revealed the importance of understanding how students use technology for learning and the need for educators to adapt their teaching methods accordingly. There was recognition of the challenges posed by the diverse backgrounds and skill sets of students when implementing digital learning strategies. One of the key takeaways was the need for effective training and support for educators to enhance their teaching skills as well as a focus on digital teaching skills. Also identified as a current major gap, the lack of training and support for educators in effectively using digital tools was unanimous. Likewise, the development of appropriate skills in digital skills for students was seen as imperative for their learning.

Participants expressed concerns about potential overreliance on evaluations and surveys for assessing teaching quality, emphasising the need for more comprehensive methods for quality assurance. Here, the potential benefits of peer observation in improving digital teaching practices were addressed. It was also noted that blended or digital approaches are under more academic surveillance than traditional in-person teaching, which should not be the case.

The reintroduction of previously created activity systems by sharing on screen brought about other notable points around the strategic focus and need to move away from the short-term approach to teaching and learning policy and strategy, instead requiring more mid to long-term plans and change.

#### **5.9.4 Session Reflection**

Despite the session alterations due to the group attendance, I observed several positive aspects. The participants actively engaged in discussions and contributed valuable insights and experiences related to digital teaching practices and student engagement. The reduction in numbers perhaps enhanced the diversity of perspectives and enriched the conversations and allowed for a comprehensive exploration of the topic. I was unable to make any diary notes during this session, which I had been able to complete in previous sessions. This was disappointing, but reviewing the session immediately afterwards meant I was able to note some key areas to go back and analyse further prior to the next session.

While the session encouraged open dialogue, there were instances where certain participants dominated the conversation, potentially inhibiting others from sharing their viewpoints. To address this, I will look to implement strategies to ensure all participants have equal opportunities to contribute and feel comfortable expressing their opinions. I could have prompted or questioned further at times related to the need for educator training in digital tools. This may have prompted participants to delve deeper into these areas, leading to more concrete suggestions and potential solutions.

#### **5.9.5 Session Outcome**

Session 6 has been a valuable contribution to the development of the ABLE activity system, enriching it with new visions and views that were not previously evident. The discussions during the session highlighted the significance of student engagement

with digital resources and the potential benefits of peer observation in improving digital teaching practices, leading to a specific rule being added. Additionally in the *Rules*, the session brought to light the gap in training and support for educators in effectively using digital tools for teaching. To address this issue, the ABLE activity system has incorporated a comprehensive training component in the form of a specific and tailored blended learning professional development pathway for academics. This element aims to provide educators with the necessary skills and knowledge to leverage digital tools optimally, ensuring they can create engaging and effective learning experiences for their students. Additionally, this is seen to be essential for academic buy-in and providing definitive routes for professional development. A 'peer observation framework (incorporating blended learning practices)' was deemed essential to enabling educators to collaborate and receive constructive feedback on their digital teaching approaches. This element was seen to foster a culture of continuous improvement and professional development among educators, with alignment with aspects of the *Community* and *Tools* sections.

In the *Tools* section progress was achieved with a focus on cultural tools that are required to foster an effective blended learning activity system. Developing 'progressive educational culture' and 'Foster a culture of continuous improvement and professional development among educators with the community' were added to the list of key components, emphasising the critical role of cultural and communal investment in ensuring the success and sustainability of blended learning initiatives. In the enhancement of the ABLE activity system's division of labour section, students were importantly incorporated. This decision underscored the recognition that

students are not just passive recipients of education but active contributors to the system. By positioning students within the division of labour, the system becomes more inclusive and addresses their pivotal role in the co-construction of knowledge, shaping pedagogical interactions, and participating in various important aspects of the activity system. This adaptation ensures that the ABLE activity system aligns with modern educational concepts around the value of collaborative and student-centred approaches.

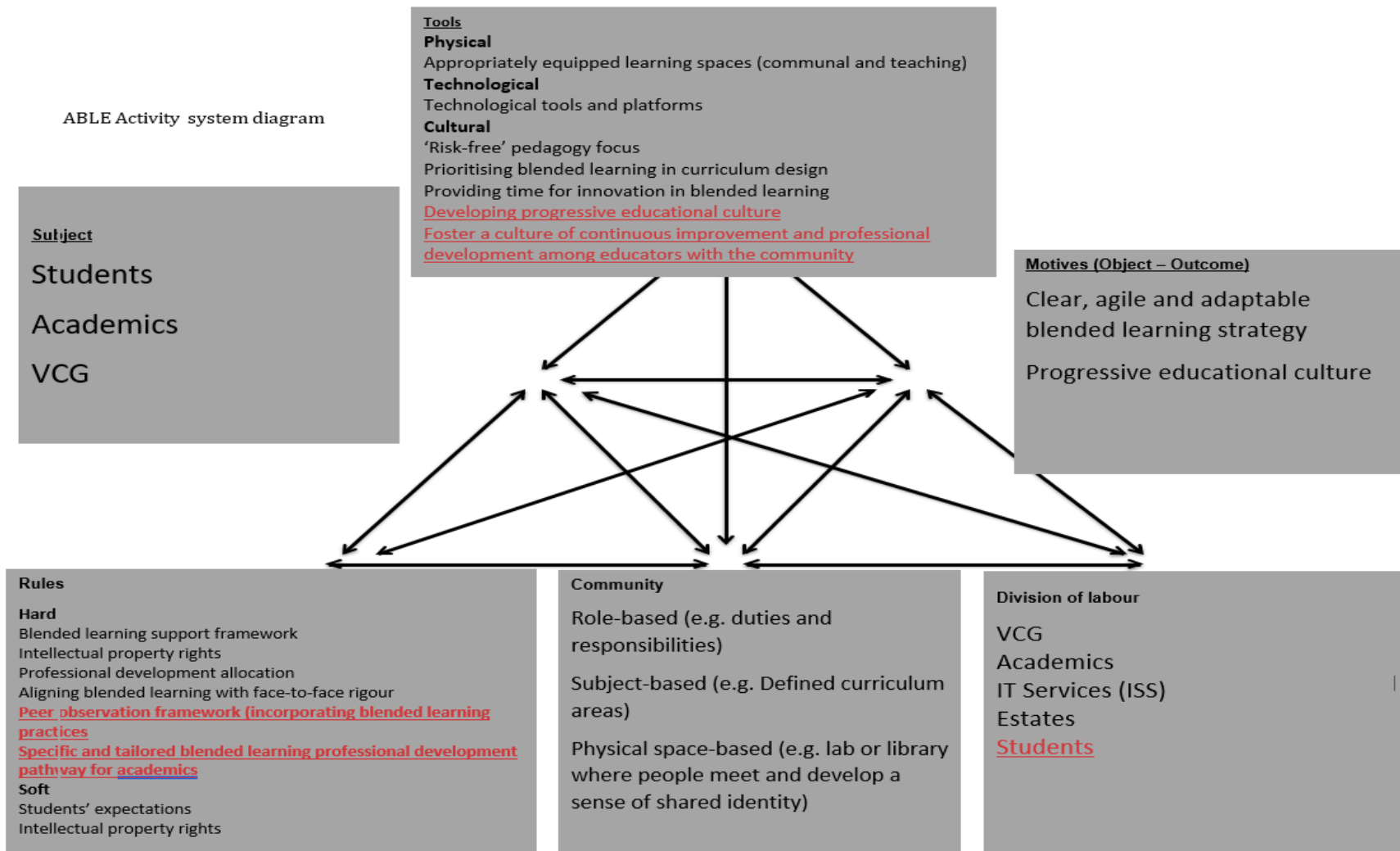


Figure 5.42 - ABL activity system progress after session six.



### **5.10.1 Session 7 Context**

Session 7 aimed to focus on modelling and examining, centring around one core task with associated stimuli and mirror data to structure and provoke in-depth discussions and debate to continue to refine and build the new activity system. The intention is to have one central task (7.1), to engage participants in discussions about their created activity systems in comparison to the current university's position and the gap, if any, between the two.

### **5.9.2 Session Design**

Task 7.1 planned to start with the introduction of the first stimuli, the previously group created activity system. Participants would be questioned about the current LU activity system in relation to this draft example, activating debate and discussion around the gaps, omissions and required progress needed. By presenting the participants with the group-created activity system, the intention is to provide a tangible framework for discussion and examination.

Table 5.16 - Summary of design for session seven.

Session 7 Design			
<b>Expansive learning action:</b>	Modelling & Examining		
<b>First Stimuli</b>	<b>Mirror data</b>	<b>2<sup>nd</sup> Stimuli</b>	<b>Social Organisation</b>
<b>Task 7.1</b> Review previous group generated activity system.  Where are we in relation to achieving this at LU currently?	Session chat excerpts used to reflect back the current sentiments being discussed	Previous session quotes shared on screen to focus on the disparity between face-to-face and blended learning provision	Full group

The second stimulus (Figure 5.39), previous session quotes shared on screen to focus on the disparity between face-to-face and blended learning provision, is aimed at highlighting the contrasting experiences and perspectives of participants in different learning environments. By presenting quotes from the previous session, the intention is to draw attention to the diverse viewpoints and challenges that learners, educators, and stakeholders may encounter when transitioning between traditional face-to-face instruction and blended learning modalities. The focus on the disparity between face-to-face and blended learning provision aims to promote a nuanced exploration of the factors contributing to these differences. Participants may analyse aspects such as engagement levels, interaction dynamics, technology integration, and the role of physical and virtual learning environments.

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*How do you do peer observation on digital and blended learning technologies? How do you do peer observation on async? Yeah, you can do kind of design stuff, but how do we? How do we develop the ability to have a look at other peoples digital blended designs and teaching and tell them whether they're good or bad or what can be improved?*

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*Why don't you try and do that with non-digital? Why don't you go and tell the divisions and lecturers how their staff should be teaching in face to face? How they lecture should be formatted. How their labs should be run. You're not going to do that because you'll be chased out campus with brooms. So why do you think it's appropriate to do that for digital? And if you think it's appropriate for digital, then maybe you're also saying it's appropriate for not the old style, and we've been doing their own thing for years.*

---

*Figure 5.43 - Screenshot of second stimuli quotes to be used in session 7.*

The mirror data will be session typed chat instances, capturing the dynamic interactions and insights shared by participants throughout the session. This mirror data serves a dual purpose: it highlights key points and perspectives that emerge during the discussions, and it guides the trajectory of the ongoing conversation. This mirror data aims to help maintain the continuity in the conversation, especially in scenarios where multiple topics are being discussed simultaneously. It should provide a reference point that allows participants to revisit previous insights, ensuring that the session remains focused.

### 5.10.3 Session Report

The session followed the intended plan, with participants engaged in an active dialogue from the outset.

Table 5.17 - Task 7.1 overview and associated key contributions.

Session 7 Design			
Expansive learning action:	Modelling & Examining		
First Stimuli	Mirror data	2 <sup>nd</sup> Stimuli	Social Organisation
<p><b>Task 7.1</b></p> <p>Review previous group generated activity system.</p> <p>Where are we in relation to achieving this at LU currently?</p>	<p>Session chat excerpts used to reflect back the current sentiments being discussed</p>	<p>Previous session quotes shared on screen to focus on the disparity between face-to-face and blended learning provision.</p>	<p>Full group</p>

#### Theme 1: Lack of Pedagogical Underpinning in Blended Learning Approaches

Participants expressed concerns about the absence of a pedagogical foundation in the university's current approach to blended learning. WT observed, *"I don't think there's a blended approach at the university... There wasn't a pedagogical underpinning for the choice that they made."* This statement highlights a secondary contradiction between the institutional emphasis on blended learning as a strategic

priority and the lack of pedagogical rigour guiding its implementation. The absence of student input in decision-making processes further compounds this issue, reflecting a gap in the participatory design of blended learning systems.

## **Theme 2: Balancing Standardisation with Individualization**

A significant point of contention was the role of standardisation in blended learning. PD remarked, “...when we get stuff around blended, a lot of it is consistency, consistency, consistency. Which I don’t think is necessarily the correct dimension to be going down...” This reflects a tertiary contradiction where institutional efforts to standardise blended learning for operational efficiency clash with the need for flexibility and personalisation in teaching practices.

WT expanded on this by stating, “...standardising informative materials to make things easier to find, yes, but standardising people to make us interchangeable, I don’t think that’s the way to good teaching... It will always be about individuals, about students and individuals, and we are individuals. It’s not the production line.” This critique underscores the tension between mechanistic approaches to teaching and the humanistic ethos of education, advocating for a balance between consistency and adaptability.

PH offered a nuanced perspective, acknowledging the need for a degree of standardisation: “...there is a need for a level of standardisation which you could class as productionisation... You’re not making widgets... you are changing minds.” This statement emphasises the importance of maintaining individuality and creativity

within a structured framework, aligning with expansive learning principles of flexibility and innovation.

### **Theme 3: Time Constraints and Reflective Practices**

AC highlighted the difficulty of finding time for reflective practices, noting, “...*having the time to reflect about our practices in improving and kind of moving forward and innovating in a different way, it is difficult because we have already too many things to do.*” This reflects a structural contradiction where the demands of daily responsibilities limit opportunities for staff to engage in critical reflection and innovation, impeding the broader institutional goals for blended learning.

The discussions in Task 7.1 surfaced key contradictions within the university’s approach to blended learning, including the lack of pedagogical grounding, tensions between standardisation and personalisation, and time constraints that hinder reflective practices. These insights reflect the expansive learning actions of modelling and examining, as participants critically evaluated the current system and envisioned pathways for improvement. The session highlighted the need for a pedagogically sound, flexible, and inclusive approach to blended learning that balances operational consistency with the individuality of students and staff.

The introduction of the first stimulus (Figure 5.44), shared on screen, led to participants sharing views on the differences in perception between management staff and students regarding the implementation of blended learning. The opening question related to the reality and aspirations of a blended learning activity system provoked some impassioned responses. This stimulus prompted participants to share

their viewpoints concerning the differing perceptions held by management staff and students regarding the implementation of blended learning within the educational context. The presentation of this stimulus initiated a dialogue that shed light on the nuanced perspectives of these two key stakeholder groups. One participant expressed their viewpoint with clarity, stating, 'I don't think there's a blended approach at the university.' This assertion succinctly captured a perception that the university's approach to blended learning might not be effectively integrated or well-defined. The participant went on to highlight a critical aspect, student involvement, raising questions about whether there had been meaningful discussions with students during the decision-making process. The absence of a clear pedagogical underpinning raised questions about the rationale behind the choices made in implementing pedagogic approach, which need to be at the forefront of a future activity system. The participant's words highlight a need for more deliberate and thoughtful planning to ensure that the transition to blended learning aligns with both educational objectives and student needs.

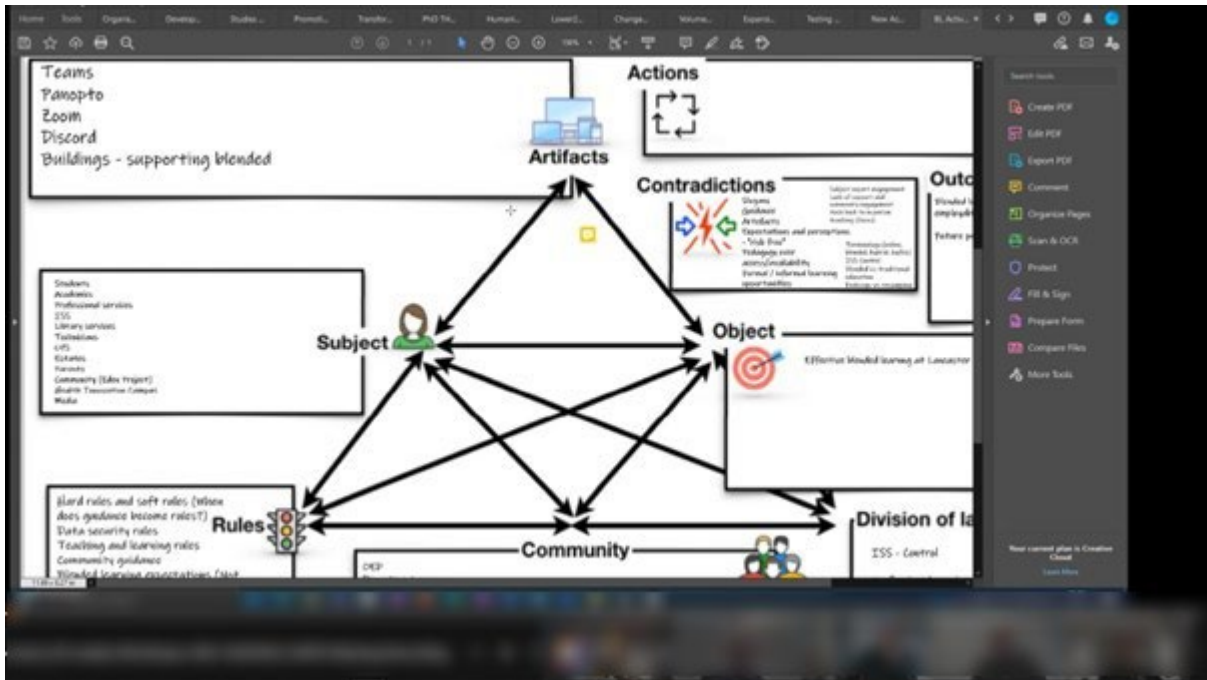


Figure 5.44 - Screensharing first stimulus in session seven.

The introduction of the second stimulus triggered a rich and multifaceted discussion among the participants, capturing a range of perspectives on the subject of enhancing the learning experience through efficient approaches. The quotes attributed to different participants highlight their diverse viewpoints and offer insights into various dimensions of the conversation.

One participant underscored the importance of moving forward to create a blended learning activity system that is emphasised by a proactive stance toward advancing educational practices, and ensuring that efforts are aligned with the goal of fostering effective learning environments. Another participant points to the significance of strategic planning and intentional use of technology in education being essential to the new activity system.



Numerous participants highlighted the need to create dedicated time for innovative practices and improvements. This perspective emphasizes the importance of finding a balance between ongoing responsibilities and the pursuit of pedagogical advancements. Furthermore, the emphasis shifted to the unique nature of education by comparing it to a production line. They emphasized that unlike manufacturing, education deals with individuals, each with distinct needs and characteristics. This requires the activity system to be adaptable to recognise individuality of learners and academics.

The introduction of the mirror data (Figure 5.45), which included excerpts from the session chat, marked a pivotal turning point in the discussion. One participant highlighted the lessons learned from the pandemic, acknowledging the reactive nature of the response to the crisis. This perspective emphasized the opportunity to transition from a reactive stance to a proactive one. The participant noted that while the proactive approach might already be in place to some extent, there is room for further exploration and implementation. This viewpoint underlines the importance of preparedness and forward-thinking in shaping a new activity system.

[26/01/22 16:56] [REDACTED]

We were reactive with the pandemic, we can think about being proactive in the future (not saying that we aren't already)

like 3 heart 1

[26/01/22 17:00] [REDACTED]

perhaps they're too focussed on loss of face to face and ignoring benefits yes

like 1

*Figure 5.45 – Anonymised screenshots of typed chat during session seven used as mirror data.*

Another participant delved into the nuanced dynamic between face-to-face teaching and the benefits of blended learning. They suggested a tendency to overemphasize the loss of face-to-face interaction, potentially overshadowing the advantages that blended learning brings to the table. This perspective implies a need for a balanced evaluation of both approaches, considering the unique strengths and opportunities that each mode of instruction offers. It underscores the importance of acknowledging the benefits of blended learning alongside the aspects of in-person teaching in a new activity system. Participants felt that in the current activity system, the institution directed a prescribed approach, irrelevant of the pedagogic, inclusivity or any other factors in relation to the student learning.

#### **5.10.4 Session Reflection**

The stimuli and mirror data worked effectively and provoking additional thoughts and discussions centred around the session focus, as well as keeping the discussion or

track with limited drifting from the point. The chat was used well in this session, and I was able to draw on these additions well throughout the session to bring in individuals to share their thoughts and points. Limiting the sharing on screen meant I was more aware of chat comments as they were added, whilst listening to the ongoing contributions. The decision to keep the social organisation as a whole group worked well, and all participants were vocal contributors to the session. Key aspects that lacked the detail in previous sessions were given the time and space to be developed and explained effectively.

#### **5.10.5 Session Outcome**

The session contributed new content to the ABLE activity system (Figure 5.46) by exploring the complexities of blended learning implementation. Considering the participant's viewpoint about the lack of student involvement in the decision-making process, incorporating mechanisms for regular student feedback and collaboration. This led to 'Effective blended learning implementation' being added to the *Object* section. Additionally, student representation in discussions about blended learning strategies and the inclusion of student perspectives in the design and evaluation of learning experiences relate to the *Community* and the inclusion of student representatives for a collective voice.

In the Tools section a suite of digital platforms used to manage course content, assignments, discussions, and assessments in an online or blended learning environment was added in the 'technological' focussed aspect. To accompany and

align with this, technology integration guidelines were added to the 'physical' section of Tools.

Time allocation for reflection and professional development was highlighted as an essential factor in enhancing teaching practices and promoting innovation in blended learning, adapting the current 'professional development allocation' in the *Rules* section. The need for a university-wide approach to blended learning, as well as more nuanced variations tailored to departments and curriculum areas was seen as key. This meant a focus on the role of the Community was accentuated and the interconnectedness of various academic units and the overarching mission of the institution. Participants acknowledged that while each department or curriculum area may have distinct requirements, a unified strategy at the institutional level ensures consistency in the adoption of best practices, technological resources, and pedagogical approaches. Role based engagement was added, sensing it would ensure that all members of the *Community* contribute their expertise, fostering a well-coordinated and collaborative effort toward effective blended learning.

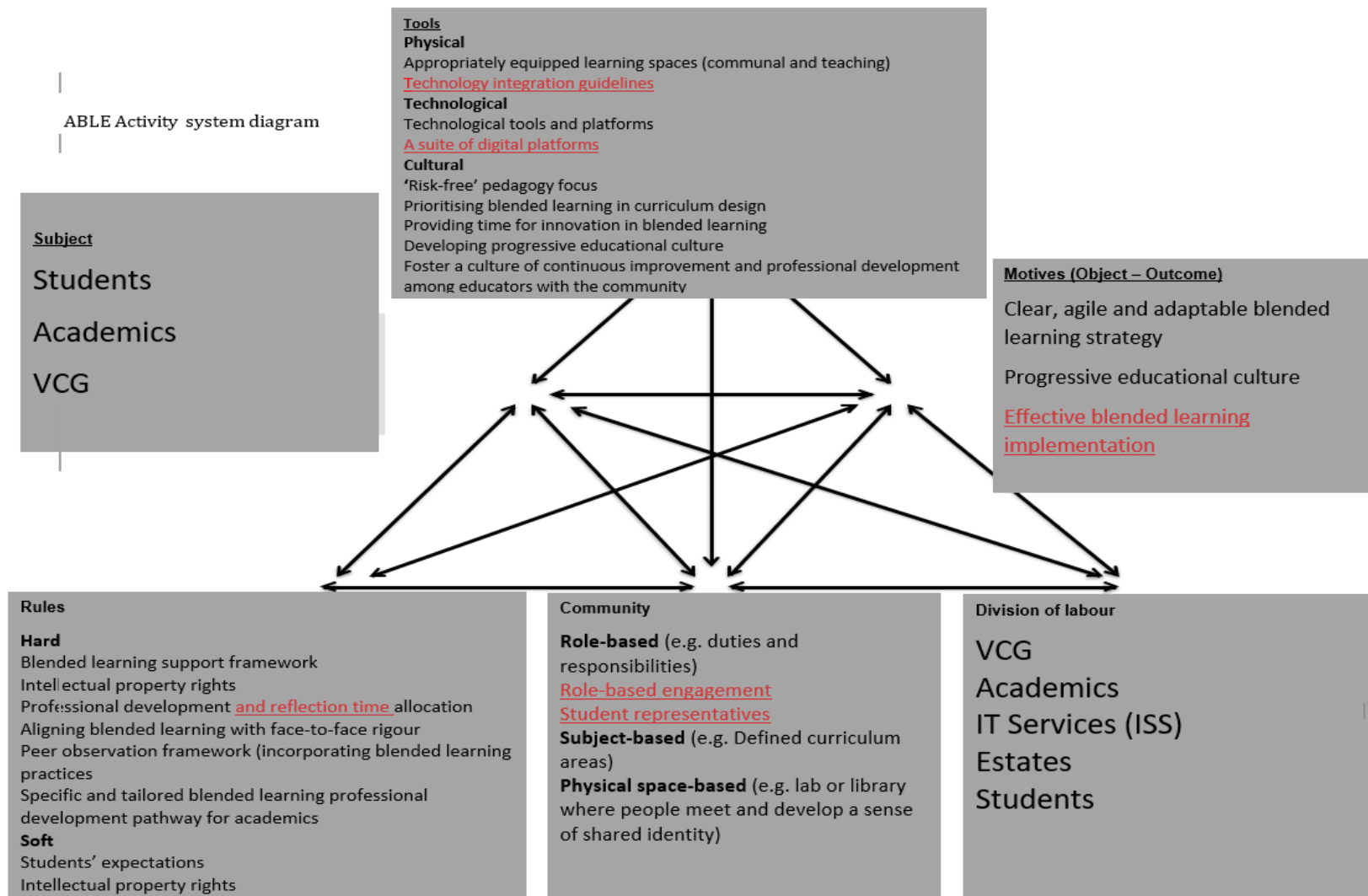


Figure 5.46 - ABLE activity system progress after session seven.

### 5.11.1 Session 8 Context

Session 8 aimed to focus on the implementation and process reflection stages of the expansive learning cycle. A focus on individual engagement with blended learning between CL sessions was central to the planning and facilitation of the session.

### 5.11.2 Session Design

Session 8 was designed around two tasks, 8.1 and 8.2, to facilitate an insightful reflection on the ongoing discussions about blended learning and to engage participants in an in-depth exploration of prioritisation of specific elements of a new blended learning activity system.

*Table 5.17 - Summary of design for session eight.*

<b>Session 8 Design</b>			
<b>Expansive learning action:</b>	<b>Implementation/Process reflection</b>		
<b>First Stimuli</b>	<b>Mirror data</b>	<b>2nd Stimuli</b>	<b>Social Organisation</b>
<p><b>Task 8.1</b></p> <p>Participants to share any discussions around blended learning they've had between session 7 &amp; 8. Have blended learning discussions been instigated by you or colleagues? What have these involved?</p>	<p>Share relevant excerpts from session typed chat</p>	<p>Provide a list of challenges, contradictions or concerns related to blended learning implementation that have been shared or discussed in previous sessions</p>	<p>Individual and group discussion.</p>

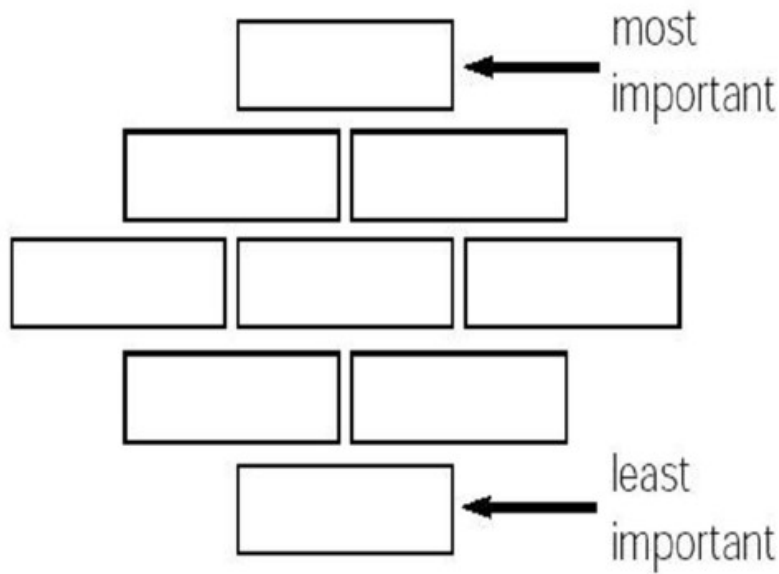
First Stimuli	Mirror data	2nd Stimuli	Social Organisation
Expansive learning action	<b>Implementation/Process reflection</b>		
<b>Task 8.2</b>  Blank diamond 9 template in Whiteboard and associated 9 'Learning and teaching reimagined: a new dawn for higher education?' prompts.	Share both groups created diamond 9's in the chat as an image	Share relevant quotes from previous sessions to focus discussion	2 breakout groups and collective creation of artefact.

In Task 8.1, participants would be prompted to share any recent discussions they had engaged in regarding blended learning between sessions 7 and 8. Relevant excerpts from the session typed chat will be shared as mirror data to contextualize participants' experiences. For the second stimulus, participants will be provided with some common challenges/contradictions from previous sessions to enabling them to relate their own discussions to broader trends and patterns. This information aims to offer participants a frame of reference, engage in more targeted discussions, and gain a deeper understanding of the complexities and potential barriers associated with blended learning.

Task 8.2 aims to focus around a collaborative exploration of the publication 'Learning and Teaching Reimagined: A New Dawn for Higher Education.' Participants will be split into 2 groups, in separate breakout rooms, and presented with a blank diamond

9 template on a Whiteboard, accompanied by associated recommendations (Figure 5.47). Their collective task is to engage with the recommendations and prioritise them, top being the most important and bottom the least important.





1. Use strategic and structural planning processes to effect the digital transformation of learning and teaching
2. Review strategic investment in digital learning and teaching
3. Develop 'risk free' pedagogy university wide approach/culture focused on effective integration of digital technologies
4. Think radically about the scale and scope of their learning and teaching activities, prioritising blended learning approaches wherever possible
5. Accelerate the adoption of blended learning, with close involvement of students in all aspects from design to delivery
6. Ensure inclusivity and accessibility are integral considerations in curriculum redesign
7. Ensure professional development plans include digital training, peer support mechanisms and reward and recognition incentives to encourage upskilling
8. Establish and be informed by research to remain in step with the changing digital preferences and expectations of prospective higher education students
9. Provide additional time and/or funding for innovation in blended learning approaches

[Learning and teaching reimagined: a new dawn for higher education? | Jisc](#)

*Figure 5.47 - Diamond 9 ranking task template and associated key foci.*

Once the diamond 9 templates are completed the groups will reconvene and look to consolidate their priorities. The second stimulus (Figure 5.48) will be introduced to stimulate focused discussion and the mirror data will be introduced by sharing both groups created diamond 9's on screen and in the chat (as an image). This aims to

support the development of the new ABLE activity system and refine key aspects addressed to this point.

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*... you have to allow that individuality of the academic to explore how best they connect with their students with their subject matter.*

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*...perhaps the term "blended" has been hijacked by the pandemic perception.*

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*...does blended have to be approached as face-to-face enhancement?*

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*Without the pandemic we probably won't be using Panopto/ Teams...the question for the future is more about: what is the ideal learning environment at LU and why we are special? Probably what works for one subject does not work to another and what works for a module does not work to another...The key thing is about caring about our teaching and learning quality and find the best way (also based on student's perspectives) to innovate and enjoy the process... Instead of adding extra tasks and responsibilities to staff...*

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Figure 5.48 - Mirror data previous session quotes.

### 5.11.3 Session Report

The session progressed to plan and effectively contributed to the ABLE activity system development by focusing on the implementation and reflection phase of the expansive learning process in the context of blended learning.

Table 5.18 - Task 8.1 overview and associated key contributions.

Session 8 Design			
Expansive learning action:	Implementation/Process reflection		
First Stimuli	Mirror data	2nd Stimuli	Social Organisation
<p><b>Task 8.1</b></p> <p>Participants to share any discussions around blended learning they've had between session 7 &amp; 8.</p> <p>Have blended learning discussions been instigated by you or colleagues?</p> <p>What have these involved?</p>	<p>Share relevant excerpts from participant chat discussions</p>	<p>Provide a list of common challenges or concerns related to blended learning implementation that have been shared or discussed in previous sessions</p>	<p>Individual and group discussion.</p>

#### Theme 1: Integrating the Learning Journey

One key theme from Task 8.1 focused on the complexity of integrating blended learning tools into the overall student learning journey. PH reflected, "...when we say about pulling stuff back to it in class, you're thinking about how do I integrate the whole journey, which is a lot of thought, especially if you don't understand the technology properly." This highlights a secondary contradiction where the institutional

drive for blended learning is hindered by the lack of technological fluency among educators. The comment underscores the need for comprehensive training and support to enable staff to effectively align in-class and digital learning elements.

## **Theme 2: The Challenges of Manipulating Technology for Educational Purposes**

AH pointed out the challenges inherent in adapting technological tools to fit pedagogical goals, remarking, “...*you know, we have to sort of bend them to the purpose that we want to, and it's always a bit tricky, isn't it?*” This reflects a tertiary contradiction where educational tools, often designed generically, require adaptation to meet specific learning objectives. The difficulty of this "manipulation" speaks to the broader issue of mismatched expectations between tool capabilities and pedagogical needs, a recurring theme across sessions.

## **Theme 3: Reflecting on Challenges in Implementation**

Participants also reflected on challenges previously discussed in the sessions, including the misalignment of tools and pedagogy, with the need to ensure that tools genuinely support learning objectives rather than simply being adopted for their novelty. The inconsistent approaches to blended learning and its lack of standardisation across departments, creating uneven student experiences was highlighted. The capacity for innovation, with time and resource constraints that limit the ability of educators to explore and implement innovative practices were prominent. These underscore the expansive learning action of implementation, as

participants critically evaluated their experiences and identified areas for improvement.

The session focused on process reflection, encouraging participants to consolidate their insights and identify ongoing challenges in implementing blended learning. Key contradictions emerged, including the tension between institutional expectations and technological fluency, the adaptability of tools to pedagogical goals, and the resource constraints that hinder innovation. These discussions align with expansive learning principles by fostering critical reflection and setting the stage for sustained improvements in blended learning practices.

Task 8.1 led participants to share any discussions they had engaged in regarding blended learning between sessions 7 and 8. These steered discussions towards connections between their own experiences and the broader discourse on blended learning at the institution. The introduction of the second stimuli served as a springboard for deeper discussions, allowing participants to connect their experiences with broader trends and patterns and address common barriers to the implementation of effective blended learning. Mirror data in the form of typed chat was limited during task 8.1, but there were opportunities to capture some key contributions and re-use and re-introduce into key discussion points (Figure 5.49).

[09/02/22 16:25] [Redacted]

Yes - I use the toolbox analogy, we'd love a full toolbox but we have a certain set available

laugh 1 like 1

*Figure 5.49 - Task 8.1 anonymised chat excerpt used at mirror data.* Quotes from the chat excerpts provided a context for these challenges and encouraged participants to explore possible solutions and strategies to address them.

*Table 5.19 - Task 8.2 overview and associated key contributions.*

Session 8 Design			
First Stimuli	Mirror data	2nd Stimuli	Social Organisation
Expansive learning action	Implementation/Process reflection		
<b>Task 8.2</b>  Discuss Learning and teaching reimagined: a new dawn for higher education?		Prioritise adapted recommendations in diamond 9 formation in Whiteboard	2 breakout groups and collective creation of artefact.

### **Theme 1: Balancing Individual Agency and Institutional Strategy**

Task 8.2 revealed a tension between fostering individual agency and embedding

institutional strategy in blended learning practices. PD emphasised the importance of allowing staff to experiment and innovate, stating, “...*we thought it was important to have the ability for individuals to go off and try things, because without that safety net, you know, nothing else matters.*” This highlights a secondary contradiction where staff autonomy and the need for centralised institutional support often conflict, creating a gap in achieving sustainable and innovative practices.

TB further reflected on the role of institutional culture in enabling such experimentation, noting, “...*you need to have a strategy in a culture from the top down... to create the environment to which this then you can then start to build it.*” This demonstrates the iterative relationship between individual initiative and systemic alignment, underscoring the importance of a supportive institutional culture for fostering innovative blended learning practices.

## **Theme 2: Integrating Research and Teaching**

The session also uncovered a concerning oversight in prioritising the integration of teaching with research. AH expressed frustration, remarking, “...*we obviously failed to prioritise the one about teaching being informed by research, which I'm slightly horrified about that.*” This oversight points to a tertiary contradiction in the activity system, where efforts to address immediate practical needs may inadvertently neglect long-term academic priorities.

Participants reflected on strategies to bridge this gap, including leveraging expert groups to disseminate evidence-based practices. PD suggested, “...*you can imagine expert groups and things like that within institutions, being the ones that are really on*

*the cutting edge of research and disseminating the more proven things to others.”*

This insight highlights the potential of fostering knowledge-sharing networks to integrate research-informed teaching into blended learning frameworks.

### **Theme 3: Building Grassroots Leadership**

Participants recognised the risk of overly centralised strategies that do not reflect the realities of teaching staff. PH warned, “*...if you don’t lead from the people who are gonna do it from the ground, then there’s the risk that you get the same old same old strategy.*” This critique underscores the need for grassroots leadership and the involvement of those directly engaged in teaching and learning activities to ensure strategies remain relevant and impactful.

#### **5.11.4 Session Reflection**

The session provided an opportunity for participants to share their recent discussions and reflections on blended learning, creating an array experiences to start the session off. The second stimuli facilitated an exploration of common challenges and concerns, fostering a deeper understanding of the barriers that might hinder effective implementation. The reduced use of the chat feature in this session meant a limited amount of mirror data was available, however this did not detract from the core focus as the contributions used were effective. The diamond 9 prioritisation exercise facilitated a deeper examination of the relationship between institutional strategy and individual agency in blended learning. Key contradictions emerged, including the tension between centralised decision-making and staff autonomy, as well as the neglect of research-informed teaching in blended learning initiatives. These insights



reflect the expansive learning actions of implementation and process reflection, highlighting the importance of balancing systemic alignment with local innovation. The session emphasised the need for institutions to create environments where both top-down strategies and grassroots initiatives coexist, ensuring that blended learning practices are both adaptive and sustainable. The use of Whiteboard to complete this task worked well and at this stage of the Change Laboratory participants are very comfortable with the technology.

#### **5.11.5 Session Outcome**

The session contributed new content to the ABLE activity system (Figure 5.50) with new additions to the *Rules*, *Community* and *Object*. 'Grassroots involvement' was added to the *Rules* to emphasise the importance of involving educators and practitioners at the ground level in shaping the blended learning strategy. This grassroots involvement could help avoid a disconnected strategy that does not align with actual needs of those involved. Alongside this, 'strategic investment in blended learning initiatives' was added to complement other rules and add the required top level support and status required to be successful. 'Expert groups' were added to the *Community*, which involve creating expert groups or communities of practice focused on research, experimentation, and the development of best practices in blended learning. The dissemination of successful strategies to the wider community was seen as essential to enhance collaboration and sharing of knowledge across the institution. The integration of research and teaching in the development of blended learning approaches and creation of a dedicated team or core group focused on exploring and refining blended learning strategies was seen to act as a central hub

for research, innovation, and the dissemination of successful approaches to the broader community.

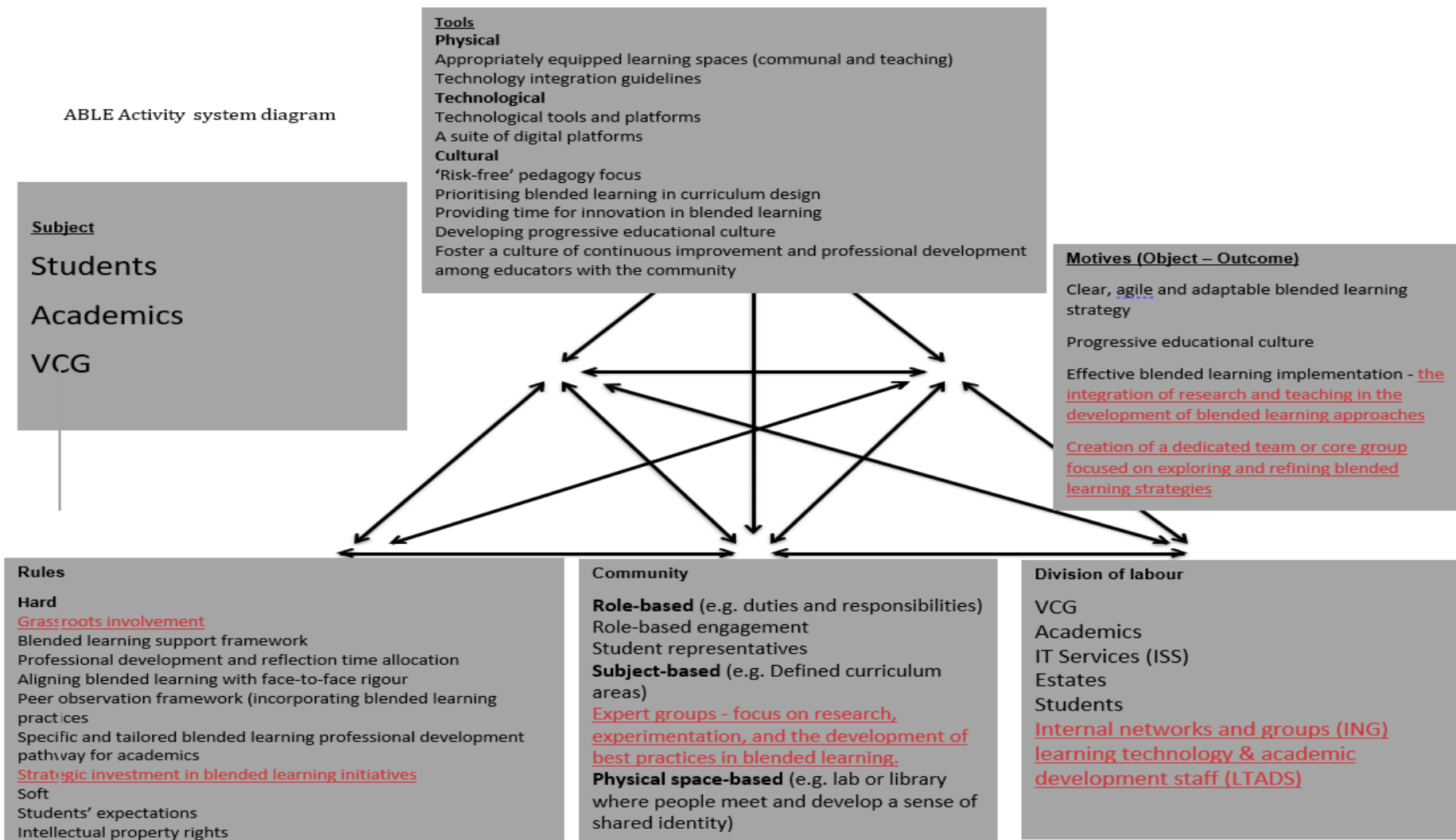


Figure 5.50 - ABL activity system progress after session eight.

### 5.12.1 Session 9 Context

Session 9 aimed to conclude the CL sessions and the mark the end of the project.

Reflecting on the process, the learning, and the take aways from the experience were at the forefront of the planning.

### 5.12.2 Session Design

Session 9 (Table 5.20) marked the conclusion of the scheduled Change Laboratory sessions, serving as a reflective platform to consolidate the collective journey and insights garnered throughout the workshop series. The main intention of this session was to provide participants with the opportunity to reflect on the process they had engaged in and share with fellow participants.

*Table 5.20 - Summary of design for session nine.*

<b>Session 9 Design</b>			
<b>Expansive learning action:</b>	<b>Process reflection</b>		
<b>First Stimuli</b>	<b>Mirror data</b>	<b>2nd Stimuli</b>	<b>Social Organisation</b>
<p><b>Task 9.1</b></p> <p>Reviewing the Change Laboratory process – How people have found this process?</p> <p>What, if anything, as a result of these CL sessions has changed with regards to blended learning?</p>	<p>Breakout group created diamond 9 priorities reintroduced</p>	<p>Introduction of mission statement (Arden University) and strategic plan (LU) overview – comparing university approaches</p>	<p>Individual and group discussion.</p>

The first stimuli aim to encourage participants to share their perceptions and experiences regarding the Change Laboratory process itself. This introspective exploration hopes to provide a platform for participants to express their thoughts and feelings about the workshop methodology, its effectiveness, and how it contributed to their understanding of blended learning. The second stimuli are intended to engage participant in a comparative analysis of these mission statement and strategic plan overview (Figure 5.51), providing an opportunity to explore and contrast the unique approaches and educational philosophies of both institutions. In this phase, participants were presented with the mission statements of both Arden University and Lancaster University. This aimed to prompt participants to consider the diverse perspectives that shape institutional strategies.

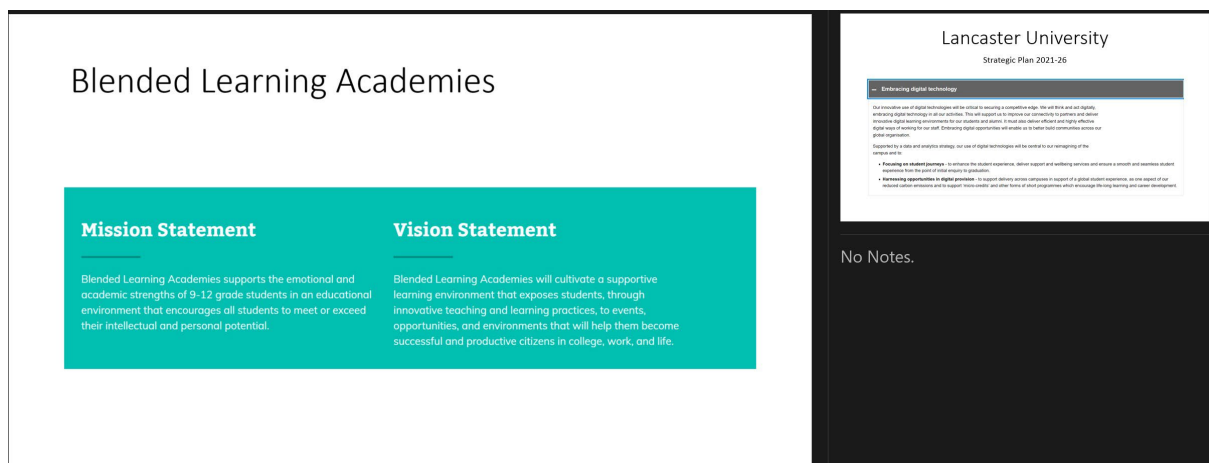


Figure 5.51- Screenshot from session nine planned PowerPoint slides

Session 8’s breakout group created diamond 9 priorities (Figure 5.52) is to be reintroduced as mirror to allow participants to reconnect with the key insights and

priorities that emerged from their collective discussions, serving as a foundation for further exploration and analysis.

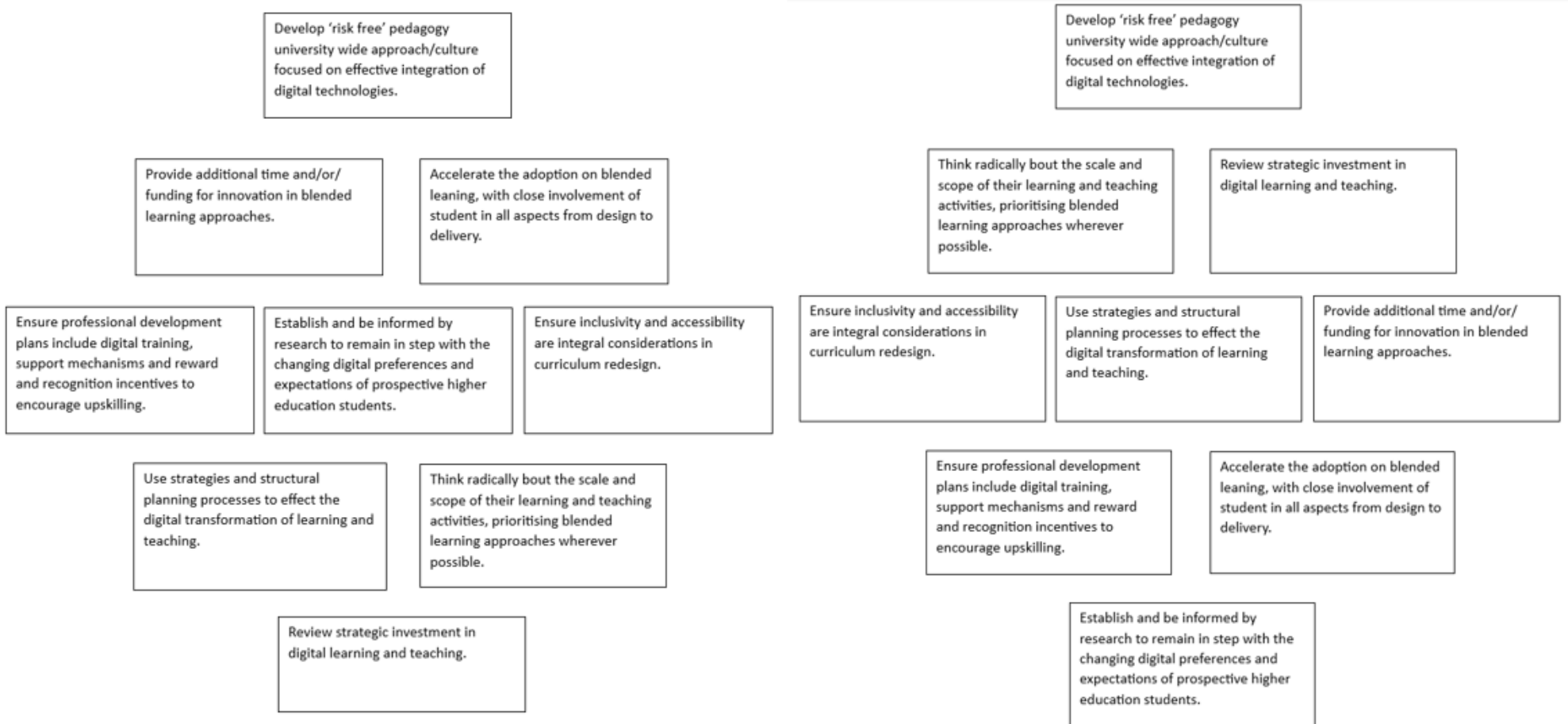


Figure 5.52 - Session nine PowerPoint slide screenshot with both diamond 9's completed.  
338

This social organisation is planned as a whole group throughout to encourage open dialogues and allow participants to reflect on their personal learning journeys and share their insights with their peers.

### 5.12.3 Session Report

The final session followed the expected plan (Table 5.21), although discussion after the initial first stimuli lasted slightly longer than anticipated and yielded some poignant reflections and contributions via the chat and onscreen sharing.

*Table 5.21 - Task 9.1 overview and associated key contributions.*

<b>Session 9 Design</b>			
<b>Expansive learning action:</b>	<b>Process reflection</b>		
<b>First Stimuli</b>	<b>Mirror data</b>	<b>2nd Stimuli</b>	<b>Social Organisation</b>
<p><b>Task 9.1</b></p> <p>Reviewing the Change Laboratory process – How people have found this process?</p> <p>What, if anything, as a result of these CL sessions has changed with regards to blended learning?</p>	<p>Breakout group created diamond 9 priorities reintroduced</p>	<p>Introduction of mission statement (Arden University) and strategic plan (LU) overview – comparing university approaches</p>	<p>Individual and group discussion.</p>



### **Theme 1: Shifts in Strategic Perspectives**

A theme in Task 9.1 was the shift participants experienced in their strategic roles and understanding of blended learning. PD reflected on their evolving responsibilities, stating, *“I find myself in the left side of the other side of the table compared to before where I’m basically kind of deciding the overall strategy for the school.”* This demonstrates the impact of the Change Laboratory process in empowering participants to take ownership of strategic decisions, a feature of expansive learning where agency and role transformation occur.

### **Theme 2: Critique of Blended Learning Practices**

AH offered a critical observation, stating, *“I’ve kind of realised it’s basically e-learning masquerading as blended learning to be quite honest.”* This highlights a tertiary contradiction where the institutional implementation of blended learning does not align with its conceptual goals. This critique reflects a deeper understanding of the limitations in current practices and underscores the need for more genuine integration of blended learning principles.

### **Theme 3: Reflecting on the Change Laboratory Process**

Participants reflected on the overall Change Laboratory process and its outcomes. Through individual and group discussions, they recognised the following key changes:

- **Increased awareness of contradictions:** The process allowed participants to identify and articulate systemic tensions, such as the disparity between institutional rhetoric and practical realities.

- **Enhanced strategic thinking:** Participants gained insights into how blended learning could be more effectively aligned with broader institutional goals.
- **Greater collective agency:** The sessions fostered a collaborative environment, enabling participants to co-create solutions and envision long-term changes.

These reflections align with the expansive learning action of process reflection, emphasising the iterative nature of learning and adaptation.

The final session consolidated the insights and transformations achieved throughout the Change Laboratory process. Key themes included shifts in strategic perspectives, critical reflections on current blended learning practices, and an enhanced sense of collective agency. These outcomes illustrate the value of the Change Laboratory as a tool for fostering transformative learning and organisational change, enabling participants to reframe challenges and take ownership of blended learning initiatives.

The transformative shift experienced by participants in terms of their roles and perspectives throughout the Change Laboratory (CL) process was evident in their reflections during the final session (see Section 5.10.1). For example, PD remarked on how the iterative workshop process had allowed them to adopt a more strategic role: *“I now see my role not just as delivering content but shaping how our department approaches blended learning as a whole.”* This shift exemplifies how the intervention fostered agency and a deeper engagement with systemic challenges, aligning with the principles of expansive learning.

The effectiveness of the workshop methodology was evident in participants' willingness to share evolving positions and insights, particularly during the examination and modelling phases. For instance, during Task 5.1, WT critically assessed the limitations of existing blended learning practices, stating, "*We have students with completely different expectations and starting points. This isn't something a single framework can resolve, but it's something we need to adapt to collectively.*" Such reflections highlight the value of the CL methodology in creating a safe, dialogical space for stakeholders to critically engage with complex institutional dynamics.

Participants also developed a nuanced understanding of the distinction between genuine blended learning and traditional e-learning practices. Genuine blended learning was identified as integrating synchronous and asynchronous modes to enhance learner engagement and autonomy, whereas traditional e-learning was critiqued as a static, tool-centred approach. For example, AH noted during Task 6.1, "*Blended learning isn't just about putting things online—it's about rethinking how we use face-to-face time to complement digital tools.*" This insight underscores how the CL process facilitated a deeper, more critical conceptualisation of blended learning that prioritizes pedagogical alignment and adaptability.

The introduction of the second stimuli, such as mirror data, played a pivotal role in advancing discussions on institutional dynamics and their impact on blended learning integration (see Section 5.5.3). For example, during Task 4.1, participants engaged with historical data showing disparities in digital tool adoption across departments,

which prompted PH to state, *“We can’t keep pretending the tools we have work the same for everyone—it’s a question of equity as much as functionality.”* This prompted the group to explore strategies for creating a more inclusive and responsive blended learning framework.

Challenges associated with transitioning students from secondary to higher education within a blended learning context were also thoughtfully addressed during the reflection phase (see Section 5.10.2). Participants emphasised the need to redefine student expectations, particularly in bridging the gap between independent learning and traditional classroom education. RB remarked, *“We assume they’re digital natives, but their use of technology doesn’t mean they’re ready for this kind of learning. We need to scaffold that transition more intentionally.”* This insight reinforced the importance of designing blended learning systems that accommodate diverse student needs and foster gradual skill development.

Finally, the introduction of mirror data during the concluding sessions served as a scaffold for critical reflection, enabling participants to revisit and synthesise their learning journey. This reflective process culminated in the development of the ABLE blended learning activity system, as participants articulated how their new understanding could inform future institutional practices. As TB observed, *“The process has shown me not just the gaps but how to think about solutions collaboratively, we need to carry this forward.”* This iterative approach to reflection and modelling highlights the CL methodology’s capacity to empower participants with both insights and actionable strategies.

#### **5.12.4 Session Reflection**

As the researcher facilitating this workshop series, I am struck by the transformative nature of the participants' journey throughout the sessions. Witnessing their growth in understanding, engagement, and collaborative thinking has been both enlightening and rewarding. The process of designing and guiding these sessions has clarified the complexities of implementing blended learning effectively within the higher education landscape, but more importantly the willingness of staff to achieve this difficult task. The mirror data, in particular, stands out as a powerful tool for fostering reflection and deepening participants' insights. Seeing participants engage with their own past statements, ideas, and discussions has highlighted the evolution of their perspectives and the depth of their engagement with the subject matter. It's fascinating to observe how these small snippets of their own words serve as catalysts for more profound reflections and analysis.

As participants complete their involvement in this process I am keen to see how these insights will shape the continued evolution of blended learning at Lancaster University.

#### **5.12.5 Session Outcome**

At the conclusion of this final Change Laboratory session, it marks the end of a significant journey that participants have undertaken to develop the ABLE activity system (Figure 5.53). Throughout these sessions, participants have engaged in deep discussions, critical reflections, and collaborative exploration of the complexities surrounding blended learning. This process has created a dynamic and evolving

activity system that encapsulates a comprehensive understanding of the challenges and opportunities inherent in blended learning implementation.

While this session serves as a milestone in our workshop series, it is important to acknowledge that the journey does not end here. The ABLE activity system, in its current form, is not a static creation, but rather a living framework that has the potential to influence and inform the landscape of blended learning in higher education. The hope is that the insights, discussions, and recommendations developed over the course of these sessions will continue to be a source of inspiration and guidance for educators, institutions, and policymakers. It is meant to penetrate classrooms, lecture halls, and virtual spaces, driving meaningful change and improvements in blended learning experiences.

This final session was successful in consolidating and confirming the progress made on the ABLE activity system and allowed participant to ensure the 'risk free' approach was added to the *Object*, seeing it as fundamental to the success of the new activity system and crucial to create the culture required for it to succeed.

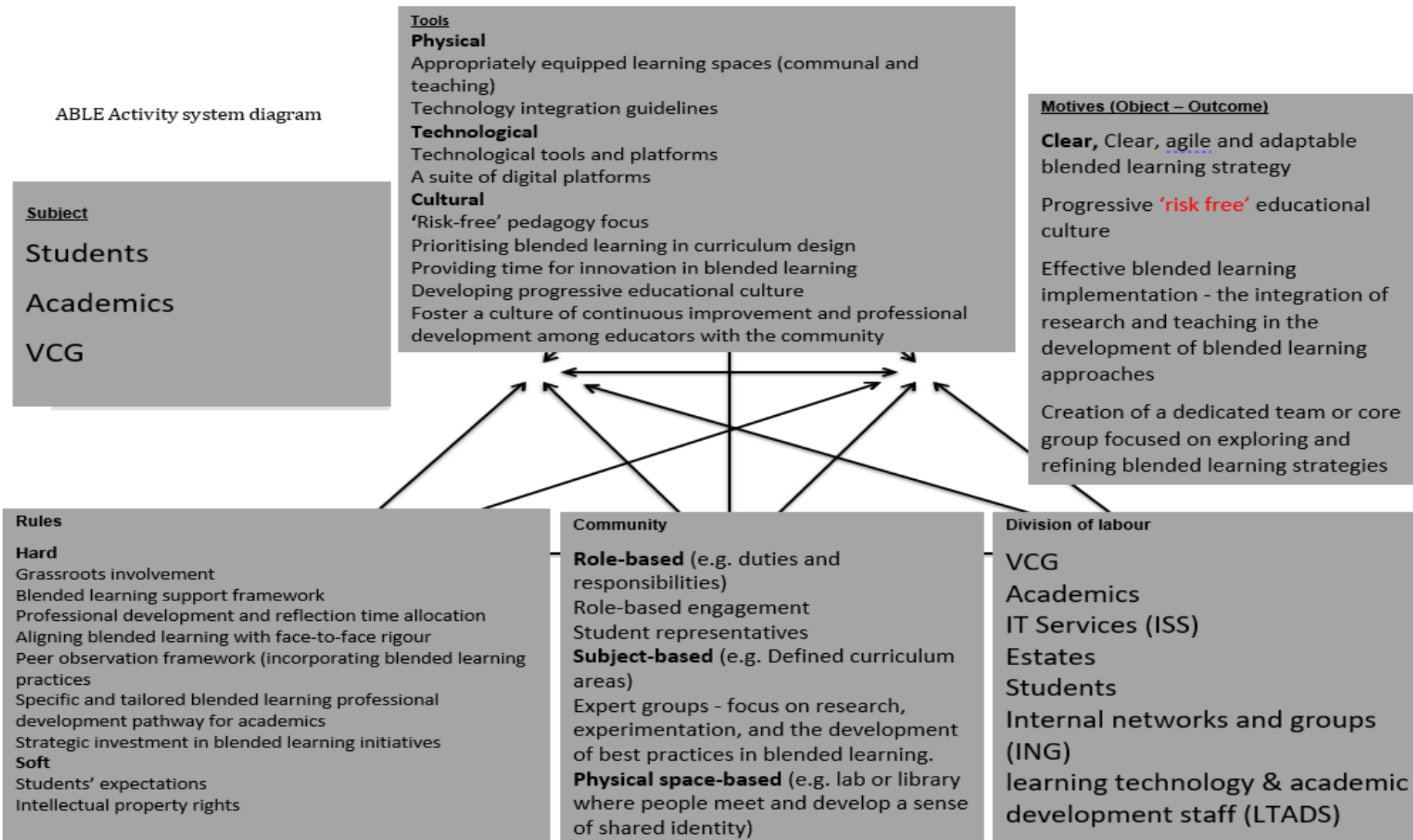


Figure 5.53 - ABLE activity system progress after session nine.

## **Chapter 6: Discussion**

### **6.1 Introduction**

The findings discussed in this chapter are rooted primarily in the perspectives of academic staff, whose central role in implementing blended learning (BL) makes their insights particularly critical. While this focus narrows the scope of the research, it allows for a deeper exploration of the systemic and practical challenges faced by educators within higher education institutions. This chapter highlights their experiences, critiques, and contributions, providing a foundation for understanding the complexities of BL through the lens of those tasked with its delivery.

This discussion chapter aims to synthesise knowledge by focusing on the integration of blended learning through a stakeholder-created culturally advanced activity system (CAAS). This is designed to consolidate the findings and underscore the contributions to the academic literature as well as explain the potential practical implications for TEL. This synthesis is central for identifying successful strategies and pinpointing areas where further investigation is needed, paving the way for future innovations in TEL. The chapter is structured around the research questions, addressing insights from the literature review, theoretical framework, and research findings to explore the dynamics of implementing a culturally advanced activity system within the higher education context.

Initially this chapter will draw together and synthesise the knowledge from my findings (Chapter 5) by firstly addressing the sub RQs (1.1-1.3) and then the main research question, RQ1 below:



1. What is the potentiality of a stakeholder created activity system in supporting TEL in the institution?
  - 1.1. How do stakeholders perceive that a culturally more advanced activity system might support the development of blended learning across a university?
  - 1.2. How is this culturally more advanced activity system developed by stakeholders in a cycle of expansive learning?
  - 1.3. What does this culturally more advanced activity system tell us about the potential for resolving contradictions in existing activity?

Subsequently, the chapter will make the argument about my contributions to the literature explored in Chapter 2, examining how they align with, diverge from, and enhance existing academic discussions.

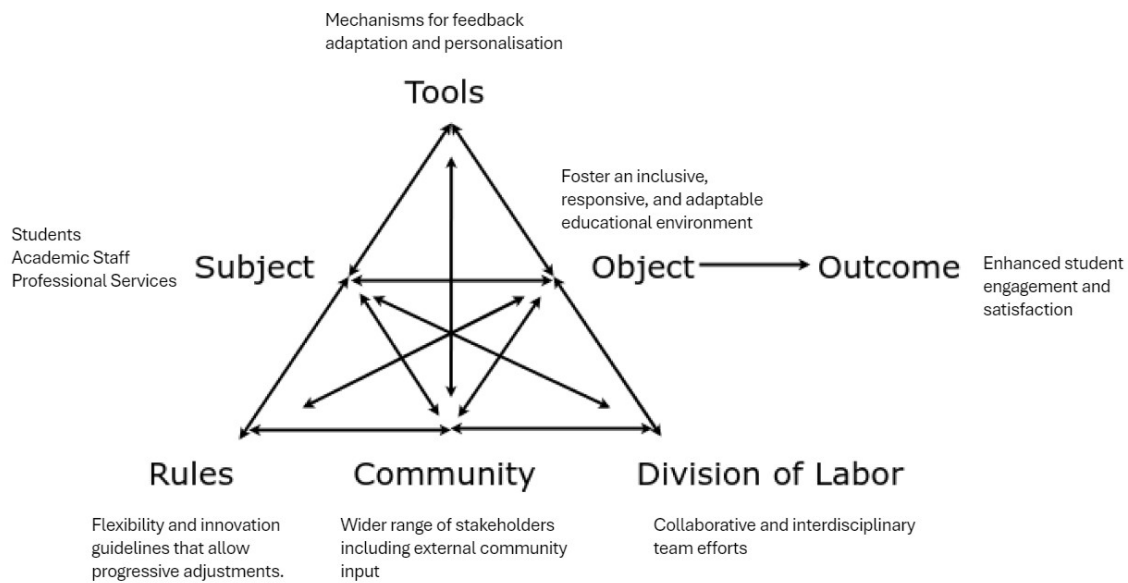
## **6.2 Addressing the Research Questions**

### **6.2.1 How do stakeholders perceive a culturally more advanced activity system might support the development of blended learning across a university?**

Stakeholders whose *object* is fostering an environment that is inclusive, responsive, and adaptable to the diverse needs and backgrounds of its community can support the development of blended learning across LU, leading to enhanced student engagement and satisfaction (*outcome*). This perception is grounded in the understanding that a culturally advanced system needs to go beyond simple technological integration, focusing instead on creating a holistic educational ecosystem that values and leverages cultural diversity, promotes equity, and encourages pedagogical innovation. This culturally advanced activity system stands in stark contrast to the actually-existing activity system, which, with a focus

on standardised curriculum delivery, tends to achieve uniformity in teaching methods at the expense of adaptable and responsive learning experiences. The process by which this advanced activity system was developed and the way it addresses current contradictions will be further discussed in sections 6.2.2 and 6.2.3. For now, the focus will remain on extracting and discussing conclusions from the activity system itself.

Figure 6.1 outlines a simplified version of the new culturally more advanced activity system as devised by participants.



*Figure 6.1 - Simplified activity system that was developed by participants containing only essential points.*

This section will also address the activity system above in terms of the key elements and indicate the difference between this culturally more advanced system and the existing activity system, as identified in Table 6.1.

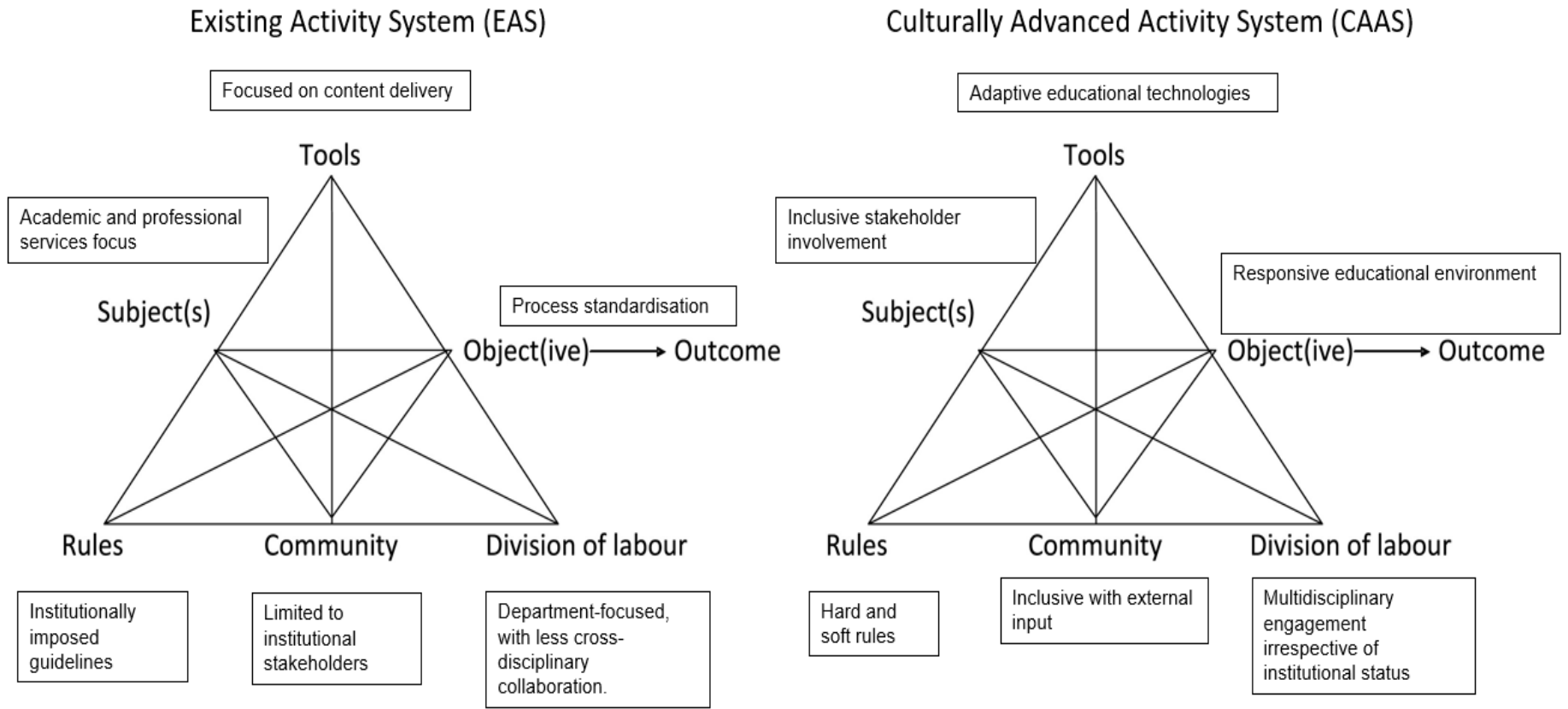


Figure 6.2 - Comparative activity systems highlighting the shift from the existing to a culturally more advanced activity system at LU.

In the newly designed activity system, the participants have established an object focusing on creating a culturally responsive educational environment. This focus underscores the participants' belief that it is crucial for the new activity system to embrace diversity, ensuring that educational practices are inclusive and equitable. The emphasis on this object implies that participants recognise the importance of adapting the educational environment to meet the varied backgrounds and needs of students, which can lead to enhanced engagement and academic success.

This contrasts with the existing activity system (EAS), whose object is ensuring process efficiency and standardisation. Participants highlighted that a focus on this object has led to a rigid teaching framework that often neglects the varied contexts of students, courses and academic approaches. This approach has been noted to limit pedagogical innovation and restrict the personalisation of learning experiences, potentially stifling student motivation and creativity.

This change represents a shift towards a more holistic and student-centred approach in educational design and delivery, reflecting a deeper understanding of the complexities and dynamics of a diverse educational setting. Expansive learning here involves broadening the educational focus to include and actively address the cultural diversity and unique learning needs of the student body. This shift not only enhances engagement and success by aligning the educational environment more closely with students' real-world contexts but also promotes a deeper understanding, amongst the subjects, of the complexities a diverse educational setting.

In the CAAS, the range of subjects includes not only faculty and students but also IT specialists, administrative staff, and community stakeholders. The inclusion of such a diverse group of participants is crucial for creating a learning environment that benefits from varied perspectives and expertise, thereby enhancing the quality and relevance of educational offerings. Currently, subjects involved in the EAS have been predominantly faculty based, with this narrower scope often neglecting the contributions of other potential stakeholders like students or professional services staff. By expanding the range of subjects to include these additional voices, the system addresses and resolves existing contradictions within BL. This broader inclusion facilitates engagement and enhances the application of BL, as the diversity of inputs contributes to more robust and adaptable learning solutions, ensuring that the educational model is not only more inclusive but also more responsive to the needs of its participants.

In the CAAS at LU, the tools employed include a range of technological solutions, such as developing learning management systems and adaptive learning technologies, alongside frameworks designed to enhance feedback and collaborative learning. The significance of these tools lies in their ability to deliver content that is accessible and adaptable to the diverse learning needs and cultural contexts of students. This adaptability marks a development from the current tools used in BL, which typically focus on static content delivery and often lack sufficient capabilities for adaptation or feedback incorporation. The tools frequently fail to engage students effectively, particularly those with diverse learning needs. By incorporating advanced tools, this system addresses critical contradictions found in the current educational settings, where the need for personalised education clashes with the generic, less responsive nature of existing digital learning environments. This strategic

use of innovative tools ensures that the educational framework is more inclusive and aligned to the individual requirements of its users.

In the CAAS, the rules are conceived by participants to promote flexibility, inclusivity, and innovation within educational practices. Creating flexible and inclusive rules are essential for adapting educational practices to meet the evolving needs of the student population and respond to the dynamic nature of global education trends (Section 1.3). In contrast to the rules in the existing system, which imposes rigid structures and guidelines, the rules in this advanced system are designed to foster creativity and responsiveness in BL. Current rules tend to restrict the capacity to innovate or tailor educational experiences to individual student needs, stifling pedagogical advancement. By implementing more flexible rules, the advanced system at Lancaster addresses contradictions inherent in traditional educational frameworks, which often struggle to accommodate the dynamic requirements of modern learners. The flexible rules in the advanced system facilitate a more adaptive and responsive educational environment, enhancing the overall effectiveness and relevance of the learning experience.

In the CAAS at LU, the concept of community does not just include the immediate academic environment but also external stakeholders. This broadened scope of community engagement enables the BL environment benefiting from varied perspectives and expertise, thereby enhancing the relevance and applicability. Community interactions within the current LU system has been confined to internal academic circles. This limitation often restricts the scope and impact of educational initiatives, as it fails to incorporate broader societal inputs and interdisciplinary insights. By extending community interaction beyond these traditional confines, the advanced system directly addresses and resolves significant

contradictions. It challenges the insular focus of academic practices and aligns education more closely with broader societal and cultural realities, ensuring that educational offerings are more inclusive and also reflect the wider societal landscape.

### **6.2.2 How is this culturally more advanced activity system developed by stakeholders in a cycle of expansive learning?**

As stakeholders developed the culturally advanced activity system (CAAS), the contributions of academic staff were particularly significant. Their critical reflections on pedagogical practices, resource allocation, and institutional policies illuminated systemic contradictions that may not have been visible from other perspectives. This underscores the essential role of academic staff in driving meaningful change within the blended learning landscape.

The development of a culturally more advanced activity system through a cycle of expansive learning at LU, as detailed in the findings chapter, reflects a collaborative process grounded in the principles of Engeström's expansive learning theory (Figure 6.3). This cycle represents a systematic approach to developing TEL practices, rooted in the theoretical foundations laid out by expansive learning theory. The implementation of the CAAS serves as an indicator of this theoretical approach, highlighting the potential of collaborative efforts to reshape the landscape of BL within a HE context.

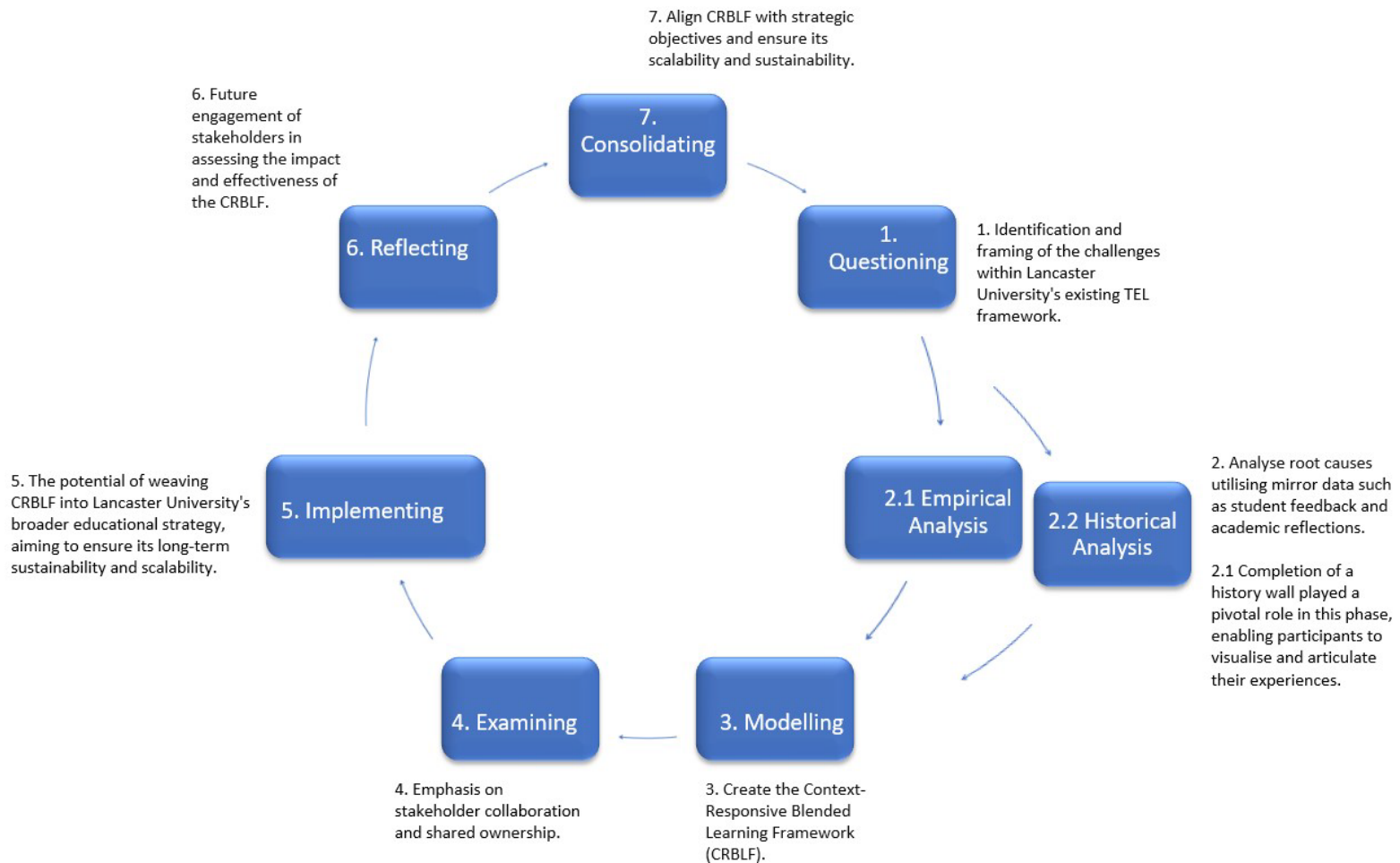


Figure 6.3 - Expansive learning cycle, which includes labelling each stage and identifying new elements introduced in the activity system.



This critically addresses the limitations of overly prescriptive or utopian perspectives on BL frameworks, which have been identified in scholarship by Bayne (2015), Ross (2017), and Veletsianos (2020), who critique the ‘default optimism’ surrounding digital education, arguing that such perspectives often overlook institutional constraints, systemic inequalities, and practical barriers. These critiques resonate with findings from this research, where stakeholders grappled with the tension between aspirational goals for BL and the pragmatic challenges of implementation, such as resource allocation and institutional alignment.

*Questioning* (1) started the process by identifying and framing the challenges within Lancaster University's existing TEL framework (Sections 5.4.1 & 5.5.1). Stakeholders, including academics, IT service personnel, and administrative staff, collectively pinpointed issues such as a lack of integration across disciplines, insufficient training in TEL tools, and a need for more responsive educational technologies, as described in sections 5.5.3 and 5.5.6. These issues were important for the design of a CAAS, as they highlighted areas where enhanced adaptability and stakeholder involvement could improve outcomes.

*Empirical Analysis* (2) involved reviewing and analysing the guidance provided by LU (Sections 5.4.1 & 5.6.1) and historical analysis (2.1) of the current state further dissected these challenges, with stakeholders constructing a history wall (Section 5.5.1) that visualised their collective experiences with TEL and BL. This representation highlighted disparities in technology access and usage, emphasising the necessity for a more equitable and inclusive approach. The insights gained here laid the foundational principles for the CAAS, particularly in fostering a learning environment that was both accessible and effectively tailored to diverse learner needs.

The collaborative design of the CAAS contrasts with the idealistic approaches critiqued by Bayne (2015), Ross (2017), and Veletsianos (2020) by emphasising co-creation, inclusivity, and adaptability. For example, during the Modelling (3) stage, stakeholders worked collectively to design the Context Responsive Blended Learning Framework (CRBLF) (Sections 5.7.1 & 5.9.1), integrating insights from diverse roles, including academics, IT personnel, and administrators. This participatory approach allowed stakeholders to navigate the gap between utopian ideals and the operational realities of BL practices, ensuring that the framework was both visionary and feasible.

Later, this had to be amended as additional shortcomings were identified. This new model was developed to directly address the identified issues by incorporating adaptability, continuous improvement, and stakeholder engagement into its core design principles. The envisioned CRBLF aimed to respond to the nuanced needs of the university's varied departments and learners, setting a course for a more integrated and effective TEL environment. Stakeholder engagement was seen as central to ensure that the voices of all user groups, including faculty, administrators, students, and technical staff, were fundamental to the development process. Additionally, a focus on staff and student digital literacy, impacting their capacity to fully engage with technology-enhanced learning, was addressed. The identified gap in digital skills training for educators and students laid the foundation for integrating professional development and digital literacy programmes into the CRBLF.

Moreover, while stakeholder discussions often reflected utopian aspirations, such as achieving universal inclusivity or creating seamless integration of tools and pedagogy,

these aspirations were balanced by iterative examination and refinement of the framework. For instance, during the **Examining (4)** phase, participants critically evaluated contradictions, such as the disparity between proposed innovative pedagogical practices and traditional assessment methods. This iterative approach underscores the practical value of the CAAS in addressing the gaps noted by Wang, Han & Yang (2015), who advocates for blended learning frameworks that are both human-centred and contextually grounded.

Examining the framework's potential effectiveness was an iterative process, refining the CRBLF to ensure its alignment with both academic standards and the practical realities of LU's educational landscape. Examining the framework's potential effectiveness (Sections 5.8.1 & 5.9.1) led to exploration of contradictions between the envisioned educational practices and the existing structures within LU. During this examination phase, stakeholders assessed how the newly modelled CRBLF aligned with LU's academic standards and practical realities. This process allowed stakeholders to pinpoint contradictions such as the disparity between the innovative pedagogical approaches proposed by the CRBLF and the traditional assessment methods still prevalent within the university. Stakeholders also explored contradictions in resource allocation, where innovative projects often competed with established departments for limited technological resources. This examination led to discussions on how to balance resource distribution to foster an equitable environment conducive to both maintaining high academic standards and embracing innovative teaching practices.

By embedding participatory methodologies such as the Change Laboratory into the expansive learning cycle, this research demonstrates how stakeholder-developed activity systems can provide a dynamic and context-sensitive alternative to top-down, prescriptive BL models. This emphasis on adaptability and iterative reflection responds directly to critiques of rigid frameworks, highlighting the transformative potential of collaborative innovation in higher education.

*Implementing* (5) the CRBLF involved theoretical planning for its integration into LU's broader educational strategy. This stage focused on aligning the framework with institutional goals, avenues for securing resources, and developing an institutional culture that valued innovation and continuous learning. The discussions here emphasised the need for scalability and sustainability, ensuring the CRBLF could evolve with the institution's future challenges and opportunities.

*Reflecting* (6) on the impact of the CRBLF and its alignment with educational needs (Section 5.10.1) became a continual practice among stakeholders. This phase ensured the framework could adapt and remain relevant to both current educational demands and future innovations. The reflective practice embedded within this phase was crucial for maintaining the dynamic and responsive nature of the CRBLF.

In the *Consolidating* (7) phase of the expansive learning cycle, a goal was to align the framework with the university's strategic objectives and to ensure its scalability and sustainability (Section 5.11.1). This phase addressed integration and operational considerations to make the CRBLF a long-term, adaptable solution for the institution. Initially, stakeholders identified that previous TEL initiatives were often developed in

isolation without clear alignment with the broader strategic goals of the university. This impeded the ability of TEL efforts to receive support and recognition across the university. There was also a concern that existing TEL practices were not designed with scalability in mind, making it difficult to extend successful initiatives across different departments or scale them to meet increased demand.

The findings also align with and extend the critiques of utopian perspectives by illustrating how stakeholder-developed activity systems address systemic barriers. Unlike overly idealistic models that may overlook practical challenges, the CRBLF was designed to reconcile aspirational goals with institutional realities. This approach acknowledges that while utopian perspectives inspire innovation, their practical translation requires stakeholder engagement, iterative development, and critical reflection—key contributions of this thesis to the literature on blended learning.

The development of the CAAS through a cycle of expansive learning at LU highlights the transformative potential of a collaboratively building a system that focuses on inclusivity, adaptability, and continuous improvement. The importance of methodologies like the Change Laboratory in fostering meaningful and sustainable advancements in higher education is evident, underscoring the role of active stakeholder involvement in shaping the future of educational landscapes.

In conclusion, the development of a culturally more advanced activity system through a cycle of expansive learning at Lancaster University exemplifies the transformative potential inherent in collaborative, theoretical-informed approaches to educational innovation. The CAAS, as developed by stakeholders through this process, not only addresses specific

challenges within the institution's TEL practices but also sets a precedent for future innovation in the broader context of technology-enhanced education. This discussion stresses the important role of participatory methodologies, such as the Change Laboratory, in facilitating meaningful and sustainable advancements in higher education.

### **6.2.3 What does this culturally more advanced activity system tell us about the potential for resolving contradictions in existing activity?**

The CAAS seeks to resolve contradictions in TEL practices at LU through expansive learning. This focuses on specific contradictions and to resolve within the current activity system (Table 6.2). The CAAS addresses and resolves contradictions evident in the current model, specifically the disparity between the demand for personalised learning experiences and the generic models currently prevalent that fail to accommodate individual differences.

Table 6.2 - Table of Contradictions and Solutions in the CAAS Development

Contradictions in Existing Activity System (EAS)	Solutions in Culturally Advanced Activity System (CAAS)
University vs departmental directives (5.6.3)	Flexible Guidelines
Rules Vs Guidance (5.7.3)	Hard and Soft Rules
Expectations and realities in blended vs traditional learning (5.8.5)	Diverse Stakeholder Engagement
One-size fits all v individualised approaches (5.8.3)	Co-creating Blended Learning Strategies
Individual Academic Freedom vs. Institutional Mandates (5.8.5)	Faculty Autonomy

The findings from Chapter 5 provide insights into key contradictions within the existing activity system at LU and how these were resolved through the development of the CAAS. This section will explore these contradictions and explain how the work undertaken by the participants in the CL sessions led to new solutions.

In the EAS, **University vs Departmental Directives** often conflict with departmental self governance, resulting in inconsistencies and confusion in BL implementation. University directives primarily focus on standardisation and efficiency, while departments require flexibility to tailor blended learning approaches to their unique contexts. The CAAS resolves this contradiction by introducing **Flexible Guidelines**. These guidelines provide broad institutional objectives while allowing departments to customise their approaches to meet

specific needs, ensuring alignment with university-wide goals while empowering departments to innovate and personalise their BL strategies. The flexible guidelines also promote collaboration across departments, encouraging best practice sharing and reducing inconsistencies.

In the EAS, ***Rules vs Guidance***, such as minimum standards and compliance checks, created a culture that discourages experimentation. These prescriptive rules limit individual creativity and pedagogical flexibility. The CAAS introduces a balance between ***Hard and Soft Rules***. Hard rules maintain minimum standards and compliance, ensuring quality and consistency. Meanwhile, soft rules foster a supportive community where experimentation and innovation are encouraged. This dual approach provides structure while promoting creativity and pedagogical flexibility. The soft rules take the form of guidelines, collaborative communities, and best practice sharing, offering personalised guidance rather than strict mandates.

In the EAS, ***Expectations and Realities in Blended Learning vs Traditional Learning*** highlight the discrepancy between expectations and realities in BL, with students and staff expecting traditional learning environments but encounter challenges adapting to blended learning practices. Furthermore, staff and students lack the necessary digital skills to effectively engage with TEL practices required for effective BL. The CAAS resolves this contradiction by drawing on ***Diverse Stakeholder Engagement***. This approach ensures that BL practices are co-created with input from students, educators, IT staff, and administrators. Overcoming this contradiction also integrates training and support for educators and students to bridge the skills gap, aligning blended learning expectations with reality.



The EAS imposes standardised BL models that fail to accommodate individual learner needs and discipline-specific requirements. The CAAS resolves this contradiction by enabling the ***Co-creation of Blended Learning Strategies***. This provides a flexible basis that allows educators to design personalised approaches tailored to their specific departmental and student needs. This approach encourages departments to collaborate with stakeholders in designing and refining BL models, ensuring they are context responsive and culturally inclusive.

In the EAS, **One-size Fits All vs Individualised Approaches** indicates the tension between the uniform approach the BL that fails to consider and address the diverse needs and preferences of staff and students. The rigidity of this system often fails to leverage the strengths and insights of individual departments and educators, thereby limiting the effectiveness of BL initiatives. In contrast, the CAAS underlines the need ***Co-creating Blended Learning Strategies*** for tailored blended learning approaches that meet specific needs and goals. By engaging in co-creation with key stakeholders, the CAAS fosters a sense of ownership and participation, ensuring that the BL strategies are contextually relevant and adaptable.

***Individual Academic Freedom vs. Institutional Mandates*** in the EAS were seen to restrict academic freedom, limiting educators' ability to innovate and experiment with new technologies and teaching methodologies. The CAAS resolves this contradiction by focusing on the role of ***Faculty Autonomy***. This shift is designed to empower educators by providing them with the freedom to make pedagogical decisions that suit their students' learning needs and their own pedagogic approaches and skills. The introduction of faculty autonomy within the CAAS is a deliberate move to foster an environment where educators

can freely integrate innovative technologies and varied teaching methodologies without the constraints of overly prescriptive institutional policies. This approach acknowledges the expertise and professional judgment of faculty members but also places trust in their ability to design and implement effective educational strategies. This increased autonomy aims to promote the use of and engagement with TEL resources, professional development opportunities, and collaborative platforms where faculty can share best practices and innovative teaching solutions.

#### **6.2.4 What is the potentiality of a stakeholder created activity system in supporting TEL in the institution?**

The potentiality of a stakeholder-created activity system in supporting TEL at LU is multifaceted. By involving a broad spectrum of stakeholders in the development and implementation of TEL practices, such a system leverages diverse perspectives, expertise, and experiences, leading to more inclusive, relevant, and effective TEL practices. This participatory approach facilitates a deeper understanding of the needs and challenges within the educational landscape, ensuring that TEL initiatives are not only technically sound but also pedagogically aligned and culturally sensitive, as described in section 5.7.1

Figure 6.4 is a conceptual diagram representing different elements of TEL at Lancaster University, structured in parallel to Vygotsky's Zone of Proximal Development (ZPD).

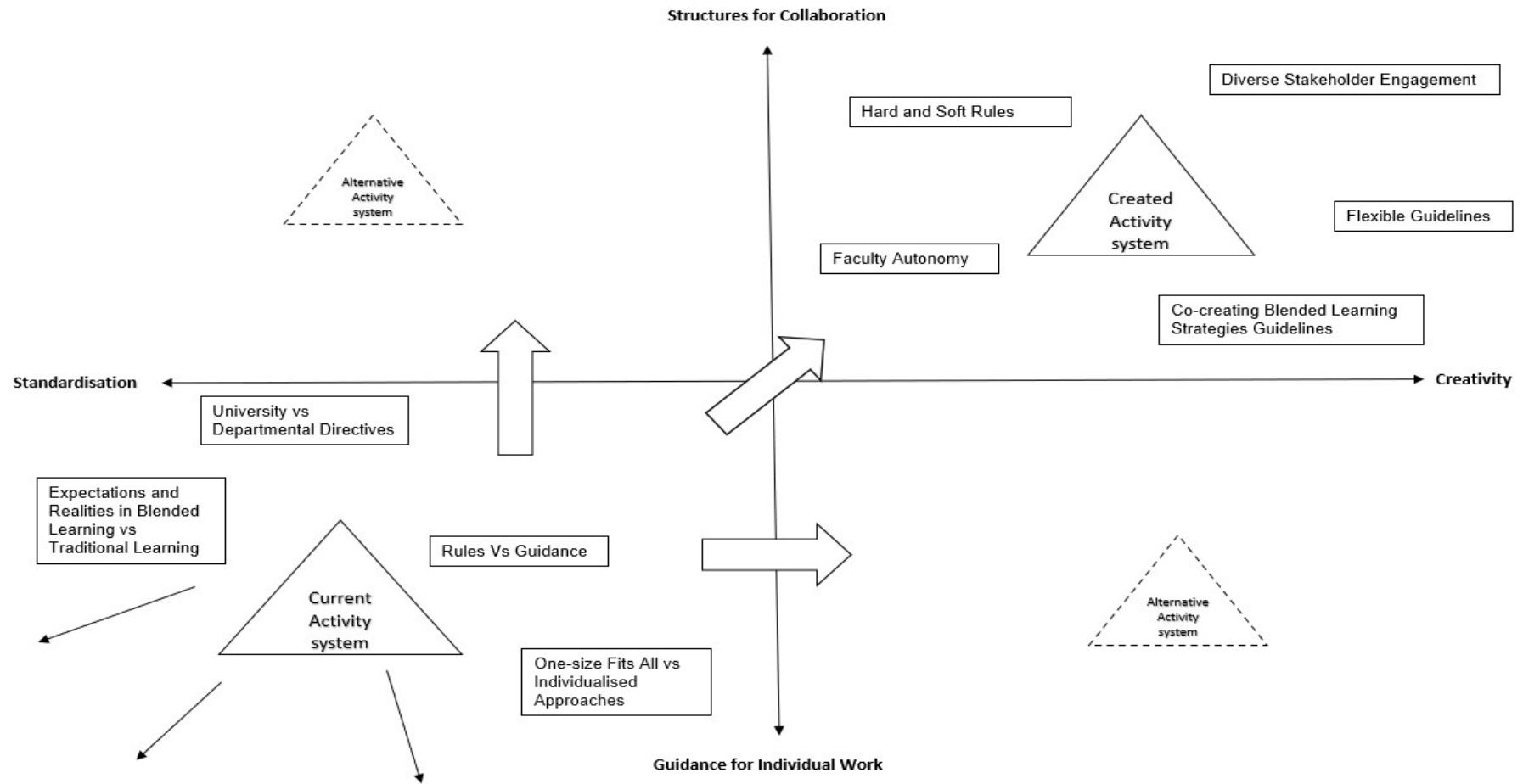


Figure 6.4 - The zone of proximal development at Lancaster University.

The *Current Activity System* portrays the existing operational framework within the educational setting, where activities and procedures are defined and largely constrained by established norms and practices. Within this system, guidance for individual tasks generally adheres to prescribed procedures that reduce variations and reduce innovation. The *Created Activity System* represents the evolved or aspirational state where new practices and innovations are represented. Portrayed as the outcome of successful collaboration and a balanced interplay between creativity and standardisation, the *Created Activity System* represents the advancements participants seek, surpassing existing practices. Each element of the ZPD at LU will be explained below.

The bidirectional arrow navigating between *standardisation* and *creativity* captures the inherent contradictions within the ZPD at LU with regards to TEL. While standardisation contributes structure and uniformity for scalable and replicable educational experiences, it often conflicts with the need for innovative, adaptive teaching methods. An excessive focus on *standardisation* can stifle creativity, which in TEL requires the freedom to experiment with new tools, pedagogical approaches, and technologies. It involves tailoring learning experiences to individual and group needs that standard approaches might ignore. The interplay between these elements within the ZPD signifies that for LU to harness the benefits of TEL, there must be a system that accommodates both the reliability of standardisation and the flexibility of creativity. This dual approach allows instructors and students to operate within a framework that ensures quality while simultaneously encouraging the kind of innovative thinking

and teaching that adapts to and exploits on the opportunities presented by TEL. Therefore, navigating this tension is not about choosing one over the other but rather about finding an optimal balance where both standardization and creativity inform and enhance each other.

The bidirectional arrow navigating between *Guidance for Individual Work* and *Structure for Collaboration* indicates the potential impact between individual learning support and collective problem-solving efforts. This highlights that while individual empowerment through targeted guidance is needed, it gains more impact when coupled with collaborative frameworks that allow for shared insights, joint creativity, and collective action. ***Guidance for Individual Work*** involves providing tailored support and resources that address the needs and challenges faced by each participant. This guided approach facilitates individual competence and confidence, as well as preparing each member to contribute effectively to group objectives. This guidance may include focused training sessions, access to specific learning materials, or one-on-one mentorship, all designed to enhance individual knowledge and skills within the context of the institution's broader educational goals.

On the other hand, ***Structures for Collaboration*** are designed to harness the collective capacities and creative potential of the group. By establishing approaches that promote cooperative engagement, such as interdisciplinary teams, learning communities, or project groups, this encourages an environment where shared insights and experiences lead to enhanced problem solving and innovation. These structures provide platforms for dialogue, idea

exchange, and feedback, which support the development of educational strategies and implementing projects effectively. The relationship between these two dimensions, **Guidance for Individual Work**, and **Structures for Collaboration** indicates how effective personal development increases the capacity of individuals to engage meaningfully in collaborative efforts, bringing more skills and perspectives to the table. The integration of Guidance for Individual Work with Structures for Collaboration is not just about balancing personal and group interests but about creating a co-operative environment where the advancement of one directly enhances the capability of the other. This approach ensures that change within the educational system is both sustainable and expansive.

### **6.3 Contributions**

This chapter will address how my research findings contribute to the two areas of literature reviewed in Chapter 2, Changing Technology Enhanced Learning, and Institutional Policy on Technology Enhanced Learning.

In section 6.4 I outline two contributions to the field of changing technology enhanced learning practices in higher education. Firstly, in section 6.4.1 looks at *addressing the strategic potentiality of object-oriented, interprofessional teams* in refining BL practices. Then section 6.4.2 looks at *highlighting the importance of environments for TEL experimentation, addressing traditional barriers to educational innovation*.

Section 6.5 addresses three contributions associated with the literature around institutional policy on TEL in HE. Section 6.5.1 explores *advocating the value of adaptable governance in developing effective institutional strategies for teachers*. Section 6.5.2 explores *promoting dynamic and integrative approaches to continuous improvement and evaluation*. Section 6.5.3 explores the *introduction of 'hard' and 'soft' rules for governing technology-enhanced learning*. Proceeding sections will address and add depth to the contribution discussion.

## **6.4 Changing Technology Enhanced Learning Practice in Higher Education**

### **6.4.1 Addressing Strategic Potentiality of Object-oriented, Interprofessional Teams in Refining Blended Learning Practices**

*Addressing strategic potentiality of object-oriented, interprofessional teams in refining BL practices* suggests the importance of cooperative collaborations across various professional domains including academic, administrative, and technical support, to create an integrative approach to TEL. Recognising the complex nature of educational environments, it suggests that multi-faceted teamwork is key to fostering innovative, adaptive, and effective BL practices.

Literature reviewed in sections 2.3.1, 2.3.2, and 2.3.4, touched on the value of collaboration in educational settings but has often fallen short of outlining a practical framework for implementing this collaborative approach within BL initiatives. Existing literature has either focused on isolated aspects of interprofessional interactions or have not fully explored how such interactions can be integrated into HE institutions. *Addressing strategic potentiality of object-*

*oriented, interprofessional teams in refining BL practices* is positioned to address these limitations by providing a structured framework that harnesses the collective expertise of diverse professional groups, discussed in the findings chapter (Sections 5.2, 5.2.2, 5.2.3 & 5.2.4).

Section 5.2.1 of the findings chapter addresses the value of collaborative, interprofessional teams in fostering a culture of creativity and continuous improvement within TEL. These findings, responding to the research questions (Section 6.2.2), demonstrate how such teams can enhance student engagement and learning outcomes. Drawing from specific instances where interprofessional teamwork has led to significant advancements in BL, the contribution underlines the strategic value of integrating diverse perspectives within educational practices.

Linking to the literature review chapter (Sections 2.3.1, 2.3.2, and 2.3.4), this contribution appeals for future research in this area to consider the interplay between different professional roles and how these can be coordinated to extend the potential of BL. The focus should shift from studying professional roles in isolation to exploring the systemic integration and interaction of these roles to fully understand the complexities and potentials of interprofessional collaboration in TEL. The literature mentioned above serves as a foundation for this fresh avenue of investigation, providing a contrast against which the benefits of *addressing strategic potentiality of object-oriented, interprofessional teams in refining BL practices* can be further explored.



#### **6.4.2 Highlighting the Importance of Environments for TEL Experimentation, Addressing Traditional Barriers to Educational Innovation**

My research contributes to the literature by *highlighting the importance of environments for TEL experimentation, addressing traditional barriers to educational innovation*. Addressing gaps identified in the literature (Sections 2.3.1 & 2.3.4), it advocates for seeing educators as active designers and innovators within educational frameworks (Section 5.2.5), thus challenging traditional constraints and norms. By highlighting the importance of environments that encourage experimentation without fear of failure, my findings suggest a shift towards distinguishing failure as an integral part of the learning process, thereby enhancing the quality of TEL. This contribution not only fills a gap in existing scholarship but also sets a possibility for future research, urging a deeper investigation into how environments for experimentation and a supportive educational ethos can impact pedagogical outcomes. It underlines the necessity for educational institutions and policymakers to reevaluate their stance on academic freedom and risk-taking in pedagogy, advocating for more adaptive, responsive educational systems that value the iterative, experimental nature of teaching and learning.

Highlighting the importance of environments for TEL experimentation emphasises the importance of creating educational settings that actively promote experimentation to enable educators and learners to explore innovative pedagogical approaches without fear of failure. It advocates seeing educators as active designers and innovators within educational frameworks (as

mentioned in the findings Section 5.2.5), thus challenging traditional constraints and norms. By highlighting the importance of environments that encourage experimentation without fear of failure, my findings suggest a shift towards distinguishing failure as an integral part of the learning process, thereby enhancing the quality of TEL.

The literature reviewed in sections 2.3.1 and 2.3.4 highlights a general interest in the role of innovation in educational settings but often explains a cautious approach focused more on controlled, predictable outcomes rather than genuine experimentation. Additionally, Section 5.2.5 of the findings highlight the organisational constraints that typically inhibit such experimental approaches. This indicates a gap in models that integrate experimentation as a core component of educational practice, often due to the perceived risks associated with departing from established norms and the potential for failure.

## **6.5 Institutional Policy on Technology Enhanced Learning in Higher Education**

### **6.5.1 Advocating the Value of Adaptable Governance in Developing Effective Institutional Strategies for Teachers**

My research contributes to the literature on institutional policy on TEL in HE by *advocating the value of adaptable governance in developing effective institutional strategies for teachers*. It addresses gaps in context-aware institutional policies identified in the literature (Sections 2.4.1 & 2.4.2) and accentuates the need to tailor BL strategies to meet the unique needs of educational institutions. This also challenges the prevailing one-size-fits-all

models and advocating for tailored approaches that consider environmental, cultural, and organisational factors.

In Sections 2.4.1 and 2.4.2, the literature review identifies a significant gap in the existing research concerning the adaptation of institutional policies to the specific needs of educational environments. Previous studies have often focused on generic strategies that overlook the nuanced differences between institutions, failing to account for the challenges and opportunities that specific contexts present. The literature highlights the need for a more context-aware approach but does not provide actionable frameworks for institutions to adopt.

The findings discussed in Section 5.2.5 inform this contribution's intention to advise how institutional culture, stakeholder beliefs, and resources influence blended learning's design, implementation, and sustainability. Furthermore, it calls for a shift in evaluating blended learning success, suggesting more holistic and flexible frameworks to better reflect diverse educational contexts' nuanced improvements and challenges. They also demonstrate how institutions that have embraced adaptable governance structures are better positioned to tailor their TEL initiatives effectively.

Overall, this research promotes a nuanced perspective on institutional strategy formulation for blended learning, urging a move towards more tailored, responsive, and inclusive frameworks that align with institutions' broader educational missions and values. Future research should focus on developing and analysing specific, context-sensitive governance models that can be

adapted to different institutional settings. Researchers should explore how varying degrees of governance flexibility affect the implementation and outcomes of blended learning initiatives. Drawing on the insights from Sections 2.4.1 and 2.4.2, it is necessary to investigate further how tailored governance approaches can accommodate diverse educational needs and how these approaches impact the overall effectiveness of TEL strategies. This line of inquiry should also consider the interplay between institutional culture, stakeholder beliefs, and resource availability in shaping the design and sustainability of blended learning. Such research could lead to more actionable strategies that help institutions implement effective and adaptable TEL governance.

### **6.5.2 Promoting Dynamic and Integrative approaches to Continuous Improvement and Evaluation**

*Promoting dynamic and integrative approaches to continuous improvement and evaluation*, discussed in Section 5.2.1, contributes to the literature on quality assurance in blended learning. My research highlights the necessity of critical reflection and staying abreast of technological and pedagogical developments, addressing the dynamic nature of TEL identified as a gap in the literature review (Section 2.4.1). This contribution indicates a need for a re-evaluation of current methodologies and structures to incorporate a more responsive approaches to quality assurance (Xiao 2019). Traditional models, often static and rigid, may no longer suffice in an educational context that is continually transformed by digital innovation (Flavin and Quintero 2018; Bell et al. 2009). As such, future research

should pivot towards developing and implementing strategies that not only accommodate but also leverage the flexibility fundamental in TEL environments.

Future research could focus on methodologies that prioritise adaptability and responsiveness, which could involve exploring more nuanced quality assurance frameworks that can evolve with the pace and scale of technological advancements. Additionally, there is a need to address how quality in blended learning is conceptualised and measured, moving away from static benchmarks towards more dynamic and iterative evaluation processes. In essence, this contribution invites a rethinking of quality assurance in blended learning. It suggests a shift towards a paradigm where continuous improvement and adaptability are central, thereby ensuring that educational practices not only keep pace with but also fully exploit the opportunities presented by the rapid progression of technology-enhanced learning.

### **6.5.3 Promoting The Introduction of Hard and Soft Rules for the Governance or TEL**

*The introduction of 'hard' and 'soft' rules for the governance of TEL*, detailed in Section 5.2.5, contributes to the discourse on institutional policy on TEL in HE. This view introduces a dual approach of 'hard' and 'soft' rules to govern TEL in HE. 'Hard' rules refer to non-negotiable standards essential for maintaining educational quality, while 'soft' rules are adaptable guidelines that encourage pedagogical creativity and innovation.

The literature explored in Sections 2.4.2 and 2.4.3 stresses the importance of governance in shaping the effectiveness of TEL initiatives but often critiques existing models for being either too rigid, stifling innovation, or too lax, risking the dilution of educational quality. This indicates a need for governance models that can support both standardisation and innovation, without proposing viable frameworks that address these dual needs effectively.

The findings in Section 5.2.5 supports the necessity and potential effectiveness of *the introduction of 'hard' and 'soft' rules for the governance of TEL*. It demonstrates that institutions implementing a balanced governance approach can achieve success in fostering an environment where faculty can innovate within a framework that also ensures the academic quality. Participants highlighted how this governance model can lead to increased faculty adoption of TEL practices, improved student engagement, and enhanced sustainability of innovative pedagogical practices under.

Future research should explore how different combinations of 'hard' and 'soft' rules impact various dimensions of TEL, such as faculty adoption rates, student satisfaction, and learning outcomes. Building on the gaps identified in Sections 2.4.2 and 2.4.3, studies could also explore the balance between these rules to maximise both innovation and quality in TEL. This future research would not only test the efficacy of *the introduction of 'hard' and 'soft' rules for the governance of TEL*, but also contribute to a more nuanced understanding of governance in educational settings, leading to more effective TEL policies.

In reflecting on the methodological contributions of this research, the Change Laboratory approach emerges as a significant approach for addressing the complexities of developing blended learning in higher education. By engaging academic staff as central stakeholders, the CL methodology provided a structured yet flexible framework for identifying systemic contradictions and fostering expansive learning. Unlike prescriptive or top-down models, the CL approach enabled a participatory process that bridged the gap between institutional aspirations for BL and the lived realities of educators tasked with its implementation. The iterative nature of the methodology, combining mirror data, task stimuli, and collaborative modelling, allowed diverse voices to co-create a context-responsive activity system that was both aspirational and practical.

This research underscores the potential of the CL approach to empower academic staff by promoting agency, reflection, and collective problem-solving. It demonstrated how academic staff, often underrepresented in strategic decision-making, can play a transformative role in shaping institutional practices when provided with an inclusive and dialogical platform. Moreover, the CL methodology's ability to incorporate diverse stakeholders, including IT personnel, administrators, and students, ensured that the resulting frameworks addressed multiple perspectives and needs. The success of this participatory process highlights the value of the CL approach not only as a tool for developing BL but also as a means of fostering a culture of continuous improvement and innovation within higher education institutions. This work represents an original contribution to the field,

advancing the use of expansive learning theories to tackle systemic challenges in technology-enhanced education.



## **Chapter 7: Conclusion**

### **7.1 Introduction**

This chapter brings together the key findings and insights from my research on the integration of TEL at Lancaster University (LU), focusing particularly on blended learning (BL). It revisits the research questions, summarises the main findings, discusses the limitations, outlines contributions to the literature, and explores the implications for policy, practice, and future research. This concluding chapter aims to provide a coherent synthesis of the study's outcomes and their significance within the broader context of TEL in higher education.

### **7.2 Key Findings**

The findings underscore the importance of prioritising academic staff perspectives in discussions of blended learning. Their insights not only reveal systemic contradictions but also highlight practical pathways for innovation. By centring these voices, this research contributes a nuanced understanding of the challenges and opportunities inherent in technology-enhanced education.

The findings emphasised two main obstacles hindering the effective integration of TEL within the university. Firstly, faculty resistance emerged as a contradiction, largely driven by the concerns about the steep learning curve associated with new technologies (Section 5.6.3). Concerns over the time and effort required to learn new tools were evident and often seen as distracting from their main responsibilities. Alongside this there was a perceived lack of

institutional support for professional development, leaving staff feeling underprepared and lacking in support of their efforts to integrate TEL effectively (Section 5.9.3). This gap between the available technological tools and the pedagogical alignment needed for their effective use has created a difficult environment for adopting TEL practices.

The findings also point out that successful TEL integration depends on widespread training programmes and robust ongoing support systems. These programmes are essential not only for enhancing technological proficiency among educators but also for ensuring that TEL tools are used effectively to meet pedagogical goals. Findings suggested that training should be continuous and aligned with the educators' needs, helping to bridge the gap between the potential of TEL tools and their practical application in educational settings (Section 5.9.5). This approach fosters an environment where technology serves as a facilitator of effective teaching and learning, rather than a barrier.

The importance of clear communication from the institution regarding the benefits of TEL, which helps create a supportive culture around its use, was another key finding. By developing policies that promote a sustained adoption of TEL and address both the immediate and long-term needs of faculty, institutions can foster a more conducive environment for the integration of technology in education (Section 6.6.3). These strategies should aim to make TEL a core component of educational practices, supported by administrative policies and resources that encourage its use and development.

Chapter 1 presented one over-arching research question, looking to address what the potentiality of a stakeholder created activity system in supporting TEL in the institution looks like. Sub-questions aimed at exploring stakeholders' perceptions and development of a culturally advanced activity system to support blended learning, its creation through expansive learning cycles, and its potential for resolving contradictions in the existing activity system.

The study revealed that such a system, when thoughtfully designed and implemented, holds the potential to enhance educational practices. It not only fosters a more engaging and responsive learning environment but also aligns technological tools with the institutional mission and educational goals. It also proposes a conceptual diagram representing different elements of TEL at Lancaster University, structured in parallel to Vygotsky's Zone of Proximal Development (ZPD) (Section 6.2.4 – Figure 6.4).

Stakeholders perceived TEL integration as a potentially transformative approach for enhancing educational access and quality. However, their perceptions were tempered by concerns over existing contradictions, particularly the misalignment between pedagogical needs and the available technological resources (Section 5.4.3). This underscores the necessity for institutions to consider stakeholders' perspectives in developing effective TEL strategies.

The development process, facilitated by Change Laboratory sessions, involved stakeholders in dialogue about their current practices and envisioned futures (Section 5.5.1). Through expansive learning, stakeholders collaboratively

identified key contradictions in the existing system and explored solutions to overcome these challenges (Section 5.7.1). This collaborative process was key in developing a shared understanding and commitment to a new, more culturally advanced activity system that aligns more closely with the changing needs of the university.

The findings suggest that the newly developed activity system has the potential to resolve several contradictions within the existing TEL framework, such as the misalignment between technology and pedagogy and the lack of support for faculty development (Section 5.5.6). By offering a more integrated and supportive approach, the new system can enhance the effectiveness of TEL initiatives, making them more sustainable and impactful over time.

In conclusion, the research conducted provides a comprehensive view of the potentiality of a stakeholder-created activity system to significantly enhance TEL integration at Lancaster University. It contributes to the academic discourse by offering actionable insights and strategies for other institutions to consider, potentially leading to widespread improvements in higher education through enhanced technology integration.

### **7.3 Limitations**

While the research provides valuable insights into the potentiality of a stakeholder-created activity system to enhance TEL practices, it is important to acknowledge the limitations that may affect the extent to which the findings of the study can be applied to other situations and other institutions. Factors such

as the specific characteristics of the participant group, the scope of the Change Laboratory interventions, and the institutional setting were key in shaping the outcomes, potentially limiting the applicability of the results beyond the studied environment.

The research aimed to draw on the contributions from a diverse group of stakeholders at Lancaster University. However, there are some limitations concerning the scope of the participant group that merit consideration. While efforts were made to include a range of perspectives from academic and professional staff, additional participation from set curriculum areas from within the institution would have been an improvement. The study did have a good range of academic and professional service contribution; however the inclusion of every area would have provided more detailed local contradictions and potential solutions.

While this research involved diverse stakeholders, its primary focus was on academic staff. This decision reflects the pivotal role that educators play in designing, delivering, and sustaining blended learning practices. Although perspectives from other groups, such as administrators, IT personnel, and students, were incorporated, the findings and recommendations prioritise the lived experiences and professional expertise of academic staff.

Further to this, the recruitment strategy did not actively include faculty and staff who are less engaged with TEL. Their absence could limit the understanding of the full range of attitudes toward TEL at the university, particularly views that

could highlight challenge or apathy. The omission of students for participation in the Change Laboratory sessions potentially restricts the study's capacity to directly address student experiences and impacts, which are crucial for evaluating the effectiveness and reception of TEL practices from the learner's perspective. Although student feedback was used throughout the project, firsthand and direct engagement in the CL sessions may have added to the collaborative CL process.

The CL methodology, while facilitating deep discussions and collaborative problem-solving, also has limitations. The success of the methodology relies heavily on the active and sustained engagement of participants, which can be challenging to maintain over multiple sessions. On occasions, the work commitments of participants took precedence and therefore were unable to attend the scheduled sessions. This did only occur on a small number of occasions, but these occasions could have led to a reduction in the data collected as a result. Moreover, the dynamics within the group, such as power relations, communication styles, and group cohesion, could have been altered due to the attendance issues, which were not considered at the time. These changing group dynamics may have affected the openness of the discussions and the willingness of participants to challenge existing practices or propose changes.

While the online format of the CL sessions afforded many benefits, it also created potential limitations that could impact the depth and quality of stakeholder engagement. Online interactions can sometimes hinder the depth of

communication that is more easily achieved in face-to-face settings. Nonverbal cues such as body language and eye contact, which play a significant role in understanding and trust-building during discussions, are less noticeable in virtual environments, which can affect how participants interact with each other. Additionally, the online format may encounter technology-related issues, such as connectivity problems or lack of familiarity with digital tools, which can impede their ability to engage fully in the sessions. During the first session, one participant struggled with the technology used to a degree. This did set the timings of the session back slightly. There is also the possibility of 'Teams fatigue,' with prolonged video conferencing there is the potential reduction of participants' focus and engagement over time. On occasions, reference was made by some participants about the volume of online meetings they had attended. This did not seem to impact on their engagement and contributions during the CL sessions, but it is a factor to note. Furthermore, the virtual setting might deter full participation from individuals who are less confident or less skilled in articulating their thoughts in an online environment. This could lead to a scenario where the voices of more technologically adept or outspoken participants dominate the discussions, potentially skewing the findings towards their perspectives. Again, this was not evident as all participants contributed effectively, and I made sure all participants were afforded the opportunity to share throughout the CL sessions and activities. Addressing these issues, future iterations of the project could consider a blended approach that combines online and face-to-face elements, ensuring that the benefits of both modalities are harnessed. Additionally, more robust technological support and training could be

provided to all participants to ensure equitable participation and mitigate the challenges associated with virtual engagement.

The data collected through workshop recordings, transcripts, session chats, and participant-created artefacts were subject to interpretation, which introduces an element of researcher bias. While measures were taken to ensure rigorous data analysis, including triangulation, the interpretative nature of qualitative research means that different researchers might draw different conclusions from the same data set.

The study captures a snapshot of the process of creating a stakeholder-created activity system for TEL at a specific point in time. The long-term sustainability and impact of the newly developed activity system remain uncertain. Changes in university policy, shifts in educational technology, or variations in stakeholder commitment over time can all influence the effectiveness and sustainability of the suggested strategies.

External factors such as changes in educational technology, policy shifts at the national or international level, or economic pressures may impact the implementation and success of TEL strategies. These factors were not the focus of the current study but could impact the applicability of the findings.

The focus of this study on a single institution, Lancaster University, presents both strengths and limitations. While this approach allows for a deep, context specific understanding of TEL integration within a particular setting, the findings may not be directly applicable to other universities with different cultural,



technological, and pedagogical backgrounds. Each HE institution operates within its own constraints and opportunities, influenced by its organisational structure, student demographics, and available resources. Therefore, while the strategies and models developed through this research may serve as a valuable reference point, rather than a direct instruction if applied to different institutional contexts.

While this thesis contributes important insights into the potential of stakeholder created activity systems to enhance TEL practices, these limitations must be considered when interpreting the findings. Future research could aim to include a broader array of participants, extend to multiple institutions to enhance the generalisability, and consider long-term studies to assess the sustainability of any implemented changes.

#### **7.4 Contributions to the literature**

Throughout my study, I have focused on addressing the research shortcomings highlighted in the literature. After detailing my contributions in section 6.3, I provide an overview of these key contributions here. I present them in Table 7.1, which is organised according to the research areas and themes outlined in Chapter 2.

Table 7.1 - Summary of contributions to new research knowledge

Research Area	Themes from Literature Review	Contribution to New Knowledge
<b>Changing Technology Enhanced Learning Practice in Higher Education</b>	<b>Blended Learning Initiatives to Promote Student Engagement</b>	<i>Addressing strategic potentiality of object-oriented, interprofessional teams in refining BL practices.</i> Refining BL practices through cooperative collaborations across various professional domains including academic, administrative, and technical support, to create an integrative approach to TEL.
	<b>Organisational Culture and Technology Enhanced Learning Innovation</b>	<i>Highlighting the importance of environments for TEL experimentation, addressing traditional barriers to educational innovation.</i> Seeing educators as active designers and innovators within educational frameworks. The necessity for educational institutions and policymakers to reevaluate their stance on academic freedom and risk-taking in pedagogy, advocating for more adaptive, responsive educational systems that value the iterative, experimental nature of teaching and learning.
	<b>Impact on Teaching and Learning Practices</b>	<i>Highlighting the importance of environments for TEL experimentation, addressing traditional barriers to educational innovation.</i> Promote experimentation to enable educators and learners to explore innovative pedagogical approaches without fear of failure.
	<b>Student and Staff Perspectives</b>	<i>Addressing strategic potentiality of object-oriented, interprofessional teams in refining BL practices.</i> Underlining the strategic value of integrating diverse perspectives within educational practices.

Research Area	Themes from Literature Review	Contribution to New Knowledge
<b>Institutional Policy on Technology Enhanced Learning in Higher Education</b>	<b>Institutional Policy Development and Implementation</b>	<i>Creating adaptable governance in developing effective institutional strategies for teachers. Ensuring context-aware institutional policies, moving away from one-size-fits-all models.</i>
	<b>Institutional Support and Resources</b>	<i>Promoting dynamic and integrative approaches to continuous improvement and evaluation. Multifaceted teamwork is key to fostering innovative, adaptive, and effective BL practices</i>
	<b>Fostering Faculty Engagement with TEL</b>	<i>The introduction of 'hard' and 'soft' rules for the governance of TEL. 'Hard' rules refer to non-negotiable standards essential for maintaining educational quality, while 'soft' rules are adaptable guidelines that encourage pedagogical creativity and innovation.</i>

My contributions are around changing technology enhanced learning practices in higher education and the role of institutional policy on technology enhanced learning in higher education. They include highlighting the role blended learning initiatives play in the promotion of increased student engagement, and how fostering cooperative collaborations across multiple professional areas, integrating academic, administrative, and technical support to create a holistic approach to TEL support this endeavour.

Furthermore, I highlight the role of educators as active designers and innovators within educational frameworks, urging educational institutions and policymakers to reconsider their stance on academic freedom and risk-taking in pedagogy. This advocates for more adaptive, responsive, and iterative educational systems that emphasise learning through and experimental nature. This would allow

educators and learners to explore innovative educational approaches without fear of failure.

### **7.5 Implications for policy**

In Chapter 1, I discussed the broader context of policy development within the field of TEL, exploring the efforts at the international, national, and institutional levels, highlighting key initiatives and the visions projected. Also, I highlighted the role that institutional policies play in shaping the adoption and effectiveness of TEL practices. Building on this, this study suggests the need for policy frameworks that are not only supportive but also adaptive to the changing educational technologies and pedagogical strategies.

The research highlights the necessity for policies that facilitate not just the adoption but also the sustained integration of TEL, meaning they are designed to support continuous professional development and access to resources, ensuring that educators are well-prepared to employ TEL practices effectively. This aligns with the points raised in Chapter 1 about the potential of policy to enable or hinder educational innovation. Effective TEL integration requires support structures that are reflected in policy, meaning institutions should consider policies that create and sustain support systems such as pedagogical support units, and communities of practice (Sections 5.9.5 & 5.11.5). These structures can assist in reducing the resistance to technology observed among faculty, as noted in the findings.

Policies should be flexible enough to accommodate diverse pedagogical and departmental needs, which this study's use of the Change Laboratory methodology highlights. It demonstrates the benefits of engaging multiple stakeholders in the policy-making process, ensuring that policies are not only informed by ground-level experiences but also adaptable to specific contexts.

## **7.6 Implications for practice**

In Chapter 1, I introduced the practice challenges associated with implementing TEL, such as alignment of technology with pedagogical goals and faculty engagement and inadequacies in digital infrastructure. The participant created blended learning activity system (ABLE) in my research addresses these challenges, offering solutions that could overcome these challenges and offer alternative approaches for the institution.

My research suggests the implementation of comprehensive, ongoing training programmes (as detailed in the ABLE activity system – Section 5.2.1) tailored to the specific technological and pedagogical contexts of faculty members can support the development of effective TEL and blended learning practices. Such programmes should not only focus on the technical aspects of TEL but also on integrating technology into teaching in meaningful ways.

Practices should encourage a culture of innovation within educational institutions. This involves not only adopting new technologies but also rethinking pedagogical approaches to include more collaborative and student-centred learning experiences. The inclusion of students as 'subjects' and in the 'division

of labour' in the ABLE activity system highlight the role they have to play in contributing to this new culture. Institutions may adopt practices that promote risk-taking and experimentation with new teaching methods and technologies, which the ABLE activity system addresses in the 'risk free pedagogy' approach.

The process of conducting the Change Laboratory provided insights into how collaborative, formative interventions can serve as powerful tools for developing institutional practices. This model proved effective in engaging stakeholders actively in the process of change, making it a valuable model for other institutions seeking to tailor to their TEL strategies. The participatory nature of this methodology not only facilitates engagement but also ensures that the solutions developed are directly relevant to the users' needs. Encouraging broad stakeholder engagement in the development and refinement of TEL practices can also lead to more inclusive and effective educational technologies. Reflecting on the Change Laboratory process, this participatory approach should be considered effective for other institutions aiming to develop their tailored TEL solutions. This method allows for specific local needs to be addressed, while fostering a sense of ownership and commitment among participants.

By explicitly connecting these implications back to the issues discussed in Chapter 1 and ensuring that each section builds on those initial points without excessive repetition, this section of the thesis provides clear, strategic directions for both policy and practice, informed by the comprehensive research conducted.

## **7.7 Implications for future research**

My project exceeded my expectations on the successful implementation of an online Change Laboratory and the engagement and output from the participants. Building on the findings and contributions of this thesis, there are areas where future research could further expand the understanding of TEL in HE. These suggestions not only aim to extend the current study's insights but also to explore new avenues that could inform TEL practices more broadly.

To further investigate the role of 'risk free' pedagogical approaches and the potential for 'hard' and 'soft' rules, a mixed-method research approach could be undertaken. This would ensure a comprehensive analysis of the implementation and outcomes associated with these approaches in a higher education context. A mix-method research approach could capture both qualitative and quantitative data where a comparative study assesses the different combinations of 'hard' and 'soft' rules across various curriculum areas or departments. Representation from a representative sample of faculty and student would allow for detailed data to be captured and analysed. This could lead to the development of a framework that illustrates the relationship between institutional culture and TEL effectiveness in HE institutions, as well as offer the potential for tailored recommendations for initiatives and strategies to support TEL adaption across faculties and the wider institutions.

Additionally, the role of 'educational cultures' and the impact on TEL engagement in UK higher education can be further explored. Specifically

contrasting research-intensive and teaching-intensive institutions including post-1992 universities and Russell Group universities would offer opportunities to explore cultural nuances to a greater degree. Selecting institutions would depend on the level of TEL maturity within them, with the data collection focusing on reviewing strategic documentation, TEL policy papers, staff surveys, interviews, and focus groups to drill down into specific cultural elements that facilitate or restrict TEL adoption. This could lead to the development of a structured framework that illustrates the relationship between institutional culture and TEL effectiveness in HE.

To further investigate and develop a 'peer observation framework' that supports the advancement of blended learning in HE, a Change Laboratory approach could be used to conduct a series of workshops where appropriate stakeholders work collaboratively to design, implement, and evaluate its success. An initial pilot implementation of the new framework would be confined to a small environment, such as a department or curriculum area, in one or two HE institutions. During the pilot and full implementation phases, data would be collected during CL sessions on how the framework is used and its effects on teaching practices. By adopting the CL approach, the research would engage stakeholders in the development process and ensure that the peer observation framework is rooted in the practical and cultural realities of the institutions/departments involved.



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## **Appendix**

### **Participant Information Sheet**

***Title of Project:*** Change Laboratory and Technology Enhanced Learning Policy and Practice

Dear participant,

I would like to invite you to take part in my PhD thesis research with the Department of Educational Research at Lancaster University.

Before you decide if you wish to take part you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

#### **The purpose of the study**

This research is for my thesis on the PhD in E Research and *Technology Enhanced Learning (TEL)* programme within the Department of Educational Research at Lancaster University. My research project attempts to understand the kinds of technology enhanced learning policy that stakeholders would

develop themselves and how that policy relates to the history and context of practice in the institution. The project will also attempt to understand the extent to which participatory development of such policy develops the agency of stakeholders to pursue and enact it.

### **Why have I been invited to participate?**

You have been invited to participate because I believe you can offer an important perspective on current policy and practice across the institution, as well as offering a personal account. In addition to this you offer the opportunity to contribute your voice and support the development of a collaborative cross institutional approach to digital teaching and learning policies and practice.

### **Do I have to take part?**

No, your participation is entirely voluntary. If you do not wish to take part, then please let me know. If you do not wish to be observed or recorded, please indicate this. Every effort will then be taken to ensure that your data/voice is removed from recordings by editing out where possible or excluding such data from any transcription.

You can withdraw at *any* time during the study and there is absolutely no obligation on you to continue nor penalty for withdrawing. Any data collected throughout your participation will be anonymized and remain part of the study.

### **What will I have to do?**

If you decide to take part, you will attend the 60-minute bi-weekly Change Laboratory online Teams sessions and take part in some collaborative activities aimed at reviewing current institutional approaches and developing new models going forward. Wednesday 4-5pm will be set as a re-occurring online meeting to attend, with recordings viewable if a session cannot be attended. Session content will develop and change based on the session's discussions, but initially you will contribute to:

- Questioning about current institutional approach to blended learning.
- Developing a blended learning model fit for research intensive HE institution.
- Developing an individual charter on digital practice.

### **Protecting your data and identity**

#### **What will happen to the data?**

'Data' here means the researcher's notes, workshop outputs, video (Teams) recordings and any Teams chat in the sessions and time between. The data will be securely stored for ten years after the successful completion of the PhD Viva as per Lancaster University requirements, and after that any personal data will be destroyed. Video recordings will be stored in the Teams space and secure OneDrive, accessible by participants and researcher only.

Participants will have ongoing access to some data as the project proceeds, but will not be able to access data that would potentially compromise the anonymity of other participants. Participants can withdraw at any stage, but cannot withdraw any data already contributed as it will already have formed part of the

ongoing discussions in the workshops. However, where participants do withdraw then extracts from their data will not be quoted in reports arising from the research.

You have the right to request this data is destroyed at any time during the study as well as having full protection via the UK Data Protection Act. The completion of this study is estimated to be by December 2022 although data collection will be complete by December 2021 or January 2022 at the latest.

Data will only be accessed by myself and my supervisor.

The research may be used for journal articles and conference presentations.

### **How will my identity be protected?**

A pseudonym will be given to protect your identity in the research report and any identifying information about you will be removed from the report. All pseudonyms will be securely stored and kept by myself.

### **Who to contact for further information or with any concerns**

If you would like further information on this project, the programme within which the research is being conducted or have any concerns about the project, participation or my conduct as a researcher please contact:

Dr Brett Bligh

Email: [b.bligh@Lancaster.ac.uk](mailto:b.bligh@Lancaster.ac.uk)



## CONSENT FORM

**Project Title:** Change Laboratory and Technology Enhanced Learning Policy and Practice

**Name of Researcher:** Dale Munday

**Email:** d.munday@lancaster.ac.uk

**Please tick each box**

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily
2. I understand that my participation in this research study is voluntary. If for any reason I wish to withdraw during the period of this study, I am free to do so without providing any reason. I understand that my contributions to the workshop activities will be part of the data collected for this study and my anonymity will be ensured. I give consent for all my contributions to the workshop to be included and/or quoted in this study.
3. I consent to the Change Laboratory sessions being audio/video recorded and transcribed.
4. I understand that any information disclosed within Change  Laboratory sessions remains confidential to the group, and I will not discuss the sessions with or in front of anyone who was not involved.
5. I understand that any information given by me may be used in future reports, academic articles, publications or presentations by the researcher, but personal information will not be included and I will not be identifiable.
6. I understand that data will be archived indefinitely at the end of the study.
7. I agree to take part in the above study.

**I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.**

**Name of Participant** \_\_\_\_\_

**Signature** \_\_\_\_\_

**Date** \_\_\_\_\_ Day/month/year