Flipped Learning Perspectives: Capturing Further Education Midwifery Learners' Perceptions of Engagement and Educator Reflections on a Structured Design Approach to Flipped Week.

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Abstract.

Flipped learning is an inclusive learner-centred pedagogy based on activity completion pre-class with time allowed in class for engagement with other learners and methodologies. This paper focuses on a qualitative study undertaken in a further education institution in Ireland between January and March 2023. The aim of the study was to capture midwifery learners' perceptions of flipped learning, including its affordances and challenges, and to gather insights into their engagement with the process. This study aimed to fill a gap in existing research, as no evaluation of a piloted Flipped Week had previously been conducted within an ETB setting in Ireland. Through this study, we show that learners engaged and embraced the inclusive flipped learning experiences, which they perceived as enhancing their overall learning experience. The findings point to the effectiveness of a structured and guided approach to flipped learning in promoting the development of self-regulated, lifelong learners. A key recommendation is to explore initiatives such as a flipped learning week as a way to promote long-term engagement with this pedagogical approach.

Keywords: Flipped learning; Further education; Inclusive learning; Learner engagement; Qualitative research.

1. Introduction.

1.1 Flipped Learning: Overview and setting the scene.

Flipped learning is an innovative, intentional, and inclusive pedagogical approach that brings learners to the forefront of teaching and learning (Bergmann & Sams, 2014). It is based on the concept of completing guided activities prior to class, so that valuable in-class time is then available for learners to engage with multiple inclusive methodologies through the application of their prior foundational knowledge. The pioneers of flipped learning, Bergmann and Sams (2012, p. 13), interpret it as "*that which is traditionally done in class [...] now done at home, and that which is traditionally done as homework [...] now completed in class*." Rather than being passive recipients of information, learners engaging in active learning are "*doing things and thinking about the things they are doing*" (Bonwell & Eison, 1991, p. 19). In that regard, the concepts of flipped learning and active learning are intertwined. Notably, in a landmark study on active learning, Freeman et al. (2014) found that learners in STEM[1] courses are on average 1.5 times more likely to fail in a traditional approach, where educators typically transfer information through lecturing, whilst test scores are more likely to improve in an active learning environment. This is compelling for flipped learning, because we see that its key benefit is to create "*time to do active learning in the group space and increase student engagement*" (Talbert, 2017, p. 22).

As there was evidence calling for qualitative research on learners' flipped learning experiences (Abeysekera & Dawson, 2015), this study aimed to capture learners' perceptions of flipped learning and to gather insights of their engagement with the process. In the paper, we present the perceptions of midwifery learners who participated in a flipped learning intervention as part of a Level 5[2] QQI Safety and Health at Work module, offered within a Midlands-based Education and Training Board (ETB)[3] further education institution in Ireland.

Out of twelve learners who had enrolled for the programme, nine volunteered to participate in the study. The research study was conducted between January and March 2023 and included four face-to-face classes held during a week called Flipped Week, where learners participated in two one-hour classes, and one two-hour class, all designed using a flipped learning approach.

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[1] STEM courses are courses related to academic areas such as Science, Technology, Engineering, and Mathematics.

[2] A Level 5 Certificate awarded by Quality and Qualifications Ireland (QQI), which is responsible for quality assurance in further and higher education in Ireland, is recognised throughout Europe offering flexible education and work pathways. https://www.qqi.ie/national-framework-of-qualifications#alevel-5

[3] An Education and Training Board (ETB) is responsible for the provision of education and training across a broad range of colleges, and other educational centres, within their respective region in Ireland. https://www.etbi.ie/etbs/

After the focus group, it took time to devise and design the Reflective Booklet, which was based on the learners' comments in the focus group. This afforded the learners time to reflect further on their Flipped Week experiences.

1.2 Flipped Learning: What is it and what are learners saying?

In 2014, The Flipped Learning Network (FLN)[3] identified what are known as the Four Pillars of Flip. These pillars serve as essential guiding principles that must be incorporated by educators into their practice in a flipped learning approach. The pillars coalesce around a flexible environment, a learner-centred culture, intentionally rich content, and a professional educator. Bergmann and Sams (2012) call for a high degree of flexibility whereby learners access new instructional content whenever and wherever they choose, at a pace that works best for personalised learning. Learners personalise their learning when engaging with pre-class activities, by watching and rewatching videos at their convenience (Drumm, Griffin, & Pollock, 2023). Additionally, learners claim that they become more actively engaged through group methodologies used as part of flipped learning activities (Gonzales, 2019).

Another key element of a flipped learning approach is the intentional design of pre-class activities by the educator. These activities such as videos, audio clips, and interviews provide learners with a valuable learning experience (Forsey, Low, & Glance, 2013). In addition, learners appreciate the educator's role in fostering collaboration, reporting improved relationships with both their peers and educator (Steen-Utheim & Foldnes, 2018), thereby highlighting the collaborative affordances of flipped learning. Nevertheless, despite these perceived benefits, there is evidence that educators may still not fully grasp the guiding principles of flipped learning to effectively engage learners (O'Flaherty & Phillips, 2015).

1.3 Is engagement the key to flipped learning's success?

The success of flipped learning hinges on engagement (Smallhorn, 2017), a construct involving the interplay of cognition, behaviour, and emotion (Fredricks, Blumenfeld, & Paris, 2004). This multifaceted engagement is a key factor in flipped learning's effectiveness.

1.3.1 Cognitive engagement.

When learners are cognitively engaged, they willingly take responsibility for and proactively manage their learning, and in so doing, feel competent and relate better to others (Fredricks et al., 2004). Pre-class activity is a crucial component of flipped learning; however, learners'

[3] Flipped Learning Network (FLN). (2014). The Four Pillars of F-L-I-P™. https://flippedlearning.org/definition-of-flipped-llearning/

unwillingness to complete it beforehand represents a challenge and potential weakness (Fisher, LaFerriere, & Rixon, 2020). Conversely, learners make a counterclaim reporting that flipped learning motivates them to take responsibility for completing pre-class activities (Aidoo, Vesterinen, Macdonald, Gísladóttir, & Pétursdóttir, 2022). It is also suggested that flipped learning can foster confidence (Gonzales, 2019), as evidenced by learners who inform that prior learning enhances their confidence to engage competently with active methodologies (Gencel-Evin, 2020), whilst the provision of collaborative opportunities is reported to promote belonging (Steen-Utheim & Foldnes, 2018).

Structure and guidance: Building foundations for engagement and self-regulated learning.

Talbert (2017) asserts that pre-class activity must be structured and guided otherwise flipped learning does not exist. Others claim that learners "*want and require clear structure and guidelines*" to engage with flipped learning (Wanner & Palmer, 2015, p. 354). Learners robustly support these views expressing satisfaction with easily accessible, well-structured materials that foster productive class engagement (Forsey et al., 2013). However, learners can feel lost when instructions are unclear (Strayer, 2012), especially when combined with poor structure and inadequate guidance, leading to confusion and resulting in an unsuccessful flipped learning implementation (Leão, Coelho, Campana, & Viotto, 2023).

Time management for pre-class activity completion and pedagogical preference.

Flipped learning is predicated on the completion of guided pre-class activities, so time management is essential for successful learner engagement. Time management, a key feature of self-regulation, enables learners to plan, monitor, control, and reflect on their cognition, behaviour, and emotions to achieve learning goals (Pintrich, 2004). It is claimed, however, that learners may lack the necessary time-management skills (Wanner & Palmer, 2015) to "*invest time upfront*" (McLaughlin et al., 2014, p. 239). Conversely, learners report finding it easy to manage work and college commitments within a flipped learning approach (Fisher, Ross, LaFerriere, & Maritz, 2017; Gencel-Evin, 2020). An alternative view is proffered in Tomas, Evans, Doyle, and Skamp's (2019) study where learners report time constraints in completing pre-class activities, because of module assessment commitments, particularly, if all modules are flipped (Wanner & Palmer, 2015). On the other hand, learners express a preference for flipped learning because they want to engage with active methodologies rather than listen to a lecture (Gilboy, Heinerichs, & Pazzaglia, 2015).

1.3.2 Behavioural engagement.

Behavioural engagement is essential for cognitive engagement (Kahu, 2013) and is afforded by flipped learning which requires active participation. When learners are behaviourally engaged,

they enthusiastically participate, attend class (Trowler, 2010), and engage in discussions and active methodologies, all of which influence successful academic achievement (Fredricks et al., 2004).

Collaborative opportunities and participation.

Learners support the evidence presented in McLaughlin et al.'s (2014) study, which suggests that prior learning is a prerequisite for successful teamwork, and they inform that classes are deemed successful when learners can apply prior knowledge (Strayer, 2012). However, what happens if learners do not enjoy teamwork (Deslauriers, McCarty, Miller, Callaghan, & Kestin, 2019)? In contrast, learners in Jensen, Kummer, and Godoy's (2015) study report that they enjoy and value collaborative and cooperative learning (Frederickson, Reed, & Clifford, 2005; Strayer, 2012). However, other learners find teamwork dysfunctional (Fisher et al., 2020), suggesting that group work in a flipped approach is a contested concept; its effectiveness depends on learners' prior knowledge, communication skills, previous collaborative experiences, and context.

1.3.3 Emotional engagement.

Notably, it is claimed that emotional engagement, involving learners' emotions, such as interest and boredom (Fredricks et al., 2004), is an imperative for cognitive engagement (Kahu, 2013). Flipped learning provides opportunities for learners to engage with multiple methodologies (DeLozier & Rhodes, 2017), increasing the likelihood of emotional engagement.

Sparking engagement: Learners' positive and negative emotions.

Learners agree with Knowles' (1980) assertion that adults want real-life, hands-on experiences, which Chis, Moldovan, Murphy, Pathak, and Muntean (2018) suggest are effective in a flipped approach, providing enjoyable edutainment whilst enhancing learners' experiences (Schwartz, Andridge, Sainani, Stangle, & Neely, 2016). Harvard University learners affirm Smallhorn's (2017) suggestion that flipped learning promotes positive perceptions. As the semester progresses, they increasingly favour active methodologies
(Deslauriers et al., 2019) and overwhelmingly approve of, and feel comfortable with, this pedagogical approach (McCabe, 2019). But UK further education learners refute Smallhorn's claim, expressing dislike for the methodologies presented (Little, 2015) and feel uneasy when engaging with them (Strayer, 2012), due to a perceived misalignment between pre-class activities and in-class tasks.

Learners contest the findings in Wanner and Palmer's (2015) study, which claim that technology can be effective in promoting engagement, by highlighting that poor internet connectivity can

impede learning (Aidoo et al., 2022) which leads to frustration (Fisher, 2020). Quizlet[4], a digital flashcard game, offers opportunities for both independent pre-class engagement and collaborative engagement in class. Indeed, it is asserted that Quizlet supports learners to interact flexibly with a variety of learning modes and fosters collaborative interactions (Ryan, Noonan, & McElheron, 2018).

2. Methodology.

This study used a qualitative approach to ascertain learners' perceptions of experiences during the Flipped Week intervention through the collection and analysis of data from sources, including a focus group and handwritten Reflective Booklets. A qualitative approach gave learners a voice (Cohen, Manion, & Morrison, 2018) and supported them to share their views. The study received ethical approval from SETU 's Research Ethics Committee.

2.1 Before Flipped Week: Sparking interest and designing the approach.

I met with the midwifery group two months prior to teaching them. The group included both mature learners[5] and recent secondary school graduates, with the latter forming the larger proportion of the group. This informal meeting offered opportunities to share insights, clarify concerns, and ask questions on flipped learning. Six out of the twelve learners on the programme attended, and during discussions it became apparent that nobody had heard of, or had experienced, flipped learning. Learners seemed intrigued that they could learn by completing guided pre-class activities, and then by helping each other engage in multiple inclusive methodologies during Flipped Week, scheduled for January 2023.

Having heard the focus group would be independently moderated to guarantee anonymity, one learner said, "*It's good to get a voice*." In total, eleven learners participated in four face- to-face classes during Flipped Week. The classes consisted of two one-hour classes, and one two-hour class for the Level 5 QQI Safety and Health at Work module. One of the twelve learners on the programme did not attend Flipped Week and was therefore not eligible to participate in the focus

[4] Quizlet, an online flashcard game, fosters self-regulated learning through fun interactions and is a valuable tool for retrieval practice and spaced retrieval practice. Learners choose from diverse learning modes when engaging with topic content and develop metacognitive skills through self-assessment and instant feedback. In the group learning space, Quizlet Live can foster inclusive effervescent peer engagement. https://www.quizlet.com

[5] Mature learners are those aged twenty-three years or older who return to, or enter, tertiary education for the first time. https://www.qualifax.ie/resources/adult-learners

group. Based on evidence that between six and eight is an optimum number of participants for focus groups (Fowler, 2009, as cited in Cohen et al., 2018), a total of eight learners were invited to attend.

To engage learners, I followed a structured design approach when planning Flipped Week as evidenced in Table 1.

Table 1: Structured Steps in Designing a Flipped Learning Approach

	Pedagogical areas for consideration	**Actions taken**
1	Topic selection	Intentionally selected topics to meet learners' needs.
2	Learning outcomes (LOs)	Provided LOs prior to, and during the sessions. These LOs were clearly aligned to the assessments.
3	Designing lesson plans	Sequenced activities and methodologies to engage learners from the outset.
4	Learner-centred designed materials and resources	Selected pre-class activities that were easily accessible within Microsoft Teams subfolders; these offered flexibility, feedback, choice, and helped reduce cognitive load. All materials and resources were aligned to the LOs and the in-class teaching and learning strategies.
5	Learner activities: worksheets and workbooks	Provided clear instructions to guide the pre-class activities and the in-class methodologies.

2.2 During Flipped Week: How did learners engage?

2.2.1 Pre-class activities for learner engagement.

During Flipped Week, learners actively engaged with pre-class activities, including flashcard sets within Quizlet that I created and Word tables[6], that mirrored the flashcard sets, offering learners alternative learning methods. Learners also engaged with a YouTube video, which I sourced online, and had the option to use a Word transcript to engage with it, if they preferred an alternative format. Furthermore, they engaged with either a guided screencast[8] (4m 39s), or

[6] I uploaded a Word file to Teams containing a table I created that replicated the flashcard set details. This afforded an alternative learning method for the new instructional content. It also offered flexible opportunities for learners to create their own varying revision sheets for retrieval practice. [8] A guided screencast instructs learners to pause the screencast, which is a digital recording of a computer screen including audio narration, at specific points in order to answer focussed questions within guided worksheets. This interactivity reinforces learning and enhances engagement. https://www.cultofpedagogy.com/screencast-videos/

a PDF version of same, which again offered different means of engagement. Whilst engaging with these rich, intentionally designed pre-class activities, learners answered focussed questions within guided worksheets.

2.2.2 Multiple inclusive methodologies to engage learners.

During Flipped Week, learners interacted with multiple inclusive methodologies whilst using workbooks. They engaged in a Think-Pair-Share[7] strategy for retrieval practice, whereby learners recall and apply prior knowledge from memory to reinforce their learning (Agarwal & Bain, 2019), and reflective exercises. Additionally, they engaged with hands-on experiences, including stocktaking a first-aid box, anonymous polling exercises, Quizlet Live, warm/cold calling, and a localised field trip. They also engaged in a pre-class activity which consisted of actively taking notes whilst watching a YouTube video, something which Maycock (2019) highlights as being important when adopting a flipped learning approach. They then participated in peer teaching using the video content.

2.2.3 How I deployed some teaching and learning strategies.

Think-Pair-Share.

I implemented Think-Pair-Share by giving learners one minute to think about a topic and to write the answer in their workbooks. They then shared and discussed their answers with peers, before sharing with the group.

I also implemented an adapted Think-Pair-Share strategy. I devised Reflect-Type-Share and Retrieve-Type-Share, which incorporate the Teams chat feature within a face-to-face classroom setting. These are an adaptation of what educators call Waterfall or Cascade commonly used in online classes.

- I scheduled a Teams meeting for the group to access the Teams chat feature.
- I posted a prompt on Teams.
- Learners had one or two minutes to type their answers on Teams chat on their mobiles or other devices.
- Learners then shared their screens with peers for discussion.

[7] Think-Pair-Share is an inclusive learning strategy designed to engage all learners and promote peer collaboration. Learners are asked to think about a topic during which they may also write, or type, their thoughts. A wait time is provided; on instruction from the educator, learners then share their thoughts with a peer, and then with the group. https://www.chronicle.com/article/how-to-make-your-teachingmore-inclusive/

- Finally, learners simultaneously shared their answers on Teams chat for group discussion.

Quizlet flashcards.

In class, I opened the relevant flashcard set that I created within Quizlet and activated the Quizlet Live feature. Learners joined a game by scanning the QR code or entering a game code, both displayed on the classroom screen, or by clicking a link I shared in Teams chat. Learners could use pseudonyms to remain anonymous. Learners engaged in Quizlet Live for retrieval practice to select the correct answer from the options provided, reinforcing learning.

Word tables.

I created a partially completed Word table mirroring the Quizlet flashcards. As a formative assessment, learners filled in the blanks in their workbooks to reinforce learning. Later, learners could copy this strategy to create personalised revision sheets for exam preparation, using the Word tables available in Teams.

2.3 After Flipped Week: Focus group and reflective booklet.

2.3.1 Focus group: What are learners saying about flipped learning?

An additional learner, who had not initially expressed interest in participating, joined the focus group, bringing the number to nine learners. Eight semi-structured questions were designed, based on evidence that rich data could emanate from fewer rather than many questions (Creswell & Creswell, 2018). The focus group explored themes such as learners' perspectives on in-class methodologies and their levels of engagement, with the aim of identifying which instructional approaches they perceived as most beneficial. The facilitator[8] took detailed notes during the session and subsequently provided them to the researcher for analysis.

2.3.2 Reflective booklet: Capturing learners' perceptions through handwritten reflections.

To enable learners to further reflect on the ideas emanating from the focus group, I devised a Reflective Booklet. Although underused in research, reflective diaries can provide rich data (Kenten, 2010) and provided an opportunity for learners to share their perceptions on Flipped Week anonymously, in case some may have been too shy to speak during the focus group. Each Reflective Booklet, labelled with their speaker number (SP) and provided in an envelope, consisted of questions based on the focus group questions. In the focus group, prompts were not provided to ensure learners' voices would prevail. Here, however, prompts were provided, based on the comments that had emanated from the focus group; this was to support learners to further reflect and to share their perceptions, whilst understanding that their voice was valued.

In March 2023, I gave each learner a copy of the focus group transcript for review and a Reflective Booklet for perusal, both of which were returned to me. Learners were invited to collect their Reflective Booklet during class later that week. Participation in the study was voluntary and consequently learners could choose whether or not to complete the Reflective Booklet. One learner chose to handwrite their Reflective Booklet there and then. Four learners,

[8] I asked a colleague, who was not familiar with the learners, to act as the facilitator for the focus group. Their role included moderating the discussions, assigning speaker numbers, documenting key points, and providing me with the notes taken. This measure helped mitigate ethical concerns related to the power differential arising from my dual role as both assessor of learners' work and researcher in the study. To encourage open discussion, and to further safeguard learners' anonymity, I did not attend the meeting.

who attended class, volunteered to select their Reflective Booklet from the eight envelopes available. In class the following week, I collated the four handwritten Reflective Booklets, in their sealed envelopes, together with one completed earlier and shuffled them in their presence; this ensured that I could not link a learner's identity with their Reflective Booklet, thereby safeguarding their anonymity.

2.4 Data Analysis: Making sense of learners' perceptions of flipped week.

Braun and Clarke's (2022) thematic analysis method was used to analyse the data. This sixstep process for analysing data was seen as an effective way to develop, interpret, and analyse themes. Using the transcript notes captured from the focus group discussions, together with the handwritten reflections from five learners, phrases from both the focus group transcript and the Reflective Booklets were typed into an Excel Workbook and codes were then applied to develop potential themes. These were subsequently transferred to a Word Storyboard[9] and colour-coded for further analysis. The themes were then named and analysed in greater detail.

3. Results: Revealing learners' stories.

3.1 Cognitive engagement during flipped week.

The learners, in this study, cognitively engaged by willingly and actively investing in their own learning and by taking ownership of it. Cognitive engagement, interpreted here as motivation and self-regulated learning, was also indicated by learners who demonstrated self-regulation skills.

3.1.1 Intellectual engagement: Motivating learners.

Learners were motivated and enjoyed managing their own learning during Flipped Week.

[9] As part of the thematic analysis, I created a Word Storyboard, using colour-coded shapes, to visually present potential themes that were developed from the codes. In the completed Storyboard, three themes are vertically aligned under an overarching theme. The top-row shapes contain quotes reflecting learners' insights from the focus group discussions, whilst the shapes underneath reflect further insights which emanated from the focus group that were handwritten in the learners' Reflective Booklets. See Appendix D for an extract of the thematic analysis Word Storyboard.

They expressed their sense of autonomy by reporting that they could self-assess and had choice. SP04 described their engagement by stating, "*You can test your knowledge using the test yourself*" or "*watch a video or do a worksheet*." Learners were confident in their own abilities as reported by SP06 who felt "*confident on what I learned on teams [sic]*" and who also understood the importance of help-seeking when they informed that "*we all worked together*," which enabled them to "*learn alot [sic]*." Learners' sense of relatedness was articulated by SP01 who "*felt a strong sense of community*;" meanwhile SP08 highlighted its influence by saying, "*You look forward to coming into class each day knowing you are part of something*."

3.1.2 Self-regulation: Time management and embracing structure and guidance.

Learners showed that they were self-regulated when they discussed how best to allocate time around competing academic-life interests, where they foresaw potential difficulties. In their considerations, SP05 mentioned that "*more than 15 minutes was hard to do because we had to focus on [...] assignments*." Although SP01 suggested that "*all classes should have one flipped day a week*," they conceded that pre-class activity challenges might exist for learners with "*family commitments*." When learners considered the implications of implementing flipped learning, as suggested by SP01, "*across other modules*," they claimed that it would be "*hard to find 30 minutes for each module for five days*" for "*people who work*" (SP04). Consequently, learners expressed a preference for a partial flip for which the same respondent offered a rationale: "*By having flipped learning one day a week, I can manage my time and workload*."

Learners identified structure and guidance as key influences that promoted self-regulated learning during Flipped Week. In their opinion, structured and guided resources, together with clear instructions and easy access to pre-class activities, made learning easier, improved understanding, and enhanced engagement. SP04 reported that they "*prepared for class*" by having "*prepared teacher materials*" which, according to SP06, made it "*easier to understand*." Having "*the quizzes, videos and worksheets easily accessible*" was important for SP01 and for SP05, who appreciated that the materials were "*well organised in different folders in teams [sic]*." Similarly, SP09 mentioned that "*the teacher was excellent with instructions*," which enabled SP08 "*to answer the questions better*."

3.2 Behavioural engagement during flipped week.

In this study, learners' enthusiastically and collaboratively engaged during Flipped Week. Behavioural engagement is interpreted here as collaborative and enthusiastic participation in class.

3.2.1 Enthusiastic participation in collaborative engagements.

During Flipped Week, learners enjoyed the benefits of social interaction and enthusiastically participated in discussions and other active methodologies which they valued. SP08 remarked that they "*liked being [sic] in groups*," whilst SP09 noted that flipped learning "*allowed great time in class for [...] discussions*." As such, learners valued the opportunities for communication, active listening, and feedback, which are lifelong skills. SP04 informed that they were "*very involved in discussions*" and engaged in "*giving and receiving feedback*," whilst SP05 commented that it was "*vitale [sic] to listen to each other*" because "*you participate more with other students and learn a lot from each other*."

3.3 Emotional engagement during flipped week.

The learners in this study, emotionally engaged with the multiple inclusive methodologies during the Flipped Week intervention. Emotional engagement is interpreted here as positive and negative emotions.

3.3.1 The trials and tribulations of engagement.

Learners engaged emotionally, experiencing both positive and negative emotions during Flipped Week, whilst participating in hands-on experiences that prepared them for life outside the classroom. SP05 mentioned that stocktaking "*was a great hands on [sic] experience*," and SP04 claimed that "*after that I did the same work on my placement and knew how to do it in practice*." Similarly, SP02 described a video, demonstrating the safe use of examination gloves, as "*helpful*" and during class learners engaged in peer teaching, which SP05 described as "*very important to learn*." For SP06, flipped learning "*was a great experience*" because it provided the opportunity "*to relax and learn in a more calm environment*" where they "*felt at ease*." SP06 "*loved*" Think-Pair-Share and appreciated that they had "*choice on the voting [...] without being judged [...] as it was anonymous*." Meanwhile, SP03 enjoyed the "*very positive learning experience*" offered by Flipped Week, which for SP04 meant that they could "*actively learn*" new

instructional content in "*a non-boring way and be ready for [...] discussions*." Similarly, SP07 "*really enjoyed taking pictures of hazards*," whilst SP01 appreciated flipped learning, asserting that "*it would be sad to see it go completely*." And although SP04 stated that warm/cold calling was "*very interesting*," as "*everyone gets their own question and can express their answer and then discuss it*," SP02 found it "*boring*."

Learners enthusiastically engaged with Quizlet Live. SP05 and SP06 found it "*fun*," "*competitive*," and "*exciting*," however, poor internet connectivity in the institution provoked negative emotions. SP06 remarked that "*the internet might have been down*," leading SP08 to feel "*annoyed*" and SP05 to feel "*frustrated*."

4. Discussion, educator reflections, research limitations, and avenues for further research.

4.1 Learners engaged during flipped week.

During Flipped Week, learners were cognitively, behaviourally, and emotionally engaged. reflecting Fredricks et al.'s (2004) interpretation of engagement. A key finding of the current study is that learners' engagement with multiple inclusive methodologies aligns with DeLozier and Rhodes' (2017) claim that varying methodologies foster engagement – suggesting that periodic events such as this can promote more consistent engagement with flipped learning in the long run.

4.1.1 Cognitive engagement: Motivated and self-regulated learners.

Another significant finding is that learners cognitively engaged during Flipped Week, which mirrors Fredricks et al.'s (2004) interpretation of cognitive engagement. Learners' willingness to complete pre-class activities in the current study, is contrary to Fisher et al.'s (2020) view that learners may be unwilling to complete the pre-class activities in advance of the learning session. However, it reflects the findings in Aidoo et al. (2022) where learners informed that a flipped learning approach enabled them to take responsibility for their own learning. Additionally, in this study, learners' claims of confidence in their competence through prior foundational knowledge is analogous to learners' accounts, as proffered by Gencel-Evin (2020) and, likewise, their claims of relatedness to each other echo evidence in Steen-Utheim and Foldnes' (2018) study.

Learners' intellectual engagement during Flipped Week suggests that flipped learning can be an effective pedagogical approach.

A further significant finding is that during Flipped Week, learners were self-regulated and understood what they needed to effectively engage, which echoes Fredricks et al.'s (2004) interpretation of cognitive engagement. Learners, in the current study, robustly reported that they valued a structured and guided approach, which enhanced their overall learning experience and promoted their development as self-regulated learners. This key finding aligns with the extant literature on the importance of structure and guidance in a flipped learning approach (Forsey et al., 2013; Talbert, 2017; Wanner & Palmer, 2015) but is incongruent with learners' accounts of poor structure, inadequate guidance, and unclear instructions which led to an unsuccessful flipped learning implementation (Leão et al., 2023).

Considering this finding, we strongly advocate for a significant amendment to the Flipped Learning Network's (FLN's) (2014) Four Pillars of F-L-I-P™. We would advocate that consideration would be given to renaming the pillars as The Five Pillars of F-L-I-P-S with the addition of 'S' signifying the inclusion of Structured and Guided Approach as an explicit key pillar, which would enable learners to operate effectively. This would also enable educators to better design, implement, and evaluate flipped learning.

Additionally, in this study, learners displayed self-regulation skills when they were proactive in monitoring their learning, including making time-management decisions, thereby echoing Pintrich's (2004) claim that learners must manage their time schedules. Learners' reports of time challenges for completion of pre-class activities due to module commitments align with learners' accounts elsewhere (Tomas et al., 2019; Wanner & Palmer, 2015). However, reported challenges in managing pre-class commitments for those who work are incongruent with learners' evidence in other studies (Fisher et al., 2017; Gencel-Evin, 2020). Learners in the current study suggested a partial flip, contrasting with Gilboy et al.'s (2015) study, where learners commented that they preferred to engage with active methodologies rather than listen to a lecture.

However, learners' preferences for a partial flip might not be in their best interests because Freeman et al.'s (2014) active learning study suggests that learners in STEM courses are on average 1.5 times more likely to fail in a traditional approach than in an active-learning approach.

This claim, together with learners' reports of engagement in the current study, provides robust evidence to support flipped learning as an appropriate pedagogical approach.

4.1.2 Behavioural engagement: Collaborative and enthusiastic participation.

Another notable finding, in this study, is that learners not only behaviourally engaged in collaborative methodologies, which reflects Fredricks et al.'s (2004) interpretation, but also participated enthusiastically throughout Flipped Week, aligning with Trowler's (2010) claim that learners need to enthusiastically participate in class.

4.1.3 Emotional engagement: Learners' positive and negative perceptions.

A further key finding from this study is that during Flipped Week learners emotionally engaged, which mirrors Fredricks et al.'s (2004) interpretation. They valued real-life experiences that are important for them in a healthcare context, echoing findings that adult learners want, enjoy, and value real-life, hands-on experiences (Chis et al., 2018; Knowles, 1980; Schwartz et al., 2016). Learners' reports of feeling at ease engaging with multiple inclusive methodologies are analogous to learners' accounts in McCabe (2019) but are incongruent with learners' evidence in Strayer's (2012) study. Similarly, whilst learners' engagement in Quizlet collaborations echoes Ryan et al.'s (2018) study, they, nevertheless, felt negative emotions due to poor internet connectivity, as evidenced by learners' accounts elsewhere (Aidoo et al., 2022; Fisher et. al., 2020).

The positive and negative emotions shown, in the current study, are evidenced not only by learners globally (Aidoo et al., 2022; Strayer, 2012), but also in the extant literature (Fredricks et al., 2004). This study reinforces the importance of the role of events such as a flipped learning week in promoting flipped learning pedagogies, staff learning, and student engagement.

4.2 My thoughts on flipped week.

I began my career as a second-level educator and later moved to further education. In both contexts, my teaching approach was traditional. However, in recent years I introduced technology resources to engage learners. One resource which learners typically enjoyed was Quizlet Live in random teams. During Flipped Week, however, challenges arose; immediate

feedback on the screen indicated that this mode was ineffective, and learners found peer errors frustrating. So, I switched to Individuals where learners could focus on the retrieval practice strategy; this experience highlights that there is no one resource that is universally effective in all contexts.

I questioned my decision to pilot a Flipped Week, rather than a smaller one-day intervention, such as a Flipped Friday. Whilst the intervention provided an opportunity to improve materials and implement multiple evidence-based learner-centric strategies, preparing high-quality materials for a three-day flipped learning intervention in January 2023 was challenging. I taught six class groups over twenty-two class-contact hours, whilst managing administrative tasks. Two weeks prior to its implementation, I spent approximately forty hours planning, creating, and revising my Flipped Week design. I concluded that it would have been wiser to plan the process well in advance of its implementation. Talbert (2017) suggests taking a year to plan for a full implementation; this could help facilitate a sustainable workload whilst managing the many demands of teaching.

I was pleased with Flipped Week. The change from my previous week's passive teaching approach with this group, using no active methodologies, to a flipped learning approach was immediately evident; the classroom became a vibrant learning space. I provided opportunities for reflection and agree with Bergmann (2022) on its powerful effect within this pedagogical approach. Indeed, learners require time to pause, think, and process learning, when engaging with multiple inclusive methodologies.

Overall, Flipped Week was a success and an enjoyable and extremely rewarding experience for both me and the midwifery learners. And although I was surprised by learners' preferences for a partial flip, given their enthusiastic engagement and positive in-class feedback, their preferences highlight the importance of considering their perspectives when adopting a flipped learning approach.

4.3 Research limitations.

This study provides valuable insights and findings despite some limitations which should be acknowledged. The study was my initiative but was conducted within the context of the Safety and Health at Work module on offer within the institution. A limiting factor is that the research took place over four classes during Flipped Week, which may be too short a timeframe from

which to draw conclusive evidence. Also, given that the classes were conducted face-to-face, findings may not fully represent the current landscape where online classes are often integrated with face-to-face classes. Furthermore, as the study was conducted with one group of learners, as part of one module, within one further educational institution in Ireland, it is not claiming generalisability.

4.4 Avenues for further research.

Considering the limitations highlighted, the authors recommend different avenues for further research. One suggestion is to conduct a longitudinal study, or several programme iterations, to determine the effectiveness of flipped learning compared with a traditional approach, in terms of learners' outcomes.

Future research could also consider online classes to provide further insights on learners' perceptions of experiences. Most, if not all, of the multiple inclusive methodologies, outlined earlier in the paper, can readily transfer to an online-class format and learners' perceptions of these could provide a fuller understanding of these methodologies within a flipped learning approach. Furthermore, learners' involvement in the design could be explored, as this would honour their central role in this pedagogical approach. This recommendation aligns with QQI's (2020) call for further research on flipped learning to ensure that educators are prepared for challenges, such as those encountered during the COVID-19 pandemic.

Future research could consist of qualitative explorations in other modules and other groups, to capture a fuller understanding of learners' perceptions of this learner-centric approach. Educators might consider interdisciplinary aspects by implementing flipped learning as a prototype in one module, to evaluate its effectiveness, before expanding it across programmes. A key recommendation is to explore initiatives such as a flipped learning week as a way to promote long-term engagement with flipped learning.

Tertiary educators could also consider establishing a flipped learning network. Implementing this inclusive learner-centric approach can be challenging and having a supportive network might assist in its successful implementation.

Tertiary educators could also consider expanding structured and meaningful CPD to ensure more extensive engagement with flipped learning. Additionally, to ensure a high-quality design,

they might consider the provision of appropriate time and resources to facilitate its design, implementation, and evaluation.

5. Conclusion.

Through this study, which sought to capture further education midwifery learners' perceptions of their flipped learning experiences, it has been shown that a structured and guided approach is required to promote the development of self-regulated learners when using a flipped learning approach. Whilst learners noted the benefits of social interaction, they also alluded to the apparent drawback of the lengthy time required to prepare for flipped classes which can prove challenging with academic-life commitments. And although the learners in the current study proposed a partial flip, they engaged and embraced the intentional and inclusive flipped learning experiences, which they perceived as enhancing their overall learning experience. Overall, given that flipped learning has shown that it enhances learner engagement and supports lifelong learning, the authors firmly believe that flipped learning can be an effective pedagogical approach. A key recommendation is to explore initiatives such as a flipped learning week as a way to promote long-term engagement with flipped learning.

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Appendix A: Hazards in the Workplace Worksheet.

Figure A1: Guided Worksheet

WORKSHEET: HAZARDS IN THE WORKPLACE PRE-CLASS GUIDED HOMEWORK

To be completed before the flipped class on Friday

Pre-Class Learning Outcome: Basic

You will identify three workplace hazards while watching a screencast called Workplace Hazards.

NOTE: By learning this topic before class, you will be able to **participate fully in class** with your peers and take part in **active learning** with them to help you learn.

Instructions:

1. Fill in the table below based on your learning from the Workplace Hazards screencast. There is also a PDF of the screencast in the folder if you prefer to use that.
2. Download this file called *Flipped Class 3* Worksheet from MS Teams by clicking on the three dots to the right of the name of the file and save it on your OneDrive.
3. You are asked to pause the screencast at each question to complete the answer.

Answer the following three questions:

Q1. What other potential slip hazard can you think of?

Q2. Identify one electrical hazard from the image on the slide

Q3. What is the fire hazard in the image?

Appendix B: Structured Design and Implementation of Flipped Week

Figure B1: Structured Design and Implementation of Flipped Week

	•	**Structured design and Implementation of *Flipped Week***
1	**Pre-class** • **activities** • **Tuesday** • ***Flipped Week*** • **Day 1**	**Structure, Guidance, and Design - One-Hour Flipped Class**. **Pre-class Activities**: • Quizlet flashcards on first aid box. • Word table of Quizlet flashcard set from which to learn in preference to the flashcards. • Guided worksheet to answer brief questions.
	• **Teaching and Learning Strategies**	**Guided workbook provided including learning outcomes, instructions, and content to be covered**.

	Day 1	**Teaching and Learning Strategies**: Group work and individual work. **1.** Think-Pair-Share. **2.** Quizlet Live. **3.** *Reflect-Type-Share*. **4.** Stocktaking a first-aid box in groups. **5.** *Reflect-Type-Share*. **6.** Fill in the blanks of a partially completed mind map and a partially completed Word table of the first-aid box contents in the workbooks. **7.** Minute papers: *Reflect-Type-Share* - reflections and evaluations of class experiences. **8.** Review of pre-class activities to be completed on PPE and safety signs.

2	**Pre-class activities** • **Thursday** • ***Flipped Week*** • **Day 2**	**Structure, Guidance, and Design - One-Hour Flipped Class.** **Pre-class Activities**: • Quizlet flashcards on PPE and safety signs. • Word table of Quizlet flashcard set from which to learn in preference to the flashcards. • Short YouTube video (1m 39s) - how to safely put on and take off examination gloves. • Guided worksheet to answer brief questions.

	Teaching and Learning Strategies **Day 2**	**Guided workbook provided including learning outcomes, instructions, and content to be covered.** **Teaching and Learning Strategies:** Group work and individual work. **1.** *Retrieve-Type-Share*. **2.** Quizlet Live on PPE and safety signs. **3.** *Reflect-Type-Share*. **4.** Watch a YouTube video (1m 39s) and write notes on the correct technique in the workbook. **5.** Peer Teaching: how to put on and take off examination gloves. **6.** *Reflect-Type-Share*. **7.** Warm/Cold Calling. There were two tables in the workbook. One contained a question number and each learner's name. The second provided numbered questions. I gave learners one minute to find their PPE question number and write the answer in the workbooks. Then when randomly selected, (I used Mentimeter's Spin the Wheel feature, which has since been discontinued), learners verbally answered their question. **8.** *Reflect-Type-Share*. **9.** Anonymous poll on Mentimeter - reporting colleagues for damaging gloves in the workplace, followed by discussions. **10.** *Reflect-Type-Share*. **11.** Minute papers: *Reflect-Type-Share* - reflections and evaluations of class experiences. **12.** Review of pre-class activities – Workplace Hazards screencast.

3	**Pre-class activities Friday** ***Flipped Week*** **Day 3**	**Structure, Guidance, and Design - Two-Hour Flipped Class.** **Pre-class Activities**: • Screencast (4m 39s) on hazards in the workplace or PDF PowerPoint file of screencast, if preferred. • Guided worksheet to complete whilst watching the screencast or reading the PDF.
	Teaching and Learning Strategies **Day 3**	**Guided workbook provided including learning outcomes, instructions, and content to be covered.** **Teaching and Learning Strategies:** Group work and individual work. **1.** Think-Pair-Share. **2.** Localised Field trip - observe six hazards and take pictures. **3.** Upload and rename files in OneDrive and insert them into the assignment template. Write descriptions in the workbooks for each image, addressing: What? Who? Where? **4.** *Reflect-Type-Share*. **5.** Anonymous Poll on Mentimeter – to answer typical misconception. **6.** *Reflect-Type-Share*. **7.** Quizlet Live – spaced retrieval practice of first-aid box. **8.** Quizlet Live – retrieval practice of PPE and safety signs. **9.** Discussions on risks of specific hazards in the workplace. **10.** *Retrieve-Type-Share*. **11.** Minute papers: *Reflect-Type-Share* - reflections and evaluations of class work and learning. **12.** Review of Work for the Safety Audit assignment.

Appendix C: Reflective Booklet Extract.

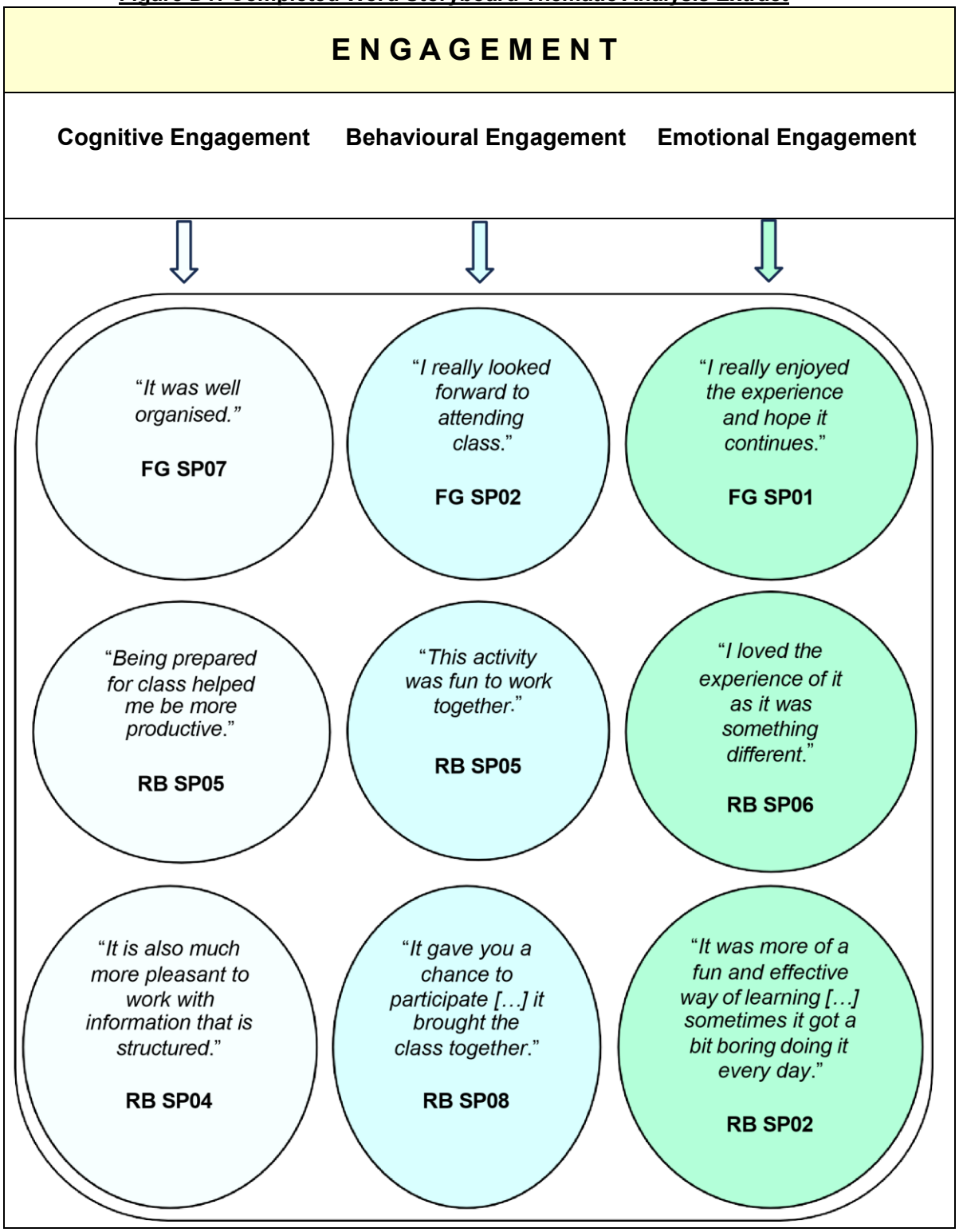
***Reflective Booklet*: Reflections based on the focus group discussions.**

Figure C1: Reflective Booklet Extract Based on Q8 Comments During the Focus Group

REFLECTION 1	**MORE OPPORTUNITIES FOR FLIPPED LEARNING**
	**Note: Comments in blue are messages from me. Remember it is your voice and your opinions that are important. Say what you want to say. Your voice matters.**
Question 8	**Would you like to have more opportunities for flipped learning in this *Safety and Health at Work* module? Can you explain?**
Prompt 1	**"*I would love to continue with flipped classes and would love to see it across other modules*." (All agreed).**
	**Can you explain what exactly you like about flipped learning? If you have changed your mind, explain why.** **Answer:**

Appendix D: Word Storyboard Thematic Analysis Extract.

Figure D1: Completed Word Storyboard Thematic Analysis Extract



KEY: FG - Focus Group, SP - Speaker Number, RB - Reflective Booklet.