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'Cui Bono?' is dedicated to my fiancée Robert Emmet

& our treasured children, Ella Roisin, Rebecca Carol, Kern Naoise Sean, Evan James,

Leon Fionn & Lauren Onga

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Abstract

The central idea of this research was to consider how a Freirean approach might be applied in the context of digitised learning environments in a way that encourages educators to adopt a critical approach toward the positioning of technology in contemporary classrooms. It is my assertion that privacy violations constitute a serious risk as adult education institutions become increasingly technologically focused. Digital pedagogy, as an evolving academic discipline must present solutions that enable enhanced technology-mediated teaching and learning while ensuring digital privacy for both educators and learners.

The proper implementation of technology is dependent on user confidence. If technology is perceived as some sort of secretive monitoring or surveillance tool, the academic community may never fully accept it. By promoting awareness and developing proficiency in digital privacy skills we can have the best of both worlds.

List of Abbreviations

AFE	Adult and Further Education
AR	Action Research
CPAR	Critical Participatory Action Research
CPD	Continuous Professional Development
ETB	Education and Training Board
ETBI	Education and Training Boards Ireland
EU	European Union
FET	Further Education and Training
GAFE	Google Apps For Education
GDPR	General Data Protection Regulation
HE	Higher Education
IBEC	Irish Business and Employers Confederation
ICT	Information and Communications Technology
IT	Information Technology
K12	Kindergarten To 12th Grade
LMS	Learning Management System
MU	Maynooth University
NCIRL	National College of Ireland
OTA	Online Targeted Advertising
PDST	Professional Development Service for Teachers
RTB	Real Time Bidding

TCD   Trinity college Dublin

TEL   Technology Enhanced Learning

UDL   Universal Design for Learning

VLE   Virtual Learning Environment

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Chapter 1: Press Play to Start

1.0 Digital by Default

I am a child of the universe no less than the trees and the stars; I have a right to be here, and I have a right to digital privacy.

The year is 2023 and for most people, the human experience is progressively being transposed to digital spaces as technology permeates almost every aspect of our lives. A key argument this research makes is that this phenomenon raises serious concerns about digital privacy violations, governmental and corporate surveillance, and the psychological and social consequences of being constantly scrutinized.

In this chapter, I outline the research questions that are pertinent to my investigation into digital privacy in the adult education sector and provide justifications for the necessity of digital privacy awareness and training for educators and subsequently learners, in an environment rapidly evolving in technological practices. Digital privacy and responsible technology use are currently hot topics, yet the issue of whether these topics should be taught in educational institutions remains largely unexplored. It is no secret that adult education institutions prioritise certain types of knowledge, and this study demonstrates that digital privacy training is not a curricular priority.

Shor (1987) states,

> There is a radical separation in the curriculum between the programs that do the most concrete training for jobs and the programs that do the most critical reflection. This separation is political, not accidental. It prevents future labour from escaping dominant ideology. It segregates critical thinking from training. Such job preparation reduces the capacity of workers to challenge the system (Freire & Shor, 1987, p. 70).

1.1 Research Aims & Objectives

This study explored digital privacy in the context of adult education in Ireland and it had several interrelated objectives. First and most importantly, I sought to ascertain the knowledge base of a group of fourteen adult educators regarding digital privacy, and to determine if they possessed the knowledge and technical proficiency required to protect their own and their learners' digital privacy in the classroom. I also wanted to look at how critical pedagogy could inform continuous professional development (CPD) to better equip adult educators for engaging judiciously with educational technology (edtech) and embracing the digitalization of the educational system without compromising their digital privacy.

I sought to understand how educators interpret the GDPR law, its significance to data security and hence the positive impacts of effective GDPR laws on user privacy. The distinction between data privacy and data protection is not just semantic. GDPR is not a privacy law, the word 'privacy' does not appear anywhere in its articles or recitals. Despite the discrepancy, there is a strong correlation between privacy and security (Logue, 2019).

There is currently a loophole in the GDPR law where edtech is concerned, and more legal oversight is required. As it stands, there are few guiding regulations or safeguards in place, enabling unregulated tech companies to be driven by surveillance capitalism rather than moral considerations, and consequently tech companies now perceived internet users as unpaid digital laborers who forfeit their privacy in exchange for 'free' e-services. Through Freirean technological 'conscientization' I sought to explore the dark side of technology with adult educators and to raise awareness about the exploitative nature and the hidden risks associated with using technology uncritically.

It is vital to highlight the power dynamics at play in the technological classroom, and ethical solutions to this contemporary oppressive pedagogy should be sought. Adult educational establishments should strive to empower their educators and enable

them to successfully implement a digital pedagogy whilst thwarting the hidden exploitation of intangibles like privacy.

My Higher Diploma in Adult Education coupled with my primary degree in Computer Science equipped me with the technical and pedagogical expertise I needed to undertake this critical research effort.

1.2 The Dark Side of Technology

Adult education professionals acknowledge that technology can enhance the educational process, foster learner autonomy, and support academic success. Therefore, many contemporary educators ardently incorporate technology into their pedagogical methodologies and actively encourage students to adopt it. However, the edtech sector is a lucrative one. According to Brehm (2022) profit drives business decisions, not improving learning outcomes or academic achievement, and especially not the well-being of either teacher or learner. Brehm states that,

> Most edtech companies start with the intent to earn a profit and then consider products for education, which always have a nefarious profiteering built into their very DNA (Brehm, 2022).

Since the global pandemic, students and educational systems have become more dependent on digital platforms and products, and opportunistic edtech companies have capitalised on this. They build compelling narratives about how their technology will solve educational challenges, and through the lens of their offerings, they liberally redefine education (Williamson & Hogan, 2021). I argue edtech businesses offer a concealed pedagogy of oppression, whose 'generosity,' according to distinguished educational philosopher Paulo Freire (1921 – 1997),

> begins with the egoistic interests of the oppressors, an egoism cloaked in the false generosity of paternalism and makes of the oppressed the objects of its humanitarianism (Freire, 1970, p. 28).

Edtech companies lure us with 'free' services but like Brehm (2022) I envision a digital future,

> that is free of the trite profit motive and the current disaster capitalism
> mentality in higher and further education as a result of the Covid-19 pandemic
> (Brehm, 2022).

Software designers, advertising agencies, marketing companies, business strategists, database administrators, data miners, and a myriad of other individuals harness, control, sell, repurpose, and own the edtech and the data generated by its usage. Assignments are completed using Microsoft, Moodle, Google, YouTube, and email among others, which all feed into digital systems that are owned, managed, used, and repurposed by hundreds of thousands of unseeable business hands.

Cloud computing raises significant privacy concerns. Edward Snowden former CIA technologist and mastermind of one of the biggest political leaks in US history stated that he could not in good conscience allow the US government to destroy privacy with the massive surveillance machine they are secretly building.

Snowden (2019) offers his viewpoint on 'the cloud',

> From the standpoint of a regular user, the cloud is just a storage mechanism
> that ensures that your data is processed or stored not on your personal
> device, but on a range of different servers, which can ultimately be owned and
> operated by different companies. Your data is no longer truly yours. It is
> controlled by companies, which can use it for virtually any purpose (Snowden,
> 2019, pp. 193-194).

According to Snowden, the cloud's image - white, peaceful, fluffy, and protective, misleads people into believing it is harmless, 'I think it made everyone think of heaven' (Snowden, 2019, p. 193). According to Veliz (2021), technologists have hijacked the language of nature euphemistically describing our digital reality to us,

> You used to be able to taste the sweetness of an 'apple,' listen to the birds 'tweet' at sunrise, read your feet in a 'stream,' and find shapes in the 'clouds' passing by. Now these words are mostly used to describe things that are the opposite of nature. It is the job of thinkers and writers to challenge corporate bullshit and reclaim transparent language (Veliz, 2021, p. 75).

A stranger is not permitted to enter a classroom without authorization, yet in a digitised learning space, learners' data is transmitted to a multitude of strangers far beyond the college walls.

Hillman (2021) asserts that edtech companies thrive on digital data. During the coronavirus lockdown American students were required to use Google Chromebooks which came with Gaggle software pre-installed, a proactive approach to suicide prevention software that scans student coursework and behaviour for evidence of depression. The power to potentially identify students in need of support seems ethical in principle, but in practice it subjects students to relentless surveillance. Educational institutions are led to believe that the surveillance provided by Gaggle or similar software is critical to students' well-being (Hillman, 2021).

Colleges that employed proctorial software for students taking examinations during the Covid-19 lockdown, did not give students the choice to opt out. The artificial intelligence used by proctoring technologies to detect academic dishonesty has come under heavy fire for its bias and accessibility impacts, not to mention the fact that it frequently generates inaccurate results (Kelley, 2022).

Veliz (2020) reminds us that cyber breaches, fraudsters, hackers, criminals, companies that want you to spend your money on them, various agents who want to use you as their social media mouthpiece, foreign and national forces that want you to vote for them, are all lying in wait (Veliz, 2021).

In addition to edtech, surveillance cameras are strategically placed throughout most educational facilities. While some people are aware of the 'Orwellian' surveillance imposed on them, a social condition that author George Orwell characterized as

detrimental to a democratic society, others are far less aware of the dangers and ethical issues associated with digital profiling. Discrimination, rating, categorization, targeted advertising, hacking, etc. The proliferation of digital profiling poses significant ethical issues and raises questions about the balance between academic success and the well-being of learners.

The authenticity of teachers in the classroom is also questionable. When people know they are being watched, and that whatever they do can have bad consequences for them, they tend to self-censor (Veliz, 2021, p. 85). Perhaps this is why learner participation is often seriously lacking. According to Veliz (2021), after Edward Snowden revealed the extent of government surveillance, web searches related to terrorism plummeted by 30%, illustrating the so-called chilling effect of surveillance (Veliz, 2021, p. 85).

Soares (2020) an experienced educator writes about 'Orwellian Spaces' and the evolution of digital surveillance in his classroom,

> When I started teaching more than twenty years ago, I remember students being upset about the installation of school cameras. Today, many students seem less concerned about cameras they cannot control than the ones they can, by placing tape over laptop webcams in defiance of prying virtual eyes (Soares, 2020).

According to Soares, pandemic-induced lockdowns have pushed the usage of technology in the classroom, yet digital privacy literacy is not included on the curriculum. Microsoft Teams, Google Meet, and Zoom, have all been rebuked by security experts for breaching user privacy. Zoom has been sued multiple times for privacy violations, including secretly installing a web server that allowed websites to track users on Macs (Howell, 2021).

Are educators employing dangerous and enigmatic digital tools that are generating a slew of unforeseeable challenges, complications, and trouble?

1.3 Research Design

I conducted my investigation using a predominantly qualitative methodology. I created and taught a course called '*The Fly on the Wall*,' a two-part online course on digital privacy. This course constituted the core component of my research design.

Following the course, I conducted two online surveys—the first quantitative and the second qualitative —which confirmed the value of the critical pedagogy approach I used and strengthened the case for one of the key findings of this research, the need for CPD on digital privacy.

Freirean principals underpinned the course so despite being designed with specific educational learning objectives in mind, the course was participatory and dialogic.

In summary, the first session invited a group of fourteen adult educators to partake in an in-depth discussion about digital privacy. We debated the barriers experienced by educators striving to safeguard their digital privacy in contemporary classrooms, and many participants expressed dissatisfaction with their lack of knowledge on this topic. The second session, which was held the following week, was a hands-on, interactive session that focused on the practicalities of reconfiguring hardware and software settings to privacy-protecting mode without compromising functionality.

1.4 Panoptic Religious Surveillance

One of the central focuses of this research was the history of surveillance imposed on the Irish people by the Catholic Church. Even though technological surveillance is a global phenomenon, a major finding of this research pertains to the particularities of Ireland's long history of surveillance by the Catholic Church as part of the near theocracy that dominated Ireland for most of the 20th century and which tarnished Ireland's history with a deep and enduring stain,

> A stain we can only regard today with great shame, profound regret, and horror (Hogan, 2019, p. 163).

For those who are unaware of Ireland's history of abuse, Fitzsimons (2021) presents an overview of some of the atrocities committed by the Catholic church. She informs us that between 1922 and 1996, an estimated 30,000 women endured imprisonment under slave like conditions in highly profitable Catholic-run Magdelene Laundries. The culture of secrecy surrounding these laundries was devastating. Thousands of Irish women were forced to participate in often profitable, international adoptions. According to the Coalition, at least 6000 children perished in these homes, many of them from hunger or 'marasmus', while others were subjected to unauthorised vaccination trials. The remains of up to 800 children were discovered in a septic tank at the Tuam Mother and Baby Home in Galway (Fitzsimons, 2021, pp. 49-52). It is not surprising that the public disclosure of these heartless crimes has had a profound effect on the Irish psyche.

Surveillance is sometimes described as having a 'God-view' of the world. God is the central tower guard; never seen but requiring moral discipline from those who believe he is there, watching. Zuboff (2019) writes,

> When Samuel Bentham first designed the panopticon, he drew inspiration from the architecture of the Russian Orthodox churches. These churches were built around a central dome from which a portrait of an all-powerful 'Christ Pantokrator' stared down at the congregation and, by implication, all humanity. Once, it was no exit from God's total knowledge and power, today, it is no exit from surveillance capitalists (Zuboff, 2019, pp. 470-471).

Information technology is fast becoming, as suggested by Zuboff and others, a virtual panopticon such as even Jeremy Bentham would not have been able to visualise in his wildest dreams (Introna, 1997).

One of the central focuses of this research was an uncovering of the way in which the adult educators who participated in this study shared a sense of how, for many people, the dominance of Catholicism in Ireland is perhaps being supplanted by an equally unscrupulous technological hegemony. According to Hedges (2017), the concept of hegemony accredited to Antônio Gramsci, Italian Marxist theorist, refers to

how the ruling elites, in today's world the techno-elites, who disregard democratic principles through systems of mass culture including educational institutions, manipulate and control our perception of reality to advance their own interests (Hedges, 2017, p. 8).

Gramsci saw mass culture as a vital instrument for complicity and servility. He described it as 'the trenches and permanent fortifications that defend the core interests of the elites.' The dominated see the world through the lens of mass culture, not as it is but as it is interpreted and manufactured for them. Unable to see through the mores, stereotypes and narratives disseminated by the dominant culture, they perpetuate dominant ideals, convinced that their interests align with those of the ruling class. Hedges quotes Gramsci,

> It is an important and urgent task to develop alternative interpretations of reality (Gramsci, in Hedges, 2017).

The religious hegemony that predominated our educational system until recently, and the grievous crimes committed against mothers and children by the Catholic Church in our country, shaped my perspective on privacy. Paradoxically, the all-seeing, all-powerful God was nowhere to be found on the 31st of January 1984.

A poem titled '*The Statue of the Virgin at Granard Speaks*' by Irish poet Paula Meehan is dedicated to Ann Rose Lovett a 15-year-old girl who died while giving birth to her baby boy in a field beside a grotto of the Virgin Mary. I was the same age as Anne Rose at the time, and this tragedy severely shook my faith in Catholicism.

On a night like this I remember the
child who came with fifteen summers
to her name, and she lay down alone
at my feet without midwife or doctor
or friend to hold her hand
and she pushed her secret out into the night,
far from the town tucked up in little scandals,
bargains struck, words broken, prayers, promises,

and though she cried out to me in extremis

I did not move,

I didn't lift a finger to help her,

I didn't intercede with heaven,

nor whisper the charmed word in

God's ear.

Neither will God's heir in the form of technological surveillance come to our aid in our hour of need. Instead, it will relentlessly monitor and track us, steal our personal data, violate our privacy, influence how we think, behave, and perceive the world, and rob us of autonomy and individuality. Unregulated technology will dehumanise us just as the Catholic Church did, but unlike the Catholic Church, there is still hope for redemption.

A liberating pedagogy in the classroom is the ideal place to begin.

1.5 Structural Overview of 'Cui Bono?'

Chapter 1 introduces the subject of digital privacy and sets forth the goals and objectives of this research. I present the research problem from my perspective and explain why I am qualified to conduct this study. I also introduce the contrasts I make between the intrusive monitoring the Catholic Church imposes and the surveillance we experience as technology users. I briefly outline the research methods I chose to conduct this study.

Chapter 2, the literature review, explores the concept of privacy and why it is vital to protect it. I introduce authors and academics who have written on digital privacy and their opinions of using technology uncritically including the conundrums it presents to educators. I draw attention to the lack of CPD for adult educators on the subject of digital privacy.

Paulo Freire's philosophy of a critical pedagogy for liberation is the focus of Chapter 3, my Conceptual Framework. This chapter also examines the problems associated with the use of technology in adult education settings, such as surveillance capitalism and epistemic fragmentation.

Chapter 4, my Methodology, describes the critical pedagogy approach I used to determine the level of knowledge held by a group of adult educators on digital privacy, as well as the methods I used to gather my research data. I provide my ontological and epistemological viewpoints as well as a brief overview of the data analysis procedure. Ethics-related issues are also addressed here.

Chapter 5 presents the research Findings from all 3 phases of this research investigation. Phase 1, the course, and phase 2, the qualitative survey are presented thematically. Phase 3, the quantitative is presented graphically.

Chapter 6, the Analysis, discusses what is to be done for adult educators in light of the findings. It highlights the key learnings that can guide us forward in addressing the issues this thesis uncovered. I discuss limitations, recommendations, and suggestions for further research beyond the purview of this study.

Chapter 2: Harbingers of Hegemony

2.0 Introduction

The purpose of this chapter is to give an overview of what other authors and academics are saying about privacy, digital privacy, and the evolving definition of privacy. This chapter addresses the absence of CPD offered to adult educators on the risks associated with technology which impedes their pedagogic development, and I point out the commonalities between church and tech giants.

2.1 Privacy is Priceless

The definition of privacy has been the subject of intense debate since the 1960s, and many different definitions coexist today. Privacy appears to be something we value to provide a sphere within which we can be free from interference by others, yet it also appears to function negatively, as the cloak under which one can hide domination, degradation, or physical harm to women and others (DeCew, 2018).

Several theorists argue that maintaining control over one's personal information constitutes privacy. Others believe privacy is essential for human dignity, intimacy, and meaningful relationships. Some say privacy affords us the power to control who has access to us or a set of norms that support personal expression and choice (DeCew, 1997, pp. 46-60).

Introna (1997) suggests that privacy can be divided into three distinct categories: no access to the person, control over personal information, and freedom from judgment or scrutiny by others (Introna, 1997). Van Der Sloot (2021) argues that privacy is the power to selectively reveal oneself to the world (Sloot Van Der, 2021).

Veliz (2021) says,

> Privacy is the key that unlocks the aspects of yourself that are most intimate and personal, that make you most you, and most vulnerable (Veliz, 2021, p. 55).

The definition that most resonates with me is 'privacy is the power to selectively reveal oneself to the world.' I concur with Schwartz (1968) who claims that privacy is woven into the very fabric of social establishments. Doors, fences, walls, window blinds, and other similar structures all serve to provide us with privacy and distance from others at various times. McGinley, an American poet describes so eloquently her opinion on privacy,

> Who could deny that privacy is a jewel? Egyptians planned vine-hung gardens, the Greeks had their porticos and seaside villas, the Romans put enclosures around their patios. Privacy was considered as worth striving for as hallmarked silver or linen sheets for one's bed (McGinley, in Schwartz, 1968).

What then constitutes digital privacy? Is it a sense of efficacy in safeguarding our personal information or an online experience free from the 'Peeping Tom' effect?

Moore (2003) argues that people are justifiably angered when they are subjected to blatant violations of digital privacy but more often than not, privacy infractions are silent and undetectable. Moore's passionate defence of privacy rights decries data mining, video surveillance, facial recognition technology, spyware, and other highly intrusive technological tools in use today. These tools open up our private lives for public consumption.

2.2 Defending Digital Privacy

The following quotation from Snowden (2019) succinctly encapsulates the importance of digital privacy.

> Saying that you don't need or want privacy because you have nothing to hide is to assume that no one should have or could have to hide anything –

including their immigration status, unemployment history, financial history, and health records. You're assuming that no one, including yourself, might object to revealing to anyone information about their religious beliefs, political affiliations, and sexual activities, as casually as some choose to reveal their movie and music tastes and reading preferences (Snowden, 2019, p. 208).

The erosion of privacy affects everyone. Privacy experts argue that everything we do online is meticulously recorded to construct a digital profile that follows us around the web and governs our online experience. Technology is used to manipulate our moods, behaviour, and spending habits by bombarding us with a flood of customised advertisements, images, and videos.

According to Shorr (2020) most data collection and aggregation occurs passively, without the individual's explicit consent or even knowledge (Shorr, 2020).

Microtargeting may appear harmless and even advantageous since it tailors our online experience to our interests, but it is a strategically effective technical weapon with a significant societal cost. Microtargeting is used by political interest groups to incite fear, spread disinformation, and create hyper partisan communities. It suppresses opposing viewpoints corroding and weakening healthy democracy.

According to Introna (1997), profit motives, power accumulation, and other such forces exist in the classroom and should not be ignored. Digital privacy should become a much more prominent issue in the curriculum, systems design, and systems implementation (Introna, 1997).

According to Williamson & Hogan (2021), edtech businesses flourish on digital data, which makes the digitalized classroom a breeding ground for power abuse. Rapid digital transformation of the educational sector, driven by tech companies' efforts to increase their dominant position in education, has the potential to be profoundly undemocratic and damaging. When it comes to the digital curriculum offered to teachers, many edtech companies are seeking to lead the way and several major corporations are already active in this market dictating not just how the curricula is set, but who sets them.

Edtech is evolving into a pedagogical agency capable of superseding existing pedagogies and educator expertise. Rather than being driven by market-led 'digital-first' transformations, educational futures should be driven by 'purpose-first' pedagogy and curriculum development, alongside debates about education's critical role in meeting the complex challenges of the future (Williamson & Hogan, 2021).

As stated by Freire (1987),

> We know that it's not education which shapes society, on the contrary, it is society which shapes education according to the interests of those who have power. If education was left alone to develop without political supervision, it would create no end of problems for those in power. But the dominant authorities do not leave it alone. They supervise it. From the point of view of the ruling class, of the people in power, the main task for systematic education is to reproduce the dominant ideology (Freire & Shor, 1987, pp. 35-36).

Outside of the classroom, Snowden (2019) discusses the 'art of invasion', the monetization of user data by Internet-connected 'smart' devices for the home.

> The data we generate by living, or just by letting ourselves be surveilled while living, would enrich private enterprise and impoverish our private existence in equal measure (Snowden, 2019, p. 192).

The term 'ubiquitous computing' refers to technology that has been integrated into everyday household appliances, concealed from view, making it impossible for humans to identify or detect it, furtively bypassing our consciousness. This panoptic economy, on a quest for profit, violates our privacy and creates an oppressive system with no avenues of resistance. The popularity of 'Internet of Things' (IoT), smart appliances like thermostats, home security systems, smart fridges, TVs, and toasters is booming.

> Billions of devices are sensing you every day, they are everywhere, hidden in plain sight. Smart TVs use cameras and microphones to spy on users, smart

lightbulbs monitor your sleep and heart rate, smart vacuum cleaners can map
every square inch of your home (Yus, 2022).

Security is rarely a priority. These products have a business model built on data mining
and surveillance. IoT is transforming us into profit-generating nodes on a global
network of devices that capture and exploit our private data (Hillman, 2021).

The Snowden revelations of 2013 confirmed corporate and government collusion.
Institutions and government agencies are using people's personal data for their own
illicit purposes, to shape people's opinions and influence behaviours to further their
own social, political, and economic goals. It is a well-known fact that the 'Big Five'
hegemons of the Web, Google, Apple, Microsoft, Amazon, and Meta (GAMAM), all
conduct extensive surveillance of their users and share their user's data with
government agencies.

Darden (2015) writes,

> Technology and its ability to transcend barriers brings the previously private
> and unknowable into full view (Darden, 2015).

In 2010 employees at a Pennsylvania high school were able to remotely activate a
webcam hidden inside school-issued laptops. According to court documents, over
56,000 images were captured. When student Blake Robbins was disciplined at school
for inappropriate behaviour in his bedroom, the surveillance was revealed (Darden,
2015, pp. 76 - 77).

> It is for the ultimate good of society as a whole that privacy is preserved,
> without some preserved private spaces, society would lose its most valuable
> asset: the true individual (Introna, 1997).

Educational institutions that value democracy should emphasize positive engagement
with social media, as it can be used to manipulate users and divert our attention away
from the real world. Facebook, Twitter, Pinterest, and Snapchat creators express
regret and concern about the unanticipated negative consequences.

Sohail (2018) states,

> Social media is an open platform for every kind of unbridled communication. Let us not be a part of this self-promotional race which may override and overrule our real persona (Sohail, 2018).

Striving for independence and autonomy, especially through education, whilst continually renouncing them in favour of convenience and efficiency, is tragic. Ceding our privacy and permitting the commercial and political exploitation of our private information and allowing ourselves to be shaped and influenced by technology puts us at risk of becoming an inert, culturally homogeneous population that engages in self-censorship. Our agency will be diminished, our opinions marginalized, and our capacity to participate in healthy, political, democratic debate will become hampered.

2.3 Going with Google

Research conducted by Lindh & Nolin (2018) demonstrate how Google's business model is purposefully concealed within Google Apps for Education (GAFE). GAFE is a suite of 'free' cloud-based software applications designed specifically for educational institutions.

These free services include Gmail, Google Drive, Google Docs, Google Forms, Google Scholar, Google Books, Google Sites, Google Calendar, Google Classroom, and numerous other messaging and collaboration apps. At first glance, it appears that the implementation of GAFE allows for significant savings in IT costs because it is presented as a 'free' suite of applications. GAFE also supports a variety of file formats making file sharing and conversion a breeze, allowing educators and learners to collaborate and communicate digitally with ease. Taken together, these two features make GAFE look like an ideal choice for educational institutions, expertly resolving both economic and practical issues.

Freire (1970) cautioned,

> The dominators try to present themselves as saviours of the men and women they dehumanise. This messianism cannot conceal their true intention, to save themselves, to save their riches, their power, their way of life: the things that enable them to subjugate others (Freire P., 1970, pp. 118-119).

According to Lindh & Nolin (2018) the advantages of GAFE products are clear to educators. From the front-end or user interface experience, everything appears first-rate. However, a deeper analysis revealed that back-end data mining and surveillance tactics are considerably and purposely hidden. Ignorance, according to Zuboff (2019), is one of many reasons why this market structure has been effective,

> Surveillance capitalists dominate an abnormal 'division of learning' in which they know things that we cannot know while compelled to conceal their intentions and practices in secret backstage action. It is impossible to understand something that has been crafted in secrecy and designed as fundamentally illegible. These systems are intended to snare us, praying on our vulnerabilities bred by an asymmetrical division of learning, and amplified by our scarcity of time, resources, and support (Zuboff, 2019, p. 343).

Google attempts to conceal the existence of an online marketing business model under the guise and ethics of a free public service organisation, through the rhetoric of Google's 'fundamentally illegible' privacy documentation.

Lindh & Nolin (2018) observe a subtle distinction between your 'data' and collected 'information'. As evidenced by the rhetorical analysis, the corporate strategy according to the policy documents is to collect, store and analyse users' information and behaviour on the web to create personally tailored information for use in advertising. The digital economy is powered by targeted advertising. With increased Google lock-in or institutionalization, far more accurate and consistent individually tailored information can be processed using sophisticated Byzantine algorithms.

Cookies and anonymous identifiers are sophisticated technological tracking tools that collect and store user data to generate algorithmic identities for online marketing. These algorithms of oppression are effective at filtering, sorting, and prioritising user

information and are recognised as vital in placing knowledge and power into the hands of dominant web actors. Edwards (2011) who previously worked for Google recalls a conversation between Google engineers and its cofounder Larry Page:

> Some engineers asked, why don't we just tell people how we use cookie data? Larry opposed any path that would reveal our technological secrets or stir the privacy pot and endanger our ability to gather data. Users would oversimplify the issue with baseless fears and then refuse to let us collect their data. That would be a disaster for Google (Edwards, 2011: p 340).

Freire (1970) asserts that,

> Any situation in which some individuals prevent others from engaging in the process of inquiry is one of violence. The means used are not important; to alienate human beings from their own decision making is to change them into objects (Freire P., 1970, p. 58).

Educators who use educational tools such as GAFE are probably underestimating the negative consequences of 'Going with Google.' GAFE is being used by approximately 150 million students, teachers, and administrators globally (Perez, 2021). Based on this statistic the classroom, it appears, is a hotbed of power abuse. GAFE services are provided at 'no cost' to learners because Google has a well-established business model that enables the generation of vast riches through the collecting and analysis of online user behaviour. In 2021 alone, Google's ad revenue amounted to a stunning 209.49 billion U.S. dollars (Statista Research Department, 2022).

The truth is it is Google that has access to 'free' digital labour as users produce the commodity that generates Google's mass of economic wealth through their daily digital activities. In the immortal words of Richard Serra, world-renowned video artist,

> If something is free, you are the product (Serra, in Roy, 2018).

Fuchs, referenced by Lindha & Nolin (2018), claims that Google's exploitation of users is a networked process, it is not limited to its own sites,

> Google is the ultimate economic surveillance machine and the ultimate user exploitation machine since they economically exploit all users' data. Obviously, this threatens individuals' privacy (Fuchs, in Lindt & Nolin, 2018).

Over the last two decades, the internet has been colonised by 'The Big Five' who claim ownership of practically everything digital in modern society. Google alone holds enormous power and influence over internet usage thanks to its multifarious 'free' services. Given that this power structure extends to smartphones, personal laptops, and computers, Lindh & Nolin (2018) believe that the trend of implementing GAFE in educational institutions is problematic. Firstly, we are seeing the rise of what (Williamson, 2015) terms 'digital education governance', where teachers and students are transformed into objects to be tracked, measured, and mined for data. Secondly, it seems that the educational system is collaborating with unscrupulous business interests. The power involved is made explicit in a book written by former Google CEO Eric Schmidt who states that,

> Modern technology platforms are even more powerful than most people realize, our future world will be profoundly altered by their adoption, these platforms constitute a true paradigm shift and what gives them their power is their ability to grow, almost nothing, short of a biological virus can scale as quickly, efficiently, or aggressively as these technology platforms, and this makes the people who build, control, and use them powerful too (Schmidt, in Zuboff, 2019, p. 179).

Lindha & Nolin (2018) conclude that the rhetorical goal of Google's 'customer-oriented' privacy policy documents, the term 'customer' being a misnomer in this context because it is understood that the term refers to non-paying users, is to conceal the business model and persuade the reader to perceive Google as a free public service, divorced from market contexts and concerns. The commercial aspects of Google's relationship with users were notably absent in the documents reviewed. When utilising 'collected information,' the benefiting rhetoric is put into play and it is claimed that 'in order to provide better services' they are 'figuring out which ads you'll find most useful, the people who matter most to you online, or which YouTube videos you might like' (Google, 2022).

According to Zuboff (2019) this 'personalisation' defiles, ignores, overrides, and displaces everything about you and me that is personal (Zuboff, 2019, p. 519).

Nonetheless, GAFE was perceived as a positive and functional package in the educational organisations studied in this research, meeting the majority of the institutions Information and Communication Technology (ICT) needs. Because of the benefits of GAFE, privacy concerns were downplayed (Lindh & Nolin, 2016). With the implementation of GAFE both students and educators can now be rated and evaluated technologically by their educational institutions in previously inconceivable ways.

According to Herold (2014), GAFE includes powerful, simple-to-use tools that enable learners to perform a wide range of digital functions, such as storing data in the cloud and collaborating frictionlessly using word-processing, spreadsheets, and other software applications. Google has confirmed that it 'scans and indexes' all GAFE users' emails to create 'secret' profiles that can be used for a variety of purposes, using automated processes that cannot be turned off. Cameron Evans, Microsoft's chief technology officer for education states a growing number of edtech companies use a 'freemium' business model to provide digital services to educational institutions in exchange for access to an increasing body of information about students, including 'ambient' data about their location, the devices they use, with whom they interact, and more (Herold, 2014).

Digital profiling means no more guesswork and far less waste in the advertising budget.

      Mathematical certainty replaces all of that (Zuboff, 2015, p. 78).

When we do not take the time to read privacy policy documentation these subtle violations occur in the background. In the words of Shore (1987),

> Education is thus a complicated and indirect agency through which corporate interests are promoted in the public sector (Freire & Shor, 1987, p. 76).

According to McLaren & Farahmandpur (2002), there is a sense of complacency surrounding technocapitalist exploitative strategies. Critical pedagogy has largely

concentrated on corporate-sponsored curricula and the use and distribution of 'free' educational apps and digital devices. Educators need to ask: Why are these applications and platforms available for free? Why do we have to 'opt-out' rather than 'opt-in' of data collection?

Whether or not it is included in the existing curriculum, the time has come to critically examine edtech as it stealthily infiltrates our treasured educational environments. Freire (1987) states,

> Scrutinizing a small amount of non-traditional material lifts the curricular albatross hanging on the teacher's neck (Freire & Shor, 1987, p. 87).

2.4 Educating the Educators

The field of further education and training (FET) is no exception when it comes to putting outdated practices to rest. Technological proficiency is of paramount importance and the latest National FET strategy goes into considerable depth about how it intends to transform the FET sector by proactively reengineering for digital transformation.

FET emphasises that both the modalities and the nature of learning need to change to accommodate the technological revolution. Adult educators are required to extensively integrate technology into their teaching methodologies otherwise FET institutions will risk jeopardising credibility and falling behind their academic competitors.

In order to evaluate the existing level of digital knowledge and skills held by adult educators within FET, and to build successful strategies for improvement, FET recommends that a periodic, short survey, of FET digital experiences be considered, emulating the format of HE in Ireland and other FET systems abroad. This would help to benchmark progress and to evaluate how far the FET digital transformation has progressed over time.

Have the benefits of digital privacy or the dangers associated with uncritical technology use ever been referenced on this questionnaire? When I conducted my investigation with fourteen adult educators representing a variety of geographical regions within Ireland, no one mentioned the aforementioned survey.

The FET strategy states that SOLAS will collaborate with the Education & Training Boards (ETB), other providers, learners, and industry experts to develop the framework for digital transformation, concentrating on developing the necessary digital competencies and abilities required by the job market.

The goal of bridging the digital gap by providing learners with the ICT skills they need to tackle digital literacy is highlighted. They emphasise 'meta' skills as being critical to prospering in the future world of work and providing FET graduates with the opportunities to build the technical skills now required for almost every job.

They outline the need for investment in key technology, equipment, networks, and other infrastructure to support TEL provision. They will even seek to implement smart solutions to facilitate tech-friendly communication of career routes and labour market information.

There is a brief reference to the importance of CPD for FET practitioners. The document states that to further enable the expertise and commitment of FET practitioners, there will be a keen focus on CPD to support the digital transformation and to further ensure that FET learning is up-to-date and industry related. (Future FET, 2020-2024, p.56).

Based on this rhetoric, careerism will be a major focus of the curriculum.

> Once people thought about thriving not just surviving. Cockroach survival … to limit demands for power, equality, and prosperity (Freire & Shor, 1987, p. 74).

A democratic, critical pedagogy appears to have no place within the FET strategy for a digitised education. Adult educators are informed that incorporating technology into their teaching methods is obligatory, yet this strategy profoundly disregards the needs of adult educators and learners in terms of their digital privacy. The gap between a

democratic digital pedagogy and one that promotes technocapitalist exploitation is alarming.

Adult educators lack access to the vast array of online courses offered to primary and secondary teachers by the Professional Development Services for Teachers in Ireland (PDST), and to my knowledge there is no resource that comes close to meeting their needs. It seems contradictory to me that while education is allegedly an instrument for resolving social disparities, other educators are offered more training than adult educators. Adult educators are equally well-positioned to adopt a heutagogic approach to their learning and growth throughout their careers, provided they are afforded the necessary supports.

On the Edtech Ireland website, there is a free digital publication called the Education Technology publication designed for K–12 teachers and leaders. The publication encourages the use of edtech in the classroom and is in my opinion, a valuable resource for all educators. The journals cover everything tech-related, bar digital privacy.

Tim Lavery, CEO of EdTech Ireland and a veteran of the edtech industry, acknowledged that EdTech Ireland has a responsibility to address the issue of digital privacy. Lavery (2023) discussed an initiative that Edtech Ireland is working on that would ask teachers to review and assess the edtech they are using in the classroom. If the product is deemed ethical and appropriate, the product will be issued with a certificate of conformance. This initiative will advance digital pedagogy and give educators more influence. An honest assessment by educators may serve as a driving force for edtech businesses to modify their currently deplorable privacy policies. Edtech businesses will not want negative reviews, nor will they want to be perceived as unscrupulous. It is pertinent that the voice of the educator is heard; after all, they are the ones on the ground.

The bulk of educational technology, according to Lavery (2023), was essentially software that had been repurposed; it wasn't created with education in mind, which explains why there is an abundance of ineffective edtech products on the market. Up until recently, nobody paid enough attention to privacy, so there is no regulation

governing edtech and the privacy statement is just an inherent component of the product (Lavery, 2023).

Regarding digital privacy training for educators, Lavery believes that privacy awareness needs to be presented to educators as a training option, we cannot expect educators to ask for privacy training if they do not know privacy issues exist. Lavery believes that most educators are unaware of data mining and surveillance, so privacy training is not offered because there is no demand for it (Lavery, 2023).

A post graduate course in 21st century teaching and learning is available in Trinity College Dublin (TCD). Bridge 21, a technology-mediated pedagogical model designed by TCD to support an innovative 21st Century learning environment within schools is aimed at secondary school teachers. Digital curriculum and pedagogy are promoted, digital privacy appears to be neglected. It is disappointing that such a highly valued globally recognised Irish educational institution like TCD overlooks both adult educators and digital privacy in their offerings.

Further research revealed some courses that tangentially refer to data privacy, but they are vague and lack specificity and this appears to be the rule as opposed to the exception. Additionally, they are pricey for a few days of training and a certificate bearing the seal of an esteemed university.

2.5 Parallels between Church & Tech Titans

There are numerous parallels between the church and technological titans in my mind. I see technology, like aspects of Catholicism, being used as a tool of hegemony and oppression.

My passion for digital privacy stems from my deliberately misleading, iniquitous, Catholic upbringing. I write from the standpoint of a woman who was controlled and manipulated as a child by Catholicism's perverse religious brainwashing. The Catholic Church's systematic and institutional oppression of Irish society, including the marginalisation of women through alienation, dehumanisation, and the violations of individuals' rights cannot and should not be easily forgotten. The church committed crimes against humanity in a bid to control, influence and dominate the education system, the health system, and Irish society in general. Mullally (2018) addresses misogyny, patriarchy, and the catholic church's vehement opposition to female independence and autonomy,

> The systematic imprisonment, punishment and forced exile of our own women; the illegal child trafficking; the abuse and torture. Occasionally the especially abhorrent, especially cruel, especially tragic stories make it into the headlines, but for every one of those, there are thousands more, the white noise of the subjugation and oppression of women (Mullalley, 2018, p. 3).

Catholic priests wielded an excessive amount of power in Ireland, palpable in the text of the *Irish Constitution of 1937* which unequivocally states that a women's 'life is within the home'. O'Toole (2023) writes eighty-six years after the Constitution was first published,

> The government is proposing to hold a referendum to replace the Constitution's clause in which the contribution to society of 'woman' is defined by her domestic 'duties.' This is a long overdue attempt to get the social ideology of the 1930s out of the constitution (O'Toole, 2023).

In her book Repealed, Fitzsimons (2021) states,

> Girls lucky enough to stay in Ireland's Church-run schools after primary level were taught how to cook, clean and be good housewives (Fitzsimons, 2021, p. 49).

Bea (2018) maintains that only two women have ever won the prestigious 'Field' medal for mathematics, despite an increase in the representation of women in mathematics' and she jokes,

> Women are encouraged by society to do loads of counting - for things like calories, and days until their wedding (Aisling, 2018, p. 38).

When I started secondary school in the early 80s, education for egalitarianism was never part of the Catholic led curriculum. I was fortunate to have older sisters who encouraged me to pursue my career in computing and mathematics and to abandon antiquated church and state rules. Freire (1970) reminds us,

> Banking education inhibits creativity and domesticates, although it cannot completely destroy the intentionality of consciousness (Freire, 1970, p. 56).

Victimization of vulnerable and marginalised people by dominant, patriarchal religious orders has convinced me that powerful hegemonic institutions dehumanise and devalue people. Fitzsimons (2021) quotes O'Fatharty who exemplifies the Catholic Church's dehumanising attitudes and behaviours towards women and girls during my adolescence and prior,

> … the vision of the stable traditional family so cherished by Catholic Ireland rested upon a particularly brutal system of containment where women and their children became what the journalist Conall O'Fatharty describes as 'little more than a commodity for trade amongst religious orders' (Fitzsimons, 2021, p. 49).

Fortunately, we are no longer a commodity for religious orders; unfortunately, instead, we have become a commodity for the world's tech titans.

We may live in a democracy, but surveillance and data profiling, like the church, limit dissent, and, like the church, technological hegemony coaxes, shapes, and influences those who acquiesce for many reasons, including, I argue, a lack of transparency and knowledge. No less than the Catholic Church, which extols values that it blatantly disregards, technological firms lure us with lies and empty promises. Both are blatantly antidemocratic and serve to keep the people in line.

> They'd beat the people with the people's stick (Chomsky & Barsamian, 1994, p. 15).

Edtech is designed with a concealed business model that is hard at work in the background, subtly attempting to impose a culture or worldview on us. Our private data is sold to the highest bidder because we unwittingly or through passivity, consent to digital profiling. Our privacy is sold, but we can never buy it back.

In our innocence we fail to read the privacy policies. We are being disempowered and devalued once again. But challenging these dominant groups in the face of socially constructed forces that work against us are decisive forms of self-preservation and agency. According to Freire, the dominant ideologies of any society are always the ideologies of the ruling elites who hold power, and their ideologies are intended to perpetuate inequality, dehumanisation, and oppression.

Freire (1970) states that,

> power is accomplished by the oppressors depositing myths indispensable to the preservation of the status quo (Freire, 1970, p. 112).

Freire argues that teachers must acknowledge the political role of education and its contribution to perpetuating dominant interests. He argues that educators are also politicians, and that facing this fact forces us to confront issues of power. Educators engaged in social change and struggle can 'make the political more pedagogical and the pedagogical more political' (Giroux & Freire, 1987, p. 12).

Giroux (2010) states that education is a crucial site of struggle yet,

> Too many classrooms at all levels of schooling now resemble a 'dead zone' where any vestige of critical thinking, self-reflection, and imagination quickly migrates to sites outside of the school only to be mediated and corrupted by a corporate-driven media culture (Giroux, 2010, p. 715).

Politics and Society has been an examinable subject in the Irish Leaving Certificate since 2018. It seeks to develop the learner's capacity for reflective and active citizenship informed by the insights and skills of social and political sciences. The curriculum incorporates Freire's philosophy of critical pedagogy. Incorporating a module like this into the Adult Education curriculum could prove transformative.

Giroux (2010) cites Said,

> Pedagogy in this instance provides the conditions to cultivate in students a healthy scepticism about power, a willingness to temper any reverence for authority with a sense of critical awareness (Said, in Giroux, 2010).

Adult educators recognise the importance of questioning power dynamics and breaking the cycle of misguided loyalty, deference, and general subjugation better than most, since many adult learners arrive at adult education institutions following trauma inflicted by dominant groups. Domination obtained, according to Gramsci, because of 'a conception of the world absorbed uncritically by the various social and cultural environments in which … the average man develops' (Gramsci, 1975, p.1396).

Freire brought Gramsci's concepts and ideas to life through his work as an adult educator and policymaker. Freire (1970) maintained that,

> Problem posing education strives for the emergence of consciousness and critical intervention in reality (Freire, 1970, p. 54).

Giroux (1987) talks about the indisputable power and necessity of critical research, with an emphasis on forms of critique which are relentless in the task of unmasking the lies, myths and distortions that construct the basis for the dominant order (Giroux & Freire, 1987, p. 10).

No more bowing down in silent acquiescence to dominant powers. Let us adopt a critical pedagogy and hold the tech titans liable for their moral turpitude, just as the church is currently paying for its transgressions.

Chapter 3: Mainframe: **CPU**

3.0 Critical Pedagogy Underpinnings

Critical pedagogy, promoted by Paulo Freire, served as the theoretical framework for my research. Critical pedagogy fosters student agency by challenging power structures and promoting critical thinking. It promotes democracy and social justice and is diametrically opposed to the banking method.

> Implicit in the banking concept is the assumption of a dichotomy between human beings and the world … the individual is spectator, not recreator (Freire, 1970, p. 48).

Raised in Ireland under the harsh rules of the Catholic church, I felt a connection to Freire. I was educated in the stultifying environment of Catholic-run schools that embraced the banking model of education, with banking teachers delivering lessons in monotonous, somnolent, repetitive tones.

> Many students simply withdraw into a speechless cocoon … but there is an aggressive, negative resistance as well (Freire & Shor, 1987, p.123).

Under the watchful eyes of the Catholic nuns, I cocooned. You paid the price if you defied orders, or if you were unfortunate enough to be a 'kithogue' or dyslexic for example.

Conversely, critical pedagogy is liberatory, encouraging learners to reflect critically upon their position in the world and with the world. Through critical questioning and logical argument people gradually become aware of the exploitative nature of capitalism or its new incarnation technocapitalism, and their role in its continued existence.

Suarez-Villa (2012) defines technocapitalism as the transformation of capitalism brought about by the expansion of the technology sector and the dominance of big

tech businesses who aim to maximize the value of intangibles such as creativity, knowledge, and private data (Suarez-Villa, 2012).

Freire's critical pedagogy regards teaching as a political profession in which educators invite students to critique power structures, therefore his educational philosophies are of particular interest to educationists today considering the numerous issues and concerns that the use of technology in today's computer and Internet-readied classrooms pose for pedagogy. Freire (1987) insists,

> The teacher has the right but also the duty to challenge the status quo, especially in the questions of domination … the liberating teacher can never stay silent on social questions, can never wash his or her hands of them (Freire & Shor, 1987, pp. 174 - 175).

Critical pedagogy can cultivate vital skills to help educators navigate and negotiate more deftly the digital domain and its manifold complexities, its artful deception. Freire repeatedly urged critical educators to question and expose what popular culture hides,

> To unveil the reality, which is being hidden by the dominant ideology, is one of the main tasks of liberating education (Freire & Shor, p. 36).

According to Khan (2007), Freire was wary of technology's potential to be used as a tool of dominance and oppression, and as early as *Pedagogy of the Oppressed,* he advocated for digital literacy in educational institutions to empower individuals in the face of manipulation and oppression (Freire, 1972, pp. 114-116). He is explicit in *Education as the Practice of Freedom* (1976), regarding the potential of technology to subjugate and manipulate people into behaving like mass-produced, homogeneous beings (Freire, 1976, p. 34).

> Technology thus ceases to be perceived by men as one of the greatest expressions of their creative power and becomes instead a species of new divinity to which they create a cult of worship (Freire, in Khan & Kellner, 2007, p.436).

According to Khan (2007), Freire worried about the unchecked propensity of capitalists to exploit technology users in his cherished educational domain,

> That the introduction of these more sophisticated means into the educational field will work in favour of those who have, and against those who have not (Gadotti, 1994, p. 79).

Freire believed that educators have a responsibility to use technologies with a critical but hopeful curiosity, remaining faithful to a pedagogy that both diligently interrogates technology's more oppressive facets and attempts to foster reconstruction of people's social, political, economic, and cultural problems through the conscientization of technology
(Khan & Kellner, 2007, p. 437). Freire states that,

> The answer does not lie in the rejection of the machine but in the humanization of man (Freire, in Khan & Kellner p. 435).

3.1 The Reconstruction of Education

Who are emergent technological pedagogies designed to serve? Cui Bono?

Kahn & Kellner (2007) investigate the educational and technological theories of Freire and Ivan Illich. Despite their globally acknowledged brilliance little attention has been paid to exploring their opinions on the introduction of computers and educational technology into the classroom. I will focus on Freire's ideas since I used a critical pedagogy strategy to highlight the potential pitfalls of the digitization of education and because well-informed critical educators are necessary to address the complexities and subtle inequalities that arise in a technology classroom.

McLaren & Farahmandpur (2002), quote Paula Allman (2001) when she suggests that 'teaching methodologies rooted in a theoretical framework based on the ideologies of Paulo
Freire can work in formal contexts in today's contemporary educational institutions' (McLaren & Farahmandpur, 2002).

Kahn & Kellner (2007) state that Freire argued for the necessity of teaching media literacy to motivate people to resist technological manipulation and oppression. Freire was sceptical of technology, fearing its potential to function as a tool of hegemony and oppression, yet he remained optimistic, recognising its power to liberate people from the tedium of existence, disempowerment, and inequality. Like Freire, I think it is critical to evaluate the ethicality of the technology we employ in the classroom.

Zuboff (2019) states,

> We accept the idea that technology must not be impeded if society is to prosper, and in this way, we surrender to technological determinism. An unquestioning acceptance of technology has become a feature of modern life (Zuboff, 2019, p. 225).

According to Khan & Kellner (2014), technology is indisputably driving the current educational transformation, and it is the responsibility of educators to ensure that technology is used ethically to advance learning and teaching whilst also supporting democracy. In a world where democracy has started to resemble a withering plant, it is vital to critically engage with technology.

Edtech should not be used to benefit capitalist corporations and the privileged techno-elite at the expense of user privacy. Cultivating democratic citizens and empowering future generations for democracy should be a key objective of contemporary educational practices. This is especially pertinent today, given the global emergence of populist demagogues claiming democratic virtue.

Khan & Kellner (2007) use the Cambridge Analytica scandal as a prime example of an assault on democratic principles. Cambridge Analytica, a data marketing company that was founded opportunistically on the back of Facebook used personal data harvested from approximately eighty-seven million Facebook profiles via multiple Facebook owned apps like Twitter,
WhatsApp, and Survey Monkey, without users' consent. The scandal involving Cambridge Analytica became public in 2018 following an inquiry by the UK's data

protection authorities. The stolen data was used to aid Donald Trump's 2016 presidential campaign.

According to Wachter (2021) in order to manipulate people's perceptions of electoral candidates, and change their voting behaviour, Cambridge Analytica created microtargeted political messaging and aggressively targeted voters online (Wachter et al, 2021). Cambridge Analytica functioned as a fully-fledged political propaganda machine that rode roughshod over users' privacy, seriously violated privacy laws and was instrumental in putting Trump in the most powerful position on earth.

Freire's forecasts, according to Kahn and Kellner (2007), are unequivocal regarding the tendency of technology and digital media to control and manipulate people into acting like mass-produced, custom designed mechanisms (Freire, 1976 p. 34). Today, technological hegemony is successfully used to coax, shape, and influence people worldwide. Even though it is akin to dominance, technical hegemony is established by consent eliminating the need for force.

Drawing from Mayo (2005), Gramsci, whose ideas about hegemony and human consciousness had a major influence on Freire's work, was a frequent critic of educational institutions, declaring mordantly that educators filled the stomach with 'bagfuls of victuals' capable of causing indigestion, which left no trace and had no meaningful impact on the lives of the learners (Mayo, 2005). This mirrors Freire's banking concept, in which 'learners are transformed into automatons, subverting their ontological vocation to be more fully human' (Freire, 1970). Working against the 'banking' approach, supporting the art of critical thinking, and breaking the habits of passivity and conformity that oppressive cultural systems have deeply ingrained in our consciousness, critical pedagogy is indispensable in the technological classroom.

> In the banking concept of education, knowledge is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing, projecting an absolute ignorance onto others, a characteristic of the ideology of oppression, it negates education and knowledge as processes of inquiry. This concept is well suited to the purposes of the

oppressors, whose tranquillity rests on how well people fit the world the oppressor has created, and how little they question it (Freire, 1970, pp. 45-49).

Greene (2009) advises encouraging a culture of critical pedagogy,

> If situations cannot be created that enable people to deal with feelings of being manipulated by outside forces, there will be far too little sense of agency among them and without a sense of agency people are unlikely to pose significant questions (Greene, 2009).

According to Khan & Kellner (2007), Freire saw that only computer specialists understand computer systems, and he believed that this was both antidemocratic and dangerously non participatory. He warned all communities to approach technology with both scepticism and optimism. It was his wish that educators adhere to a critical pedagogy that examines and questions the oppressive facets of technology, and that educators strive to raise awareness of people's social, political, economic, and cultural problems through the 'conscientization' of technology. He considered passive teaching and learning to be poor pedagogical practises that aided dominant authorities whilst disempowering learners.

It is a fact that technological initiatives undeniably transform educational institutions, particularly in socioeconomically disadvantaged areas, and Freire acknowledged that technology was an inevitable step in the evolution of society and education. In the early 1990s as Secretary of Education for the city of São Paulo, he decisively introduced computers into all institutions under his supervision.

Regrettably, it has now come to light that technology frequently has a negative impact on the lives of learners. Efforts to monitor and track learners' work and lives raises significant digital privacy concerns. Educational institutions routinely promote the use of technology and the psychological profiling of students in order to develop sophisticated tools of administrative surveillance and discipline that operate freely under the guise of security.

In addition to Freire's predictions, Illich implied that people must work hard to master their tools or risk being mastered by them (Illich, 1973). The wise counsel of Illich has

been ignored. Our computer systems, or more precisely the software preinstalled on them, as well as the 'free' apps we readily download know far more about us than we do about them.

Most of us are only familiar with a subset of the functionality of the devices we use. As Khan & Kellner (2007) suggest, when people operate tools uncritically and invest them with unquestionable power, oppressive monopolies can emerge, limiting freedom by describing specific tools as essential for life (Khan & Kellner, 2007).

Zuboff (2019) reinforces this point,

> The dictatorship of no alternatives is in full force (Zuboff, 2019, p. 342).

Today, the notion that technology is indispensable is profoundly ingrained in our mentality as the coronavirus crisis has expedited the trend to digital living and learning,

> Most people find it difficult to withdraw from these utilities, and many ponder if it is even possible. It is difficult to identify avenues of escape let alone genuine alternatives (Zuboff, 2019, pp. 341-342).

3.2 Datafied Times

These are datafied times. Barassi (2020) describes how addictive technologies are purposefully designed to hook users encouraging us to spend as much time as possible on our devices. Time equates to data, and data equates to wealth in the digital economy.

Barassi mentions the 'infinite scroll' as one example of a ploy, designed to enable users to swipe up and down through web content without having to click, thus encouraging addictive behaviour. Aza Raskin, creator of the 'infinite scroll' declared in 2019 that he is infinitely sorry for his invention. A guilt ridden Raskin said the aim was to create the 'most seamless experience possible for users' but unfortunately, it has turned out to be a ruse to 'keep users online for as long as possible.' Tim Cook, CEO of Apple, expressed concern about the 'endless, mindless scrolling' saying that 'technology should serve humanity and not the other way around' (Fathi, 2021).

According to Zuboff (2015) software developers concerned about the privacy implications of monitoring mechanisms made institutional efforts to create internet policies that would restrict their invasive capabilities (Zuboff, 2015, pp. 86 - 87). In the absence of a Hippocratic Oath, there should be strategies and resources available to developers to analyse their code and determine whether or not it runs afoul of their own values.

Which prompts me to inquire about ethical guidelines that govern adult educators. Data ethics and privacy have become more salient in practice, thus in the absence of education on digital privacy, how acceptable is it for adult educators to incorporate technological tools in their curricula? Educators may unintentionally or through inertia be involved in granting third parties access to student data via educational applications. By asserting our right to digital privacy training, adult education practitioners must step up and commit to learning how to use technology responsibly. Educators do not need to tolerate unethical conduct on the part of edtech corporations nor subject their learners to same.

In the last decade, personal data has morphed into a business resource, a critical economic input used to generate a new type of economic value.

Zuboff (2015) warns,

> Industrial civilization flourished at the expense of nature and now threatens to cost us the Earth. An information civilization shaped by surveillance capitalism and its new instrumentarian power will thrive at the expense of human nature and will threaten to cost us our humanity (Zuboff, 2015, pp. 11-12).

3.3 Safeguarding Our Liberties

Sears (2022) writes passionately about safeguarding our liberties. Echoing sentiments expressed by Zuboff and others, he describes social media as the ideal platform for populist movements whose modus operandi is to incite fear to garner votes and to effectively disseminate lies to amplify and feed that fear. Sears states that democracy

has recently proven to be far too fragile to allow ultra-wealthy individuals to erode its foundations without consequence.

He cites the Brexit referendum, the 2016 US election, the Kenyan elections, and Cambridge Analytica. He challenges us to consider whether the use of social media by politicians, political parties, and lobbyists is fair and balanced claiming that social media has shattered the order of political consensus that had previously ensured democracy's proper operation and function. In a poignant statement, Sears, founder of Holocaust Ireland, writes that the Nazis understood that controlling words is the first step toward controlling society. Referring to Kayne West's recent anti-Semitic tweets that reached 49 million followers, and Elon Musk's opinions on Ukraine and Taiwan, Sears concludes that these social media technophiles have a great deal of interest in countries that have no interest in democracy (Sears, 2022).

As they surf the web and sign into countless free apps on their smart devices, I notice that my students click the 'Consent' button without hesitation. Zuboff (2019) states that these free services cater to the latent needs of contemporary individuals seeking tools for a productive life in a society that is becoming increasingly time constrained. These free applications both disarm and charm us but 'Once bitten, the apple was irresistible' (Zuboff, 2019, p. 341).

3.4 Demystifying Technocapitalism

According to Zuboff (2015), surveillance capitalism undermines democratic norms and values by attempting to predict and modify human behaviour using technological algorithms. Zuboff claims that Google's practises are purposefully designed to be undetectable or at the very least obscure, and that aspects of its duplicitous operations would still be hidden today if whistle-blower Edward Snowden had not come forward. Snowden urged people to prioritise privacy, he emphasised the critical role of cybersecurity, and he advocated for a resurgence of political activism on digital privacy issues (Mascarenhas, 2016).

Zuboff (2015) reminds us that Google has faced severe legal and societal consequences for abuses of privacy, including tracking and surveilling students who use Google's educational tools. In January 2020, the French data regulator CNIL fined Google $56 million for privacy violations, the largest fine ever imposed under the GDPR (Bureau, 2020).

Hoofnagle believes that,

> A lack of knowledge rather than a cavalier attitude toward privacy as tech leaders have claimed, is a major reason many people engage with the digital world in a seemingly unconcerned manner (Hoofnagle et al., 2010).

Zuboff (2015) illustrates how previously populations and capitalists relied on one another for employment and consumption, but this new paradigm is apathetic to and disconnected from the people, who have been reduced to data extraction targets. She describes how the 'division of labour,' a hallmark of the industrial revolution, has been replaced by the 'division of learning,' prompted by the introduction of smart machines, and resulting in job polarization where governments have not invested adequately in education. The deskilling of humans in order to invest in machines is precisely the crisis we are now facing in education, as more and more edtech purveyors tell us that it is not the educators who know; it is the machines, and so we should invest, not in people, but in machines, handing over not only our funds, but also the actual work of education.

According to technologists, these developments are an inevitable consequence of computer-based technologies. According to research, job polarisation reflects the power of neoliberal ideology, politics, culture, and institutional structures. Companies are choosing 'smart' machines over smart people, trading computers and their algorithms for human potential in a range of roles 'far from the factory floor' (Zuboff, 2019, p. 181).

What a different world adult education would be today if colleges had spent the last two decades investing in educators and learners rather than investing in Learning Management Systems (LMS). There was no contingency plan in place, no guidelines

for educators or learners when we were asked to transition from frontal teaching in classrooms to online teaching via various video conferencing platforms like Teams or Zoom. This abrupt digital transformation compelled teachers to manage and master digital tools without adequate training. Educators are now under pressure to continue using digital tools, as the blended learning experience has escalated in popularity.

As Zuboff (2015) states, the data-dispossession process is now fully embedded in education, with LMS like Moodle and apps like TurnItIn controlling what she refers to as 'the two texts'.

> The first text, full of promise, actually functions as the supply operation for the second text: the shadow text. This second text is hidden from our view: 'read only' for surveillance capitalists. The shadow text is a burgeoning accumulation of behavioural surplus and its analyses, and it says more about us than we can know about ourselves. Worse still, it becomes increasingly difficult, perhaps impossible, to refrain from contributing to the shadow text. It automatically feeds on our experience as we engage in the normal and necessary routines of social participation. As the source from which all the treasure flows, this second text is about us, but it is not for us. It is created, maintained, and exploited outside our awareness for others' benefit (Zuboff, 2015, pp. 185-186).

3.5 Epistemic Fragmentation

Part of my concerns when initiating this research, was to get a sense of what adult educators know (or don't know) about the targeted advertising they encounter when they seek to introduce technology to the classroom. Wachter et al (2021) provide an overview of the negative effects of online targeted advertising (OTA) namely Epistemic Fragmentation.

The digital economy is propelled by commercial online targeted advertising which funds the 'free' services we have come to rely on.

Algorithms are built to generate specific demographics and then tailor content to target their campaigns. Contrary to common belief, OTA is not a risk-free procedure. For starters, it divides and isolates us by preventing us from collectively flagging objectionable advertisements. We can do this in the real world by alerting regulators to potentially harmful content when we see an offensive advertisement at a bus stop or train station. Regulatory agencies have historically relied solely on consumer complaints and post publication reporting. Conversely, the sheer magnitude and distribution method of OTA profoundly challenges regulators' ability to ensure that advertisers comply with codes of conduct.

As a collective, we were successful in having several noxious advertisements banned. Mr. Clean produced divisive advertisements which claimed that a mother's 'real work' is cleaning her house, a demeaning usage of gender stereotypes. Flora margarine outraged the entire LGBQT community in 2013 with offensive advertisements implying that fathers need a strong heart to cope with their son or daughter coming out. Hyundai's 2013 'Pipe Job' advert depicting a man poisoning himself with carbon monoxide in his garage was highly insensitive. Pepsi were accused of trivialising Black Lives Matter and police brutality while a Coca-Cola commercial was banned for suggesting its drink was 'nutritious' (Mertes).

Regulators are struggling to safeguard us against potentially harmful OTA. If people do not file complaints, harmful messages continue to circulate, and the regulator fails to update guidelines to reflect current social norms. Our capacity to function as empowered citizens, which is the bedrock of civic governance, is limited. The public forum for discussion of what we as a society consider harmful is deteriorating (Wachter et al, 2021 p. 467).

Identifying harmful content requires a critical and empathetic eye. The people most likely to have the awareness and motivation to register a complaint are not themselves vulnerable, but they are aware of and concerned for those who are. A teacher, for example, may notice that learners from minority or socioeconomically disadvantaged backgrounds are disproportionately exposed to unhealthy food or alcohol advertising (Wachter et al, 2021, p. 466). When advertisements for high-fat

foods or alcohol are directed at low-income families, when gambling advertisements are directed at people who have a gambling addiction, or when advertisements for fancy footwear crowd out job advertisements or public health announcements, these are examples of damaging advertising strategies that prey on people's vulnerabilities or deny people opportunities they have a right to.

Legislation does not currently address epistemic fragmentation. Critical educators can disrupt epistemic fragmentation by focusing on educating people and restoring the role of people as active participants in online advertising regulation (Wachter S., 2021). Adult educators are well positioned to raise awareness about the myriad of challenges that adult learners face while using technology for living and learning. Mullally (2022), decries the lack of media literacy in educational establishments,

> … there is a tapas of madness for voters to choose from, underscored by a national education issue when it comes to media literacy and critical thinking (Mullally, 2022).

Greene (2009) highlights the necessity of having a space in which light can be shed on what is happening and she muses on the valuable work that educators might do during this difficult period in history (Greene, 2009).

3.6 Prâxis

Freire (1970) defines praxis as,

> Reflection and action directed at the structures to be transformed (Freire, 1970 p.126)

According to Mayo (2021) praxis is at the heart of Freire's acclaimed pedagogical approach. Freire's anti-imperialist and anti-capitalist literacy praxis served as the foundation for a broader struggle for freedom from oppression. Could media literacy praxis serve as the foundation for freedom from technological oppression?

Educators can potentially enable people to read not only the word but also the world (Freire, in Mayo P., 2013, p. 27).

According to Mayo (2013), Freire's idea of praxis entails a critical analysis of the world one inhabits; the 'action for change' that leads to greater social justice depends on this. Freire employed praxis as a means of confronting and criticising oppressor-oppressed relations with the hope of improving current practises. Praxis then, is the dialectical unity of thought and action.

Vita activa (active life) and *vita contemplativa* (contemplative life) would be intertwined in a process of praxis (Mayo, 2020).

The well-known quote by Socrates, 'An unexamined life is not worth living' exemplifies Freire's concept of praxis. If an activity lacks a reflective component, it falls far short of Freire's definition of praxis.

Chapter 4: The Holy Trinity of Knowledge

4.0 Methodology

This chapter details the research methods and methodology I chose to conduct this inquiry. It reflects my ontological and epistemological viewpoint, which guided my decision on the conceptual framework most appropriate for my inquiry's objectives. I briefly explain how I analysed the qualitative data using a thematic analysis technique. The ethical issues and challenges I experienced are also addressed here.

To qualify for inclusion in this research participants were required to be adult educators working with adult learners in adult education institutions in Ireland.

This study aimed to assess the knowledge base of a group of fourteen adult educators regarding digital privacy awareness and to determine how critical pedagogy can inform CPD to better prepare adult educators for navigating the edtech environment. Global technology corporations are making significant in-roads into the adult education sector. The pandemic has been a catalyst for edtech expansion and capitalization. According to Williamson & Hogan (2021), one key value and purpose driving edtech expansion is monetary (Williamson & Hogan, 2021).

4.1 Research Design

There were three distinct components to the research design. The first phase entailed developing and teaching a course on digital privacy to a group of fourteen adult educators. Phase 2, a quantitative survey and Phase 3, a qualitative survey were conducted after the course.

The core component of the research design, phase 1, involved the delivery and subsequent thematic analysis of the data generated from a two-part online course on digital privacy for adult educators. I taught the course titled '*The Fly on the Wall*'

online using Teams, and with the participants' permission, I recorded both sessions. Teams then produced verbatim transcripts that everyone had access to afterwards. I used these transcripts to identify, code, and analyse the recurring themes that emerged from the data.

The first part of the course was dialogic and participative. We engaged in candid discussions on the concept of digital privacy and what it actually means in a society that is progressively digitizing. We explored the difficulties and barriers faced by adult educators when attempting to safeguard their digital privacy in the classroom. We discussed the origin and rise of the data economy, investigating tech's hidden agenda and the enormous financial gains generated by data mining and surveillance. We debated the effects of real time bidding (RTB) which leads to OTA and its detrimental consequences for marginalized and vulnerable groups – a phenomenon known as epistemic fragmentation. I highlighted the dangers posed by epistemic fragmentation and how it undermines democratic values.

In addition to being structured and designed with specific educational learning objectives in mind, the first session was collaborative and conversational. Freire (1987) states:

> Through dialogue, reflecting together on what we know and don't know, we can then act critically to transform reality, dialogue is a challenge to existing domination. Dialogue is a sealing together of teacher and students in the joint act of knowing and re-knowing the object of study (Freire & Shor, 1987, p. 100).

Rich, in-depth, open-ended dialogue can lead to the resolution of a problem which in turn can lead to a more equitable, humane, and compassionate world. Throughout his literary works, Freire asserts that the ontological aim of humanity is to become more human. Right now, our digital privacy is being violated in the classroom, which is dehumanising.

A hands-on, practical approach guided part 2 of the course, which focused on the practicalities of effectively preparing adult educators for navigating the digital

classroom. This session sought to provide educators with technical knowledge, and information on the numerous privacy protection options accessible to them.

As a critical pragmatic researcher motivated by critical pedagogy, and an aficionado of experiential education, I took inspiration from elements of critical participatory action research (CPAR). The action component, which took the shape of my course on digital privacy to improve digital pedagogy, ensure fairness, transparency, and privacy whilst promoting and encouraging counter-hegemonic practices.

Two survey reviews, the first quantitative, the second qualitative, provided me with additional valuable research insights. The qualitative survey demonstrated the effectiveness of the critical pedagogical approach I used, and the quantitative findings provided supplementary data on a recurring theme, the appetite for CPD on digital privacy.

I recruited my participants by speaking directly with my former HDip colleagues from Maynooth University, my current peer group on the M.Ed. at Maynooth, and the educators I worked with during my teacher training. Additionally, I created a poster which I distributed via social media to my colleagues, and to the current cohort of HDip students at Maynooth University via the course co-ordinator. The response from adult educators wishing to participate was overwhelmingly positive, but I established a limit of fourteen participants, not including myself, to assure the quality of the data.

4.2 Ontology

Despite being a critical pragmatic researcher, I drew from elements of CPAR, and although my research methods were primarily qualitative, I conducted a modest quantitative survey too. I cannot say that I used mixed methods since my use of quant is minimal, however, I did use a somewhat mixed method as my data-gathering methodology.

CPAR is a framework for engaging research with communities interested in documenting, challenging, and transforming conditions of social injustice (Fine &

Torre, 2021, p. 3). The 'C' stands for critical. The research question is concerned with critically questioning issues of power. 'P' denotes rich and deep participation by the group affected by the issue under investigation. 'A' indicates that CPAR links research to action through a range of methods, including teaching, with a goal to promote change, educate people, and inspire them to act. 'R' represents a commitment to systematic inquiry; qualitative, quantitative, and/or mixed methods (Fine & Torre, 2021).

Maguire (2009) wrote a description of participatory research and its potential for educators that resonated with me,

> Participatory Action Research (PAR) has found a welcoming home in the field of education. Classrooms are the most fundamental site for social change efforts, and PAR and other forms of CPAR are central to that struggle. PAR openly challenges existing power structures and creates opportunities for the development of innovative and effective solutions to the problems we face in our classrooms and in our communities. PAR is an openly and unapologetically political approach to knowledge creation through and for action. It is political in the sense of naming and unsettling relationships of power. The struggle to introduce a counter-hegemonic edge to PAR, including all types of practitioner inquiry, frames our work (McGuire & Brydon-Miller, 2009).

In order to confront oppression and orchestrate institutional change, Freire promoted a PAR approach. Orlowski (2019) clarifies Freire's role in the development of PAR detailing how participatory research was in its infancy when Freire was invited to Tanzania in 1971 to present his research ideas (Hall, 2005). Freire used the Tanzania presentation to challenge the traditional positivist approach of conducting dispassionate research by claiming neutrality and objectivity.

> The investigator who, in the name of scientific objectivity, transforms the organic into something inorganic is a person who fears change (Freire, in Orlowski, 2019).

PAR and critical pedagogy share assumptions. Critical pedagogy strives for the emergence of consciousness and critical intervention in reality and serves as an

alternative to traditional institutional models of education which attempt to maintain the submersion of consciousness, the teacher imposing knowledge on passive recipients, anesthetising, and inhibiting their creative power (Freire, 1970, p. 54). As an adult educator, I value dialogue and constructive criticism and I am devoted to Freire's politics of emancipatory action. I spent a significant amount of time critically examining technological power structures and how they operate in order to illuminate their dark practises.

> Oppression needs to be illuminated in order to be overcome through practical action (Giroux & Freire, 1987).

As a computer scientist, I fully comprehend how the combination of relentless data mining and sophisticated political targeting can and has resulted in democratic gerrymandering. To the untrained eye, the algorithms appear mathematical and objective, but in reality, the system is highly subjective, with human decisions controlling the personalized content recommended.

4.3 Epistemology

The word pragmatism is originally derived from the Greek word 'pragma,' which means action (Pansiri 2005). Pragmatists focus on real-world issues. The degradation of privacy in the contemporary digital classroom is unquestionably a real-world concern.

Pragmatics acknowledge that there are numerous ways to interpret the world and conduct research, that a single point of view can never tell the whole story, that multiple realities coexist. Pragmatists employ whatever combination of methods necessary to advance the research question therefore pragmatism provides a philosophical and methodological middle ground in the form of a mixed method approach that rejects traditional dualism (Johnson-Burke & Onwuegbuzie, 2004). Pragmatists believe that the process of acquiring knowledge is a continuum rather than two mutually exclusive poles of either objectivity or subjectivity (Goles & Hirschheim 2002).

Pragmatism provides an appealing philosophical partner to mixed methods research that eschews unhelpful epistemological dichotomies. According to Creswell (2020), 'mixing methods is an intuitive way of doing research that is constantly being displayed throughout our lives' (Creswell et al, 2020). No one buying a house refuses to discuss or even know the price, the mortgage repayments, the room measurements, or the number of bathrooms. No one buying a house refuses to visit the house, look at pictures of it, walk or drive around the neighbourhood, or talk to people about it. All rational actors putting a substantial personal investment into their own house would naturally, without any consideration of paradigms, epistemology, identity, or mixed methods, use all and any convenient data to help make up their minds (Gorand, 2010, p. 246).

As a mathematics tutor, I value quantitative research. I appreciate statistics, facts, and inferential data but I also recognise the importance of a subjective, qualitative approach that tells the story from the perspective of those directly involved in it.

Charles Dickens' (1995) fictional works illustrate how opposing epistemological perspectives are pitted against one another when in fact both have value in this world. 'Girl number twenty unable to define a horse!' said Mr. Gradgrind. 'Girl number twenty' is Sissy Jupe, a circus girl who grew up among horses. Gradgrind will never be able to compete with her first-hand experiential knowledge of horses (Dickens, 1995, pp. 11-12). Gradgrind accepts an abstract, decontextualized, factual response from Bitzer, a textbook response from a boy who has never been around horses, and in doing so, Gradgrind disregards the critical role of emotion and feelings in the acquisition of knowledge.

Drawing from Marx Freire states that,

> To deny the importance of subjectivity in the process of transforming the world and history is naive and simplistic. Marx does not espouse such a dichotomy, nor does any other critical, realistic thinker (Freire, 1970, pp. 24-25).

According to Creswell (2020) the mixed methods paradigm allows for the best of both monomethod perspectives to be included in a single study (Creswell et al, 2020). According to Johnson & Onwuegbuzie (2004) methodological pluralism frequently results in superior research (Johnson-Burke & Onwuegbuzie, 2004).

I like the implicit tendency towards balance and compromise within this 'third methodological community' (Teddlie & Tashakkori, 2010, p. 11). Quantitative versus qualitative promotes unnecessary boundaries and limits creative thinking (Tenny, Brannan, & Brannan, 2022).

This research is primarily qualitative, with only a brief quantitative survey but for me, it felt natural to provide my reader with a small portion of statistical findings to honour my hard-earned knowledge of Mathematics.

4.4 Thematic Analysis

This research was investigative; therefore, I choose a latent thematic analysis to identify the important and recurrent themes that emerged from the data. Braun & Clarke (2006) the creators of this popular six-step qualitative analysis method describe thematic analysis as a viable and flexible technique for qualitative research that offers a user-friendly and theoretically flexible framework for data analysis (Braun & Clarke, 2006, pp. 77-101). The latent level goes beyond the actual words to analyse ideologies, presumptions, or conceptualizations that may have prompted or influenced the semantic content (Braun & Clarke, 2006, p. 84).

I spent a considerable amount of time familiarising myself with the transcripts generated from the course which produced a large amount of rich and valuable data. I then started the process of 'coding' the transcripts, which entails identifying key phrases, sentences, or words and assigning a label or 'code' to represent their meaning.

By grouping related codes, the themes were created. My Findings chapter which follows, includes a thorough discussion of each of the themes I analysed and wrote about.

4.5 Ethical Issues

All of my participants agreed to participate in this educational research voluntarily; they responded to a personal invitation from me, and to a social media advertisement I posted. Nobody was pressured or coerced in any way.
Some key ethical considerations were:

- Allowing participants to remain anonymous.

- Safeguarding my participants' privacy.

- Keeping sensitive or personal information confidential.

- Not collecting sensitive or personal information unless absolutely necessary for the research.

Each of my participants completed a consent form in accordance with Maynooth University procedures, and I supplied them with an information sheet detailing the purpose of the study. Everyone was given a copy of both the information sheet and their signed consent form for their own records. Participants were treated with dignity and respect throughout the research process, and they have been and will continue to be kept fully informed throughout this research project.

Adult and Further Education instructors who graduated from Maynooth University and are presently working in the field of Adult and Further Education (AFE) were among my participants, as well as my colleagues at Maynooth University completing an M.Ed. in Adult and Community Education while working in AFE institutions.

In true Freirean style, I taught the course in a non-hierarchical, collaborative, and dialogical manner. The emphasis was on the group as a whole rather than individual members, ensuring that everyone had an equal opportunity to participate in the process. With permission, I recorded the audio and generated transcripts during the course. Participants had access to the recording and transcripts on Teams afterwards, giving them the opportunity to revise their contributions and request that they be removed or excluded from my thesis if they so wished.

I asked my participants to submit two questionnaires at the end of the online course. I conducted a brief quantitative survey in order to get statistical results that were easy to evaluate and display. I then constructed a qualitative survey to collect subjective information from my participants, who could freely and anonymously share their ideas and beliefs.

Ethical issues associated with using a survey questionnaire method were strictly adhered to in this research, including participant anonymity, privacy while answering the questions, and no questions included within the questionnaire that could extract any unique identifying information.

Participants' anonymity and adequate time to complete and return survey questionnaires were important factors in ensuring the reliability and validity of the data obtained. My supervisors at Maynooth University reviewed my ethics form to ensure that appropriate ethical standards were followed.

A key ethical concern for those conducting research ought to be the quality of the research, the robustness of the findings, and the security of the conclusions drawn. The ethics concern has been largely for the participants in the research process, which is perfectly proper, but this emphasis may have blinded researchers to their responsibility to those not participating in the research process (Gorand, 2010, p. 247).

I was conscious that the learners were not involved in my study, but I for one, as an adult and community educator, conducted this research with the learner's needs at the forefront of my mind.

Chapter 5: Breaking News

5.0 Introduction

In this chapter, I will present the key findings of my investigation into digital privacy in the context of adult education in Ireland. The qualitative findings generated from the course, the research's action component, and the qualitative survey findings are presented thematically. The quantitative survey is presented graphically in Appendix B.

5.1 Participant Demographics

Fourteen adult educators participated in this research. Participants included Maynooth

University HDip in Adult and Further Education graduates currently working in Adult Education institutions and M.Ed. students in Adult and Community Education also presently employed in Adult Education centres. There were two male and twelve female educators whose ages ranged from twenty-eight to fifty-five approximately. A wide range of ethnicities and geographical regions within Ireland were represented.

The following 7 themes are drawn from the transcripts of the course I taught, 'The Fly on the Wall,' which constituted the core component of my research.

Theme 1
How Much do Adult Educators know about Digital Privacy?

In this recurring theme, adult educators realised that there is a knowledge gap, and they expressed the need for CPD in digital privacy awareness and training. Pandemic-induced lockdowns have pushed the usage of a host of technological tools in the

classroom, yet little or no digital privacy literacy is taught in adult education institutions according to my participants.

> Teachers may be experts in education, but they are often not experts in digital technology. Confidence and willingness are among the main barriers to adopting digital technologies. Ensuring teachers have adequate training is often the biggest challenge (Digital Strategy for Schools, 2021).

Educators recognised that they lack specific technological knowledge and proficiency because the subject of digital privacy has never been mentioned or presented to them. Going into this research, I suspected that most educators have limited understanding of how to configure the privacy settings on the apps, platforms, and devices they use daily, and they rarely, if ever, review their privacy settings. I assumed that educators are either unaware of the embedded surveillance features and the extent of the exploitation and what they can do to mitigate it, or don't question for fear of being left behind or overlooked.

The debate kickstarted with Maud expressing her thoughts on the level of technical knowledge she has observed in her workplace,

> Do they understand? Do they know it themselves? ... most of the people I've come across in an educational environment, with regards to IT have just a basic knowledge.

During this discussion, several participants expressed concerns about their lack of technological familiarity, some confessing to having little technical knowledge. Grace was the first to reveal her predicament,

> I'm struggling with technology platforms, honestly.

When the data mining and nefarious uses of personal data were revealed during the discussion, some participants became irritated and upset. Naoise expressed her dismay,

> ...there should be training ... you're telling us all this, I had no idea it existed, so how do you know? I mean you'd need to have done a thesis just as you're

doing Ruth. So, there would be a case to put together a CPD so that everybody using technology for study or teaching is aware that cookies exist and what the implications are, and what one can do to minimize the risk.

Several other participants raised similar concerns about their lack of technical knowledge, Tara admitted,

Now I'm not so technical as to think about data, I'm just not that techie.

Naoise then expressed her frustration with her lack of knowledge by inquiring,

Am I the only one with the dunce hat on my head here in the corner?

to which Tara replied,

No, no by no means, you're just taking the hit.

And on that note, Naoise went on to say,

Ruth … you're here and you're sharing a screen and you are going through it step by step and possibly an extra step for me, but it's not easy if you're not here. It's not easy if we can't say, hang on, go back, or go forward … it's not easy.

At this point, I felt that Naoise was being incredibly brave. No-one wants to admit that they don't understand technology for fear of sounding inept. I was relieved to see that other participants supported her. Erin communicated her support by saying,

Ruth, it's a tough subject to understand, data protection is totally overlooked, people have no idea about cookies etc. so developing an online awareness could be useful across all sectors of the work environment.

Our understanding of how the sudden transition from 'chalk and talk' education to remote or hybrid learning has blurred the lines between public and private life, is still in its nascent stages.

The Catholic Church was a recurring theme in our discussion about 'privacy' and what it means in today's digital age. Some of the key words that emerged from the data were 'secrecy,' 'shame,' and 'abuse.' This theme arose as a consequence of the emotional and psychological effects of the oppressive religious hegemony that predominated our educational system until relatively recently. In this context, the word 'privacy' appears to be synonymous with 'secrecy' and has negative connotations for many of the participants. A passionate debate ensued about how the Catholic church operated in secrecy, concealing domination, degradation, and physical harm to Ireland's women and children. This theme omits the fact that many students in Ireland's Adult Education sector abandoned their schooling as a result of the tyrannical abuse of power perpetrated by religious orders.

Maud led the discussion, which began with her opposition to keeping things private,

> … in this country for years, information was not shared with us in any way, shape, or form … access to information about 'Mother and Baby' homes, adoption, birth certificates, all that kind of stuff … as a society we need to be able to access that information.

Several participants agreed with Maud's viewpoint including Naoise who shared her perspective as follows,

> … how much was swept under the carpet in this country, how much awful abuse was inflicted, and absorbed by people through the history of this country … people hid the truths, they hid awful things … we have to be more open; the truths have to be known … with the history in Ireland … we need to be more open.

Croia was adamant that privacy was a bad thing and expressed solidarity with the other participants stating,

> … I disagree with the idea of keeping everything private … that is linked to a very shameful existence for a lot of people … there's been a lot of abuse behind closed doors, I don't necessarily think keeping everything private is a good thing.

Seanna contributed a logical statement acknowledging the secretive nature of our history,

> … in the end it's going to be about balance, about regulation, about compromise, because we've got this history of secrecy, and that notion of shame has very much been part of people's history.

Later in the session, when discussing the strategically placed cameras throughout the educational institutions where we work, Naoise reiterated her position on Ireland's unseen atrocities,

> … given the history of the abuse in this country … there were no eyes on anybody, even if there were eyes, people said it's not really happening, even people within the institution, when there were eyes on them, metaphorically speaking, still said it wasn't happening.

There is no question that the severity of the church's history of abuse has had a profound effect on the people of Ireland, maybe more so for educators because so many instances of child abuse took place within educational settings.

Theme 3
Powerlessness

As previously stated, many Irish people have a long history of suffering oppression, dominance, and abuse and it is my hope that we do not disregard historical lessons and allow private power to operate unregulated, especially in educational settings. I wanted to know if educators consent to data collection because they face difficulties they are not equipped to deal with when using technology in the classroom, leaving them powerless to overcome purposefully designed technological barriers. In my view digital devices and platforms are generating a slew of unforeseeable challenges, complications, and trouble. My participants reacted to barriers, forced consent, and privacy policies in the following ways.

Cara initiated the conversation,

> … most of the time you are forced to give your consent … you're not really forced, it's just you do not want to go through the process of reading and trying to understand what to tick, which of the options to go with … so you end up compromising your choice, it's just all complicated.

As Rian spoke about his technological experiences, the dialogue was tainted with despair and powerlessness,

> … you get cookies and it's difficult not to accept them, I'd love to not just accept them but if you don't accept them you have to do a whole lot of tricks … like when you go to Tesco you have to use your Clubcard to get the cheap deals, with cookies, you have to press yes just to get into the website, if you don't press yes, you have to go through a lot of hoops and jumps.

Loyalty cards collect much more than the points they offer. According to McLeod (2020), his coffee order app tracked him day and night, reporting his location 2,700 times in a period of five months. He had mistakenly assumed that the app only worked while he was ordering coffee (McLeod, 2020). This example illustrates that

understanding consent is a central concept in understanding digital privacy (Robertson & Corrigan).

Grace reminds us that we all want to incorporate technology into our lessons because of the numerous benefits it offers, and she states,

> I want to have access to applications, to have the services I need so I have to accept the cookies. I don't have the time to read 2 maybe 3 pages just to go on … we need to, we have to accept the cookie policies without reading them.

Maud reminds us that there are times when we have no choice but to apply a digital pedagogy,

> …. where it's directed at you to use technology in the workplace, you're kind of forced … Google classrooms, that's all pushed out … it's like download VSware, you need to. People don't question it because it's your workplace. You're not looking at cookies, you're not looking at consent and you're not reading fine print because it's part of your job.

So, if admin says you have to use it, you have to use it. If you do read the fine print and you don't like the privacy policies what alternatives are there for teachers?

Frequently the technology itself eliminates choice as Seanna points out,

> To use things like Teams, you sometimes have no choice but to accept the cookies.

Participants viewed the complaints procedure negatively; Maud describes the barriers she faced when she attempted to report inappropriate content appeared on the device she was using during working hours,

> … I did try to report it and they said, we allow adult content … lunchtime having coffee in the staff room and you're like, Jesus!

Cara again expressed frustration,

> … even when the complaints are made, it takes the Commission almost a year to go through the whole process of looking into it. It discourages people from complaining.

The data mining industry relies on inertia to function, it is in their best interests to make it as difficult as possible for us to reject cookies or file a complaint. Educators must act to address this oppressive technological hegemony. Educators should challenge the current paradigm of 'consenting' to data collection otherwise we are passive bystanders in the authoritarian struggle against the attitudes and political dogma of corporate technocapitalism.

Technological hegemony is currently in full swing in our classrooms. Hegemony differs from dominance in that dominance is generally established by coercion, whereas hegemony is established by consent. Consent is the lynchpin of technological hegemony. And of course, there are instances when no consent is sought, and our privacy is violated in blatant ways.

Rian shares a story about an image of his family pet that he shared on social media,

> I was in a shop in town with my wife when I saw my dog on a T-shirt, I knew it was definitely my dog. Someone just took the photo off Facebook, changed the colours on it and used it.

He goes on to tell us about the first person in American history to successfully get a law passed establishing one's right to privacy and image ownership,

> In the 1900 there was a woman named Abigail Roberson, she was walking down the street and she saw her face on a bag of flour. No one had asked for Roberson's consent. The humiliation caused her to suffer a severe nervous shock, she ended up in hospital. She took the company to court; she won the case.

Grace concluded the discussion with her statement on consent,

> … talking about privacy and consent, the moment you share your details and information on any application you are exposing yourself to be hacked or your data to be stolen and used, even if they said it's safe, it's not safe.

Theme 4
Panoptic Surveillance

The Panopticon is a powerful metaphor for contemporary society; a Panopticon in which we trade our privacy in exchange for the assurance of security, and in which our daily activities in most public spaces are monitored and recorded via closed-circuit television. Most people have grown accustomed to this disturbing concept and seem indifferent to this widely used mechanism of control. People don't know if they are constantly being watched, so they act as if they are.

Nowadays, most educational institutions have surveillance cameras strategically placed throughout the building. I'm curious, are educators being their authentic selves in the classroom or are they bringing a diminished version of themselves to work? How cognizant are teachers of the surveillance, do we feel free to have open and honest political debate in the classroom for example?

We talked about what kind of deal is struck by venturing onto college grounds or accepting the technology required to teach and learn. My participants had mixed feelings about it all.

Maud sparked the debate,

> … where does the surveillance actually end … it just doesn't seem to end, everybody's being monitored, everybody's being watched.

Grace agreed with Maud and shared how surveillance is making her feel,

> I'm not sure there is privacy anymore … you feel intruded on all the time, I feel I am being watched all the time, like hidden eyes all around me, everywhere, all the time … if I have my laptop and mobile phone on, I will feel I'm not alone.

Naoise held a vastly different viewpoint,

… when I go online, I'm an innocent abroad, but in my classroom, I don't feel that happens. I go into the classroom, and I am me. I'm not remotely aware of being surveilled.

At this point in the discussion, the youngest participant, who has never known life without technology, became agitated, and she defended technology by saying,

I disagree with all the sentiment of this, I think in an educational setting, they're not watching you in a way to stalk you, that's completely illegal. I've had a manager say to me, 'we've been watching you on the camera, you've been on your phone too much' and I said, 'you can't actually do that unless you have a reason to initially watch me' and they had to completely take it back. As a teacher, aren't you there to educate and instruct students and encourage intellectual debate, not to radicalize them anyway? What are you saying exactly?

Sensing the rising tension, Naoise reiterated the importance of digital privacy training for all educators,

There should be training for all tutors … everybody should have some sort of training … people should be informed … there should be transparency is what I'm trying to say, there should be transparency.

Theme 5:
Uncertainty / Responsibility / GDPR

After the data mining and surveillance issues were addressed, a strong theme of uncertainty emerged, with everyone wondering who is responsible for our online safety. All educators receive GDPR training, which informs us about GDPR laws intended to provide individuals with control over how their data is used, and to ensure that users are presented with notifications requesting consent to collect their data or track their activity. But the law is silent on the subject of digital privacy. I feel that there is currently a loophole in the law and more legal oversight is required.

Unregulated tech companies are driven by surveillance capitalism rather than moral considerations and we are consenting to the techno-capitalist system that governs our world today when we ignore historical lessons and allow private power to operate without constraint. Corporate profits take precedence over user privacy rights.

Since the GDPR came into effect in 2018, results have not been promising. The GDPR assigns responsibility for regulatory enforcement to the nation where a company has its primary offices, and for many big tech corporations, that nation is Ireland. Some critics legitimately wonder how strictly Ireland adheres to the GDPR. In addition, lawyers write the privacy policies that accompany educational technology. These policies are not readable or understandable to the layman and are often misunderstood by people who believe falsely that they contain a promise to protect their privacy when in fact there is no such promise.

> Privacy policies tend to be impenetrable walls of text that are incomprehensible for anyone without a law degree (Klosowski, 2023).

Technology and edtech are owned and controlled by dominant tech powers that are subtly attempting to impose a culture or worldview on us, driving us in the direction of political ideals that uphold the status quo. Here's what my participants had to say.

Grace asks, perplexed,

> I'm wondering, how responsible am I? I feel the burden is on my shoulders, but I want to have access to applications, to the services I need.

Naoise also sounds confused,

> What is the difference between privacy and GDPR? … GDPR goes beyond cookies and the Internet? That's a hugely different category, it raises a myriad of problems and constraints that go beyond using the Internet and using computers, right?

Cara and Seanna seem clearer about the role of the GDPR with Cara stating,

> It is your own responsibility to protect yourself. The law provides for me, it's just the way it plays out is, it does not.

Seanna supports Cara stating,

> We rely on GDPR as a regulatory framework to protect us … there are debates about whether it does it adequately and we rightly talk about that, but also how we trust tech companies to look after our data.

Regarding information privacy, which in the context of digital privacy is important for personally identifiable information, Croia asserts categorically that she understands GDPR,

> I do have GDPR understanding, and knowledge, and we have a data protection officer in our organization … information that's shared by learners registering on a course to study - that's so confidential to us, it would never be shared. I work in a confidential space.

Cara was vocal about her dissatisfaction with the GDPR,

> Ireland is a signatory to the GDPR. Why? Privacy, really do we have our privacy, it's really a question to ask … it says that if you consent your data, the details are protected but, all the guards need is to basically say that there's a

suspicion of a crime ... and there's nothing you can do about it. There's really nothing.

Maud concludes our discussion by sharing a personal anecdote about a breach she encountered at work,

...I don't know if any of you guys signed up to do the UDL course through the ETB ... there was 162 email addresses on the mailing list ... a data breach in the education system, an ETB and 162 people on that e-mail list, ... your man having a rant in front of 162 people was a little bit embarrassing, but more embarrassing for the organization.

Theme 6
Dangers of Digital Profiling

The risks and ethical issues associated with digital profiling are numerous, ranging from targeted marketing to hacking, discrimination, rating, and categorising. Zoom may allow for greater inclusion and flexibility than the classroom and the digital teacher and student may believe themselves to be independent and in control. However, every online action will generate data that will be used to create profiles, which in turn, score, and rank, placing learners in consequential categories that lead to differential treatment.

The dangers of digital profiling was a recurring theme as we addressed the use of popular educational apps in the classroom.

Grace described her experience with Kahoot, a game-based learning platform used as educational technology,

> I had an experience with Kahoot, not a good one, it's as if you are playing a game, but in fact, another kind of data is collected … being rated through applications, you are evaluated digitally, which I feel is unfair, yes it was a game, but we are evaluated. I thought it was just a game, I felt abused. I don't know about technology, there's a new kind of racism and classification of people.

Erin also uses Kahoot, and she discussed her thoughts on it,

> I've used Kahoot, and say I was doing a biology class and I just used a lesson from Kahoot from another teacher, it actually tells you that 430 students have done this before, and then you are added onto the list. So, I always wonder, do they take our data, our emails, when I get all the students to log in. I have thought about that before, and then I thought, it's just Kahoot. So, I just let it be, but I was wondering about that myself.

Grace emphasises her initial point about categorisation and unethical technological practices,

> Being on digital platform, the company sometimes ask you questions they don't dare ask to your face … you're talking about privacy, I might talk about dignity, technology should care about dignity, ethical issues should be reconsidered in the digital world. Who cares how old are you? Why do you care if I'm female or male? It's taking us to another place, believe me, we're not equal in digital world. It's another way of classifications and labels.

Seanna concurs with Grace on this point, adding,

> In the digital world, it's perhaps easier to mask bad practice than it might be in other settings.

Theme 7
Political Propaganda / Social Media / Algorithms

Mass messaging and mobilisation have never been simpler thanks to social media and the global web. Political propaganda, social media trolls, virulent religious hostility, disinformation, and journalism in free fall as a result of its degradation are all too prevalent.

Social media platforms disavow responsibility for the veracity of the news they disseminate. Content that is sensationalistic and provocative degrades the standard of public discourse and contributes to polarization. Engaging with social media in a positive way should be stressed by all educational institutions that value democracy.

As we saw in Ireland during the 'Repeal the 8th' campaign, social media can just as easily be used as a platform for the betterment of humanity. Social media platforms should be welcomed by educational institutions and used positively to advance students' education because whether we like it or not, social networking is a significant feature of contemporary life. The time has come to update curricula to include social media etiquette and literacy skills. I asked teachers what they thought

about the necessity of providing learners with digital citizenship skills and privacy-conscious social media usage and this was their reaction.

Rose mentioned that our Taoiseach, Leo Varadkar, had his privacy violated while out on the town in Dublin,

> … there was no debate about privacy in Ireland until Leo went to the nightclub and … Michael Martin came out and said, 'this is a violation of my colleagues' privacy,' and I thought, what about the rest of us?

Seanna suggested double standards, adding,

> … it shone a light on it because it was Leo and … it perhaps illustrates that actually a lot of us, our data has been collected and used and our privacy is not as valued as we might think it is.

Rian confirmed that many of us have our privacy violated on social media platforms on a regular basis,

> How many people have gone to a club and ended up on the Internet not wanting to be there, and we can do nothing about it. Getting media coverage over kissing somebody you weren't supposed to be kissing and you just have to face the repercussions of it.

Grace sounded disheartened as she shared her thoughts on privacy and social media,

> I feel that social media, Instagram and TikTok have made the concept of privacy empty now. You see people in their bedrooms, their bathroom, changing their clothes, in their bed, things you never used to see, things you never expected to see, privacy, there's no privacy.

Maud appears to agree with this sentiment,

> Technology has gone off the charts, we've just gone with it and haven't questioned it before now.

Seanna talks about social media as a platform for populist movements whose primary goal is to disrupt the democratic process and garner votes,

> … Facebook's whole ethos is about feeding content to people, feeding targeted content to users, it truly came to light after the referendum, they were really effective at targeting particular demographics … they used things like football competitions to lure people in … it was a way of doing very precise targeting of individuals to feed them misinformation, and it was done on such a targeted basis it happened completely beneath the radar … as a means of marketing, as a means of campaigning, it was extremely effective.

The Brexit referendum which has upset the equilibrium of the European Union was won online via an active social media campaign.

> Christopher Wylie, Cambridge Analytica whistle-blower, believes Brexit would not have won the referendum if the data firm had not interfered (Veliz, 2021, p. 120).

Rian discusses the cons of algorithms,

> … about Cambridge Analytica, algorithms are very dangerous … people's worldviews are enforced by these … if you're time and time again looking at beating people up or something, or all the racist stuff that's out there now, that would be fed to you all the time through your feeds, and it'll enforce your worldview, you'll think the world is like that.

Rian is correct about algorithms being 'Weapons of Math destruction' in today's technological world.

> During the pandemic, thousands of British students joined together to protest their predicted A-level grades which reinforced and exacerbated racial and class-based disparities, holding signs that read, 'Fuck the algorithm' (Bradley & Noronha, 2022, p. 137).

Ella, the youngest participant, is dissatisfied with how the debate is progressing,

> I've grown up with social media, it's important for anyone who hasn't grown up with it not to be scared, to just roll with the punches … maybe I'm looser

with my privacy, but I think it's very important that we're not scared. We need to embrace it; we just need to be mindful and smart about it.

Cara, on the other hand, finds herself reminded of a dark period in human history when data was used in the most inhumane manner,

> … there's talk that our data is private, but I don't think it's as private as it should be despite the fact, they say we have privacy, I don't think privacy is one of the things we have. Back in the Second World War, it was the data that the Jews had given to the government for a specific purpose, that data was used for another purpose. So, the truth is, whilst we say yes, we have our privacy, really do we have our privacy?

The digital transformation of education is far more than a technological project, it is a fundamentally political project being pursued by powerful multi sector coalitions.

The privatised, highly capitalised future of education calls for concerted efforts amongst staff and students to ensure we have a voice in any proposed digital transformation of our institutions (Williamson & Hogan, 2021).

Qualitative Survey Findings

Following the course, I invited my participants to complete an anonymous online questionnaire. The written responses to this qualitative survey are presented below in thematic form. Out of fourteen participants, twelve responded.

Theme 1: Conscientização

I titled this theme Conscientização in honour of Paulo Freire since it is a direct result of the critical pedagogy approach I used to do my research. I asked my participants if they would do things differently now that they had completed a course on digital privacy and the overarching theme of the survey findings was increased awareness, which is the first step towards an empowering digital experience.

> P2: I'm more aware, I think tech in the classroom is essential, but I'd advise caution against signing away personal information.

> P3: I will be more conscious of my digital footprint, I will be more intentional in using technology, I will use technology in my classroom ensuring that data protection laws are in place.

> P4: I am definitely more conscious, I am more aware of the information I give out online, I am more conscious of deleting unwanted emails.

Central to critical pedagogy is the idea of critical consciousness, the process of becoming aware. The words 'aware' and 'conscious' pop up repeatedly in the survey responses highlighting the effectiveness of the critical pedagogy approach I used.

> P5: I find myself reading more of the terms and conditions of web pages I visit, I am looking more at cookies before I accept them.

> P6: It is important to be aware of how much data can be given away without realising, and the need to make informed choices.

> P7: I'm definitely more aware of the bad cookies. Our client / learner data is collected via Google forms, I will consider changing this and advise about privacy issues.

Once people become aware of what is happening, they have the power to act and beget positive change.

> P8: It definitely made me think more about how I use the web.

> P9: I am more aware of my choices when engaging with technology and now I have more tools in my kit for safeguarding my safety online. I feel a new awareness and responsibility to keep my students safe. My habits online have been altered.

These results imply that providing CPD on digital privacy to adult educators would have a ripple effect on the adult education system as a whole.

Freire believed in creating the conditions for 'Conscientização.' Conflict, he said, 'is the midwife of consciousness' and 'conflict creates the conditions for transformation' (Freire & Shor, 1987, p. 176).

Theme 2: Education for Liberation

I wanted to know how my participants felt about the course as a whole. Was it a useful course for them, and did it meet their expectations? I also wanted to know how I could improve this course if I ran it again.

Reading the responses of my participants taught me plenty. Like most disciplines, ICT has its own jargon that can intimidate those not familiar with it and at times I used terminology that my participants did not fully comprehend.

> **P1:** I did learn new tricks, part 2 was more to my liking as there was more structure and pace, but I had no problem engaging in discussion when needed.

> **P2:** Engaging and informative, plenty of opportunity to give an opinion, I expected to learn something new on the topic and I did just that.

P3: I would have liked more introductory information for those who are not tech savvy. Introduce the topic in a more generic way to suit those with limited tech knowledge. I liked the discussion; my queries and points were addressed.

P4: It is much needed in Irish society. Every element of the course was interesting and relevant, my voice was heard, I felt secure and comfortable to engage actively, it was very well planned, and execution was perfect, excellent.

P5: Good style of teaching, it covered a lot of issues.

P6: I felt those who wanted to be heard were. I preferred the second session; it was more concrete and practical. Perhaps a survey before the course to establish the level of knowledge of the participants might allow you to streamline the first session.

P7: The course was well paced with lots of space for discussion and bringing in experience. The second session was good, spending time talking about practicalities, it was interesting and worthwhile. Participants might have benefited from having some terminology explained.

Many of the participants enjoyed the participatory and dialogic approach, which once again illustrates the value of a critical pedagogy.

P8: The open discussion was so diverse, I didn't find anything irrelevant, the open questions let people express much more. There seemed to be confusion on 'privacy' versus 'secrecy.' It was a good initiative; the presentation was very well done.

P9: I really enjoyed this course. It was extremely engaging and participatory, it was all relevant and useful, and the style was very engaging, fun, and enjoyable as well as informative and relevant. It was great, the ETB would benefit from a course like this as a CPD.

P10: It was an interesting course, there was lots of room to question and debate controversial ideas surrounding privacy. The course was well presented and very inclusive, the second evening was very experiential and well-

presented considering it was online. The only thing that might work better is to have an in-person course.

P11: I felt fully at ease in the class, all opinions and concerns were addressed by the facilitator. I felt it was very beneficial.

P12: There was so much I didn't know on this subject.

The course was well received, and the feedback was positive. I wanted to get people thinking, to gauge educators understanding of digital privacy, and to 'stir the privacy pot' a little. I am conscious that transformation requires patience and persistence. As per Freire,

> If teachers don't think in terms of phases, levels, and gradations in a long process of change, they may fall into a paralyzing trap of saying that everything must be changed at once or it isn't worth trying to change anything at all. Looking only for big changes, teachers may lose touch with the transformative potential in any activity (Freire & Shor, 1987, p. 35).

Educators with technological expertise, such as myself, need to envision and implement alternative democratic futures for adult education because what Freire (1970) says is entirely true,

> It would indeed be naive to expect the oppressor elites to carry out a liberating education (Freire, 1970, p. 109).

Following the course some of my participants inquired about the availability of digital privacy CPD in their institutions. FET Professional Development Coordinators responded that it is not currently available but that a recent survey of professional development needs had been conducted and that it may be included in future plans. However, GDPR training is currently being updated.

Quantitative Survey Results

In Appendix B, the quantitative survey results are presented graphically.
Twelve of fourteen participants responded. Ten questions were posed, and I'll briefly go over the responses here.

- o The majority of participants, 75%, indicated that they would be interested in learning more about digital privacy.

- o 50% of people claimed to have little knowledge about digital privacy. 16% of respondents claimed to have some awareness of digital privacy.

- o 75% of respondents said they would like to see curriculum-based digital privacy training, while an overwhelming 92% felt that such training for educators would be beneficial.

- o Additionally, 75% of respondents claimed that effective digital citizenship practices are not being implemented in adult and community educational institutions.

- o 58% of respondents indicated they had never addressed the issue of digital privacy in the classroom.

- o After completing the course, 83% of participants felt they had a solid understanding of digital privacy.

- o Given the knowledge and skills, 75% of participants stated they would now use technology in privacy protecting mode in the future.

- o 60% of participants indicated they would read the privacy policy before engaging with educational technology, 40% said maybe, and 100% agreed it was unwise not to read the privacy policy.

Chapter 6: Let's Get Critical

6.0 Introduction

The purpose of this chapter is to evaluate the themes and concepts that emerged from the research findings. I will address the research questions and discuss the significance of this study's findings for adult educators. I will provide recommendations on how we might support and equip adult educators in the future as they deal with issues relating to digital privacy.

This research investigated the knowledge base of a group of fourteen adult educators to investigate how critical pedagogy could inform CPD in order to better prepare adult educators for a digital pedagogy.

I applied the Braun and Clarke (2006) thematic analysis framework to the qualitative data drawn from the transcripts of a two-part online digital privacy course I ran, which served as the action component of my research, and the data drawn from the online qualitative survey results I conducted after the course had run. I tried to decipher the subtext and underlying presumptions of the data although I was aware that I had some preconceived notions about the data based on my own experiences and on current literature. My literature research provided me with a fairly clear concept of the types of themes I might identify in the data, so my approach was deductive.

I chose to run a course because I wanted to do some form of action research. Since a critical pedagogy approach is one strategy used by PAR to connect research to action, the course is how my study draws from it. PAR is a powerful idea centering on humans' ability to break free from deleterious social habits through autonomous, democratic participation (Glassman, Gizem, & Mitchell, 2012). Participation is central to this research methodology, allowing participants to share their perspectives and contribute to the change process based on their own experiences and knowledge.

My participants and I brought our digital pedagogical experiences to the research, and I brought my extensive knowledge of technological devices and applications.

The aims of the course included raising awareness of digital privacy, fostering change, educating people, and motivating people to act.

Freire's dialogical theory served as the foundation for the course. In light of my earlier onerous educational experiences, Freire's critical pedagogies are a welcome alternative to the traditional institutional modes of education.

According to Mayo (2005), Freire's epistemological position is dialectical education, and he states that his position is not to deny the educator's directive and necessary role, but rather to illuminate through mutual inquiry the generative topic of investigation. He did not advocate for an uninformed dialogue process. To quote Paula Allman,

> Of course, Freirean educators direct and prescribe, but in a way redolent of humility and in a spirit of mutuality, dialogical reciprocity, and self-respect (McLaren & Farahmandpur, 2002).

The first session was devoted to an in-depth discussion of the data mining economy and surveillance capitalism, as well as the difficulties and impediments that educators face in a tech-based classroom. The second session was a hands-on practical effort in which I demonstrated to educators how to take liberating steps to proactively prevent online privacy violations.

Following the completion of the course I asked my participants to fill out two anonymous surveys. The results of the qualitative survey I will analyse here to determine how the course impacted my participants and whether or not it will influence their pedagogy. As an acknowledgment to my background in mathematics I will include the quantitative questionnaire as an appendix. It is simply a graphical illustration of data depicting participants' views on CPD in terms of digital privacy.

6.1. Secrecy versus Privacy

The key finding of this study did not come as a surprise to me. The link between religious and technological hegemony is clearly felt in Ireland today, and participants appeared to be in a quandary between keeping their data private and disclosing it. What did surprise me however was the arguably problematic conflation of the meaning of privacy and secrecy, and I noted that one of the participants mentioned this ambiguity in the post course online survey. Privacy appears to be synonymous with secrecy and therefore had negative connotations for some participants. When DeCew (2018) investigated what privacy means to people, she also discovered that privacy can be viewed unfavourably,

> … as the cloak under which one can hide domination, degradation, or physical harm to women and others (DeCew, 2018).

Research by Caelainn Hogan reveals,

> The remains of up to 400 dead children from Saint Patrick's Mother and Baby home and its associated institutions were donated for medical research between 1940 and 1965, without the knowledge of their mothers (Hogan, 2019, p. 8).

These cold-blooded crimes all transpired under the 'shield' of the Catholic Protection and Rescue Society of Ireland. These historical tragedies weigh heavily on the consciences of many Irish people today and will likely continue to do so for a long time to come (Fitzsimons, 2021, pp. 49-52).

No less than the Catholic Church, which extols values that it blatantly disregards, technological firms lure us with lies and empty promises. Like Catholicism, I am arguing that technology is being used as a tool of oppression, and while it is a distinctly different sort of oppression, it is nonetheless dehumanising and violent – symbolically violent because it is founded on manipulation and exploitation, and it perpetuates inequality. Freire warned of the potential of technology to function as a tool of hegemony and oppression,

… that the introduction of these more sophisticated means into the educational field will, once more, work in favour of those who have and against those who have not (Khan & Kellner, 2007).

Freire (1970) also stated that,

Any situation in which some individuals prevent others from engaging in the process of inquiry is one of violence. The means used are not important; to alienate human beings from their own decision making is to change them into objects (Freire P., 1970, p. 58).

The data economy, and the ubiquitous surveillance that sustains it, caught us off guard.

Initially, tech companies did not seek our permission to collect and sell our personal data. We were not a part of the decision-making process, and neither was our government, which means that we are no longer governing ourselves; instead, we are being manipulated, monetized, and controlled by the world's largest tech companies. Occasionally, public outrage has resulted in some accountability for tech companies' violations, but there is a distinct lack of genuine public and governmental concern.

When truth doesn't matter, when alternate silos create bubbles of disinformation, when political violence is a threat, when fundamentalism is mainstream, it's not just democracy that's being dismantled, it's reality itself (Mullally, 2022).

Perhaps, as the findings of this research suggest, individuals are muddled about the privacy versus secrecy issue. Following an in-depth discussion of the data mining economy and digital profiling I was hopeful that participants would come to understand that what is actually happening is that tech companies are 'secretly' stealing our 'private' data and are taking great pains to reject any course of action that might reveal their technological 'secrets' or stir the 'privacy' pot (Edwards, 2011, p. 340).

Many privacy invasions are silent and invisible. There are no bastions of educational technology, most are pariahs masquerading as ethical solutions to educations problems.

6.2 Frustration with Legislation

With regards to GDPR one key finding was that that participants were perplexed and unclear about who is in charge of keeping us safe online. Until recently, Ireland's data protection commissioner operated from a small office above a shop in Portlaoise, with a handful of employees. It has repeatedly failed to listen to criticisms of social media companies' activities (O'Boyle & Allen, 2021, p. 147). Ireland lacks credibility and confidence when it comes to protecting digital privacy and upholding the law. As the former German Information Commissioner, Peter Schaar stated

> Of course, Facebook would go to a country with the lowest levels of data protection, it's natural they would choose Ireland (O'Boyle & Allen, 2021, p. 146).

Our government is hesitant to take on tech companies in a fight to defend our citizens' privacy and regulate their unethical business practices. When the EU Commission ruled that Apple owed the Irish government approximately €13.1 billion plus interest in taxes, the Irish government bizarrely appealed the Commissioner's ruling, leaving many Irish citizens wondering, who is in charge here? Why is Ireland opposing EU measures aimed at establishing a fair digital-tax on tech companies currently benefiting from tax-limiting provisions in the Irish taxation regime?

People like us, educators who rely on technology in the modern classroom (in fact, technology usage in the classroom is frequently mandated) must exert pressure on legislators to put a stop to the data economy. Educators are ideally positioned to act; otherwise, we cede power to the true power brokers, the tech titans, and accept a mythical democracy whilst also rejecting Freire's humanist legacy. Imagine if, via a critical pedagogy, we as educators could assist learners in developing a critical mindset. With the development of critical consciousness, Freire believed that learners

would go on to change society by fighting injustice and promoting equality for everyone.

Like most educators, I recognise the numerous benefits of using technology to facilitate learning in the classroom. It has the potential to promote inclusivity, enable blended learning, encourage critical thinking skills, improve collaboration, and prepare us for the real world. This however is not the focus of my research. No matter how beneficial edtech is, it should not be used as a tool to exploit teachers and students. There should be a clear distinction between a student's academic life and their private life, and the right to privacy should be guarded online in the same way that it is guarded offline.

6.3 Social Media Machine

The lively discussion that took place concerning social media was evidence of the participants' love-hate relationship with it. Olla (2021) political strategist of Nigerian descent warns us against technophiles like Musk who plans to invest as much of his fortune as possible to colonize Mars. Olla suggests that the real fault lies in a system that permits individuals to amass vast amounts of wealth and use it to control both the present and future. If billionaires like Musk weren't constantly gaming the tax system, NASA would have a lot more funding for experimental rockets (Olla, 2021). The Irish state is remarkable in its enthusiasm to attract foreign direct investment and moves with great alacrity to facilitate large multinational corporations to establish and invest in operations in Ireland. Aside from the usual generous grants and incentives, it offers what some consider a light touch when it comes to regulation and taxation. Is our government merely a charade designed to serve the interests of the techno elites? Why are we handing power over to a new, techno capitalist, egotistical few?

Billionaires, Flanigan & Freiman (2022) argue, are typically in a better position to assist the poor and solve collective action problems where governments have failed. Rob Reich, Stanford professor, states that billionaire funded philanthropy is commonly an exercise of power, a public relations scam that is largely unaccountable, and lavishly

tax advantaged (Flanigan & Freiman, 2022). During Microsoft's antitrust trial, Bill Gates discovered the wonders of charitable giving, a feel-good gloss to cover up his shattered reputation (Larson, 2020).

Data mining techniques generate a wealth of user data easily accessible via social media apps, making it simple to engage, target, and persuade voters. According to Veliz (2020), having technological corporations influence our political leanings is 'insane'. Fair elections are 'one of the most important pillars' of a functional democracy (Veliz, 2020, p. 125). As it stands, 'there is a political love affair going on with Google that both reflects and reinforces its position at front and centre of world affairs' (Smith, 2008).

Google now has a finger in every pie. It is the most effective data-gathering mechanism ever invented, gathering more information and secrets about us than any totalitarian regime. Edtech apps and platforms are not immune to data mining and surveillance tactics. On the contrary, teachers sentenced to technological ineptitude due to insufficient digital privacy training, and vulnerable learners are prime targets for exploitation and dehumanization.

6.4 Walking in Darkness

The research conducted by Lindh & Nolin (2016) stated that because of the benefits of Google Apps for Education (GAFE), privacy concerns were downplayed by educators who believed that GAFE met most of the institutions' ICT needs. It was regarded as the best option in terms of expertly resolving both economic and practical issues (Lindh & Nolin, 2016). Convenience and monetary gain should never take precedence over privacy.

According to Lavery (2023),

> Edtech is a very valuable tool in the classroom, but educational institutions often fail to see the value. The freemium business model has created a cohort of people who don't want to pay for products. It's no longer a cash purchase, our privacy is the price we pay (Lavery, 2023).

The findings of this study conclusively show that one of the main reasons why many educators interact with the digital world in a naive manner is a lack of knowledge rather than a lack of concern about digital privacy. It is not as tech leaders have claimed 'a cavalier attitude toward privacy' (Hoofnagle et al., 2010).

In the second session of the course when we set about reconfiguring the privacy settings, even though they wanted to, most participants were hesitant to update their computer systems fearing they would not function properly afterward. Due to fear, uncertainty, and a feeling of powerlessness, many educators adopted a fatalistic attitude when it came to actively pursuing their privacy. These feelings are a direct consequence of a lack of knowledge. I felt reminded of the fatalistic outlook we adopted in response to religious persecution. Fatalism, Freire states,

> ...is almost always related to inevitable forces - or to a distorted view of God. Under the sway of magic and myth, the oppressed see their suffering, the fruit of exploitation, as the will of God - as if God were the creator of this organised disorder (Freire, 1970, pp. 35-36).

We concede to technological dominance by accepting the premise that technology cannot be impeded if society is to flourish. Modern life is now characterised by a blind embrace of technology. Educators are given instruction in using technology, but they are not actively problem-posing or engaging critically with the technology they are required to use; instead, they are expected to receive, retain, and regurgitate knowledge. This banking concept that
Freire so despised is also applied to educators, which disempowers us, violates our autonomy, and thwarts our efforts to empower our learners, all owing to a lack of CPD on digital privacy.

6.5 Illumination

The critical pedagogy research methodology I employed to conduct this research has proved to be effective insofar as it revealed a fundamental lack of awareness of the facets of technology pertaining to digital privacy. Far from having a laissez-faire

attitude towards technology many educators use technology in ways that are typically a consequence of a profound lack of awareness of the risks associated with data mining and surveillance. Adult educators are ill-equipped to evaluate the data-handling strategies of free educational apps that may collect overly sensitive and private data from learners, and they do not know if the apps have been comprehensively researched to evaluate their efficacy.

This lack of awareness about digital privacy has brought attention to the need for CPD. Educators must understand their critical role in protecting themselves and their learners from potential privacy violations, and CPD is the best way to accomplish this. Adult Educators are the bedrock on which our Further Education system depends, therefore providing relevant up to date CPD to them should be a key priority.

Creating a culture of digital privacy is a collective effort, and I think it should start with educating teachers-in-training at university level. From personal experience, the technology training offered to aspiring adult educators is currently lacking a digital privacy component. The inclusion of privacy awareness in a more comprehensive curriculum is needed. Perhaps the reason it is not currently included at the teacher-training level is because no one to date has successfully lobbied for its inclusion.

For educators not in training, it may be challenging to enculturate relatively new ideas like data ethics or data privacy into the existing curriculum. The most effective strategy would be to tie digital privacy training in with existing technological CPD. Educators themselves need to adopt a critical and ethical stance to enable them to navigate the digital world confidently and effectively. To accomplish this, educators need a solid understanding of the hardware and technological foundations of the information systems that support the use of edtech. The central concepts of digital privacy should be incorporated into standard curricular policies in conjunction with CPD in digital privacy, and education professionals need to insist on this.

Sometimes a change in mindset is needed. A critical pedagogy approach and grounding the course material in learner-experience situations that people can easily relate to could pique interest. After all many people have their own horror story about a privacy breach.

As a direct consequence of the course I ran, the participants decided to reconfigure the privacy settings on their digital devices. They switched to privacy-protecting web browsers and search engines, are actively reading privacy policies, and are rejecting non-functional cookies before engaging with technology. Armed with their newfound knowledge, these adult educators are now choosing to engage with technology judiciously, in a conscious and critical manner.

Imagine if there was a widespread understanding of digital privacy across all educational levels and in everyday life. If educators en masse advocated that privacy awareness training was available, and privacy policies written in clear, accessible language were provided to them, this would then push responsibility back on the edtech providers, making it their problem.

The findings indicate that virtually all participants were somewhat intuitively distrustful of technology. Most were cognizant that some form of data mining and surveillance is taking place, but they felt powerless to act since they lack the necessary knowledge and skills required to reconfigure the privacy settings on the devices and apps, they use daily. Most participants expressed dissatisfaction at their lack of knowledge concerning digital privacy. Once enlightened, most participants resolved to act where possible and to fight back in the hopes of reclaiming their right to digital privacy.

Zuboff (2019) refers to a dismal 'glass life',

> Without protection from surveillance capitalism and its instrumentarian power, their behavioural aims, and societal goals, we are trapped in a condition of 'no exit' where the only walls are made of glass. The natural human yearning for refuge must be extinguished and the ancient institution of sanctuary deleted. The intolerability of glass life turns us towards a societal arms race of counter-declarations in which we search for and embrace increasingly complex ways to hide in our own lives, seeking respite from lawless machines and their masters (Zuboff, 2019, pp. 488-489).

At the heart of all of this is the need for CPD on digital privacy, improved awareness, and empowerment.

6.6 Master / Slave

Technology is a useful servant but a dangerous master (Louis-Lange, in Roy, 2019).

Digital Privacy awareness is not about creating chaos or spreading fear. The dissemination of falsehoods would significantly hinder the adoption of a highly beneficial educational resource. It is about engaging with technology in the classroom as ethically, artistically, and extensively as we can. The future of education belongs to technology. Assistive technology (AT), virtual reality (VR), and augmented reality (AR) are all potent educational resources. Technology is transformational in the hands of erudite educators. These tools help streamline the teaching and learning processes, and they support multiple learning modalities in line with UDL – a meritorious methodology adopted by adult education that enhances educational experiences for all learners.

6.6.0 Suggestions

- A top-down approach is needed.

  For starters, we need to get CPD on digital privacy in place in all Adult Ed colleges.

  Then garner all of the trainees to make a joint call for privacy awareness training.

  A groundswell of people will force the provision of CPD on this topic.

- Knowledgeable researchers and educators should collaborate with management to include privacy ethics in their codes of ethics.

- Integrate privacy awareness and training as a stand-alone module into the curriculum as a cross-curricular resource. Multiple exposures are needed. Alternatively, integrate privacy awareness into current curricula and across several curricula.

- o Include privacy materials in assessment courses since they offer fertile ground for privacy teachings.

- o In accordance with the upcoming EdTech Ireland initiative, educators should be invited to assess, rate, and review edtech in the same manner that we review other public services, and ethical products should then receive a certificate of conformance.

- o Educational institutions should be willing to invest in certified edtech resources just as they invest in textbooks.

6.6.1 RM O'Dowd Limited

- o A key limitation of this research was the time frame. An in-depth study of this nature takes time.

- o The sample size for this study was small, comparatively speaking.

- o My personal biases.

- o The majority of the participants were middle-aged. A younger cohort may have taken a different stance. Tech companies try to perpetuate the misconception that young people do not care about privacy and that privacy concerns are cultural artefacts from the pre-digital revolution, but I disagree with this sentiment.

- o The research was conducted online via Teams, and online questionnaires, enabling participants from a wide range of geographic regions to engage, but I feel that an in-person setting may have enhanced the experience.

6.6.2 The Beginning

This study is just the beginning of the story. We need the Data Protection Commissioner Helen Dixon, and the Minister for Further and Higher Simon Harris on board if a serious effort to make meaningful change is the goal.

To ascertain their position on educational technology, it is also necessary to contact the ICT Policy Unit of the Department of Education. They are in charge of formulating

policy and advising on regulations. Lavery (2030) asserts that this unit is evidently underutilised given the absence of any regulation controlling educational technology.

Ancora Imparo

Authoring 'Cui Bono?' has been a labour of love. Upon reflection I confess, I have broken some of the rules, but this is the legacy of a critical pedagogy. Je ne regrette rien.

Ruth Marie O'Dowd

30 / June / 2023

Appendix

🪰 'The Fly on the Wall ' 🪰
Free Online Course

"Privacy Is Dead, Get Over It"

I am hosting an *free* online course on '**Digital Privacy'** for Adult & Further Education teachers.

Please join my online course if you want to discover why Privacy is more important than ever and how we can protect it. I will run the course on TEAMS for 2 weeks, Thursday evenings 7pm to 9pm.

DATE:	February 2nd		TIME:	7pm – 9pm
	February 9th			7pm - 9pm

I am researching digital Privacy for a Master's program in Adult & Community Education at Maynooth University. I will deliver this course in a participatory style providing a place and space for everyone's voice to be heard. Learning is a social process in which we learn from and with others therefore everyone is encouraged to contribute to the learning experience by sharing their knowledge, experiences, and ideas about the course content.

I respectfully request that participants keep their cameras turned on to facilitate effective communication, and I will also request permission to record audio. The findings of this course will be included in my master's thesis, but the research-based aspects are entirely optional; you are welcome to take the course without participating in the research.

To book your place on the course or to find out more about the course you can email me: ruth.odowd.2022@mumail.ie Places are limited, book as soon as possible to avoid disappointment.

What's it all about?

Human beings are not data points to be exploited, but individuals to be respected, so let us reclaim our privacy through education. Mark Zuckerberg Facebook founder famously declared in 2010 "Privacy is no longer the social norm". Zuckerberg bought the four houses that surround his own home to enjoy greater privacy, his entire source of wealth is based on data mining and misuse of user's personal data. Tech giants globally echo Zuckerberg's sentiments claiming they cannot provide apps and services unless we give them our personal data. Governments join the chorus, claiming that protecting people's privacy impedes their ability to keep us safe from harm.

Do we accept and believe these claims?

Zuckerberg is wrong; privacy is a fundamental human right. Modern technology, including educational apps and platforms, pose significant threats to our privacy and data security. We must reject the claim that our liberties and rights are "dead" in the digital age. It's time to take a stand, to understand how we got here, to figure out what we can   do to reclaim our fundamental right to privacy, and to begin taking simple steps to get   ourselves out of this oppressive mess.

The Fly On The Wall
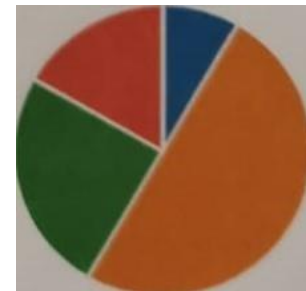
1. Would you be interested in learning more about protecting your privacy online?

   🔵 Yes   9

   🟠 No

   🟢 Not sure   2
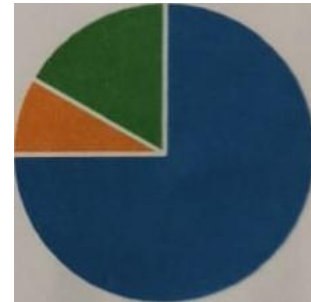
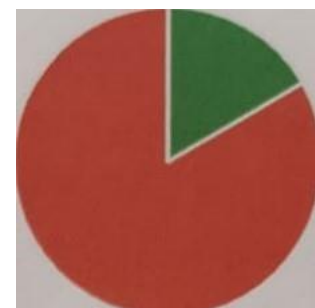2. What was your level of knowledge about online privacy protection before taking the course?

   🔵 None

   🟠 Low   6

   🟢 Moderate   3

   🔴 Good   2

   🟣 Advanced

3. How would you assess your current level of knowledge now that you have completed the course?

   🔵 None

   🟠 Low

   🟢 Moderate   2

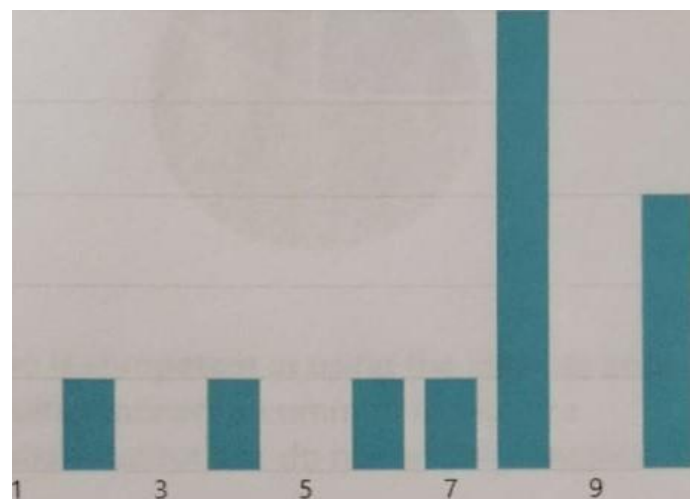   🔴 Good   10

   🟣 Advanced

4. How important do you think it is to educate yourself on how to safeguard your privacy online?
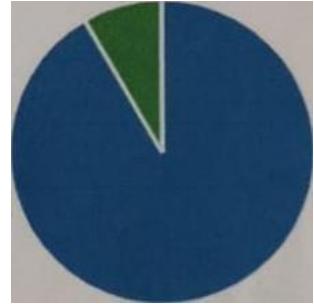

7.25   Average Rating

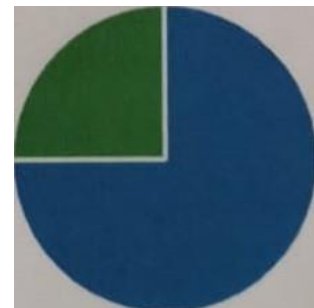5. Given what you now know, how likely are you to change the way you use technology?
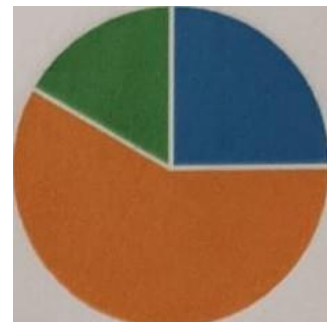

7.42 Average Rating

6. Do you think that privacy protection training for educators would be beneficial?

● Yes 11
● No
● Ma Maybe

7. Do you think adult education programs should include a module on digital privacy?

■ Yes

■ No

■ Not sure

8. Have you ever created curricula or teaching material to address the issue of digital privacy?

● Yes 3

● No 7

● Maybe 2

9. The term 'digital citizenship' (someone who is competent at using the internet and knows how to do so in a responsible and safe manner) is common in modern discourse, but adult and community education institutions do not actually practice it. Do you agree with this statement?

7.45 Average Rating
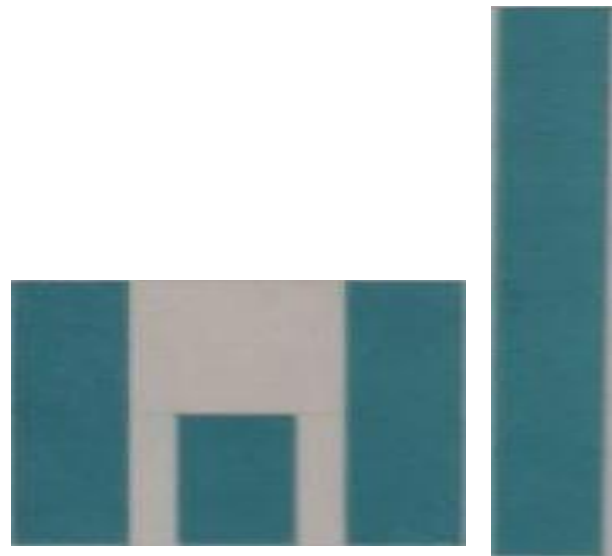
10. Given your newfound understanding of the data economy, will you choose to read the privacy policies before using a digital app or platform?

Yes

No

MaMaybe

Course Title	The Fly on The Wall - Part 1
Course Facilitator	Ruth Marie O'Dowd
Course Supervisor	Dr Camilla Fitzsimons
Course Aim	*To raise awareness about the exploitative nature of the data economy and the potential consequences of inadequate online privacy education. To inform educators about the data mining and surveillance techniques used by tech companies to feed the data economy, and how they profit at the expense of user privacy. To educate educators on the origins of the data economy and the risks that epistemic fragmentation poses to vulnerable groups. To encourage teachers to implement privacy-protection options in the classroom.*

TIME SCHEDULE	RESOURCES REQUIRED	LEARNING LEADER	LO EXPECTED	HOW LO ACCESSED
7PM to 7.15PM	Check in with participants & give a general overview of the course.	Ruth	*If you could be re-baptized?* Select fictitious names for the purpose of participant anonymization.	Check in.
7.15PM to 7.30PM	Internet Teams' software PowerPoint Handout	Ruth	Raise awareness about data mining, tracking, and tracing tactics employed by tech businesses to fuel the data economy and how they profit at the expense of user privacy.	Appraise difficulties encountered when attempting to safeguard individual privacy online.

Time	Resources	Facilitator	Learning Outcomes	Activities
8.00PM to 8.20PM	Internet Teams' software PowerPoint	Ruth	Explain Real Time Bidding (RTB) and the evolution of technological capital surveillance.	Discussion about the unauthorized theft of user-provided data such as race, sexual orientation, health status, and political affiliation.
8.20PM to 8.40PM	Internet Teams' software PowerPoint	Ruth	Assess GDPR and the DPC's role in protecting user privacy. Predict how and why privacy regulation was abandoned in the wake of 9/11.	Discussion on GDPR / DPU / data breaches / identity theft / cloud computing etc.
8.40PM to 8.50PM	Internet Laptop / Phone	Ruth	Recommend DuckDuckGo a fast efficient search engine that respects privacy.	Compare how tech can generate revenue without exploiting user data for commercial gain.
8.50PM to 9PM	Check out. Summarize Part 1 of course in broad terms.	Ruth	Reflect on the learnings as a group.	Reflection & discussion.
7.30PM to 7.50PM	Internet Teams' software PowerPoint	Ruth	Differentiate between the different types of cookies and their functionality. Evaluate the negative effects of Online targeted advertising (OTA) and the dangers posed by epistemic fragmentation.	Justify consenting to cookies. Analysis of OTA - its divide-and conquer nature and inspect its ramifications for democracy.
7.50PM to 8PM	Comfort Break	Ruth		

Course Title	The Fly on The Wall - Part 2
Course Facilitator	**Ruth Marie O'Dowd**
Course Supervisor	**Dr Camilla Fitzsimons**
Course Aim	*To educate teachers on the different privacy protection options that are available to them and to help them acquire the technical skills necessary to implement privacy preferences. To inspire and motivate educators to implement privacy-protection practices in the classroom and in their daily digital lives, and to impart this knowledge and expertise to their students.*

| TIME

SCHEDULE	RESOURCES REQUIRED	LEARNING LEADER	LO EXPECTED	HOW LO ACCESSED
7PM to 7.15PM	Check in with participants & give a general overview of part two of the course content.	Ruth	***Memory and listening skills are put to the test!*** Can you recall which person last week chose which name?	Ice breaker / check in.
7.15PM to 7.30PM	Internet Teams' software PowerPoint	Ruth	Review and revise the functionality and purpose of the various cookies and trackers. Use 'Backlight' to scan and reveal specific user tracking technologies.	Q&A. Choose the cookie that serves a specific purpose. Rate Backlight exercise.

7.30PM to 7.50PM	Internet Teams' software PowerPoint	Ruth	Distinguish between Browsers and Search Engines. Set up Brave browser and select DuckDuckGo as default search engine. Compare browsers that preserve privacy to Google.	Use Brave browser in conjunction with DuckDuckGo search engine.
7.50PM to 8PM	Comfort Break	Ruth		
8.00PM to 8.20PM	Internet Teams' software PowerPoint	Ruth	Learn how to block third party cookies. Explain browser extensions. Set up Privacy Badger to block trackers / hidden trackers.	Discussion about the pros and cons of browser extensions. Install Privacy Badger or Ghostery.
8.20PM to 8.40PM	Internet Teams' software PowerPoint	Ruth	Analyse Encryption (E2EE), Virtual Private Network (VPN) Cloud Computing, Safe Search, Anti-Virus s/w & Meta Data.	Discussion on E2EE and its importance. Remove meta data from an image.
8.40PM to 8.50PM	Internet Laptop / Phone	Ruth	Propose Signal, a social media messaging app that respects privacy.	Discuss digital footprint and cultivation of positive online persona. Compare messaging services and investigate their operators.
8.50PM to 9PM	Check out. Summarize the course in broad terms.	Ruth	Reflect on the learnings as a group.	Reflection & discussion.

Information & Consent Form for Research Participants

Purpose of Study

I am Ruth Marie O'Dowd, an M.Ed. student in the Department of Adult and Community Education, Maynooth University. As part of the requirements for an M.Ed. in Adult and Community Education I am undertaking a research study under the supervision of Dr Camilla Fitzsimons. My research focuses on the contemporary teaching practice of using technology and edtech in the classroom which has accelerated exponentially since the advent of Covid19. These technologies enable increased surveillance and the potential for increased data mining in today's educational institutions, posing a serious risk to users' digital privacy. In my research paper I advocate for increased privacy awareness as well as the creation of solutions. I would like to see adult educators presented with the resources they need to adopt and embrace strategies for dealing with the challenges posed by digital pedagogy.

What will the study involve?

My study draws from elements of CPAR. I will run a two-part online course with Adult and Further Ed educators that will expose what goes on behind the scenes with technology used by educators and learners, both inside and outside of the classroom. The course will run for two hours, 7pm - 9pm, for two consecutive weeks in February. As well as being an educational learning process guided by me, participation will involve dialogical problem posing debate and discussion, The information presented on the course may influence how educators engage with technology in Adult & Further Education (AFE) classrooms, as well as in our personal lives.

Who has approved this study?

This study has been reviewed and has received ethical approval from the Maynooth University Dept. of Adult & Community Education. You may have a copy of this approval if you request it.

Why have you been asked to take part?

You have been asked to participate because you are an Adult & Further Education teacher currently working in the field of Adult Education and you are almost certainly being asked to incorporate technology into your pedagogical practices, and you undoubtedly want to do so because you see the numerous benefits it offers. You are a 21st-century adult educator, which makes you an ideal candidate for this research.

Do you have to take part?

You are under no obligation to take part in this research, participation is voluntary. However, I hope that you will agree to participate in my online course with other AFE educators. I will request permission to record both sessions and to take notes while the course is running. If you decide to participate, you will be asked to sign a consent form. You will be given a copy of the consent form and an information sheet for your own records. You are free to withdraw at any time without giving a reason and/or to withdraw your information up until such time as the research findings are analysed and submitted to Maynooth University in the form of my thesis. [Submission date: 30th June 2023]. A decision to withdraw or to not take part, will not affect your relationships with me.

What information will be collected?

I am interested in your response to the information presented on the course. I want to know what digital privacy means to you, and if you have ever thought about or discussed digital privacy in your classroom. I am interested to know if your attitude toward technology will change after you have the knowledge presented on the course, and if you think this knowledge should also be taught to learners. Perhaps you already have the knowledge and skills to safeguard your digital privacy, and if not, why not? Following the course, I will ask you to fill out two short online surveys.

Will your participation in the study be kept confidential?

Yes, all information that is collected during the research will be kept confidential. No names will be identified at any time. All hard copy information will be held in a file in my private office at my home. Electronic information will be encrypted and held securely on MU servers and will be accessed only by myself and my supervisor Dr Camilla Fitzsimons. No information will be distributed to any other unauthorised individual or third party. If you

wish, the data that you provide can be made available to you at your discretion. You have the right to read and review what I report in my thesis. If you believe I misunderstood something you said or made incorrect assumptions, you can request a change or withdraw your statements before the final draft is submitted.

'It must be recognised that, in some circumstances, confidentiality of research data and records may be overridden by courts in the event of litigation or in the course of investigation by lawful authority. In such circumstances the University will take all reasonable steps within law to ensure that confidentiality is maintained to the greatest possible extent' (Maynooth University Ethics, 2022).

What will happen to the results?

The research will be written up and presented as a master's thesis. A copy of the research findings can be made available to you upon request.

What are the possible disadvantages of taking part?

I do not anticipate any negative consequences from your participation in this study. On the contrary, the course will be thought-provoking, informative, and beneficial to all participants. At the end of each session, we will discuss how you found the course material and how you are feeling.

Any further queries? If you need any further information, you can contact me: Ruth O'Dowd

Email: RUTH.ODOWD.2022@mumail.ie Mobile: 087-2662560

If you agree to take part in the study, please complete and sign the consent form overleaf.

Thank you for taking the time to read this information sheet.

Consent Form

I……………………………………agree to participate in Ruth O'Dowd's research study titled **'Cui Bono?.'**

Please tick each statement below:

The purpose and nature of the study has been explained to me verbally and in writing ☐

I am participating voluntarily. ☐

I give permission for my course participation with Ruth O'Dowd to be audio recorded. ☐

I understand that I can withdraw from the study, without repercussions, at any time, whether that is before it starts or while I am participating. ☐

I understand that I can withdraw permission to use the data up to 30th June 2023 ☐

It has been explained to me how my data will be managed, and I may access it on request ☐

I understand the limits of confidentiality as described in the information sheet ☐

I understand that my data, in an anonymous format, may be used in further research projects and any subsequent publications if I give permission below: ☐

I agree to quotation/publication of extracts from my interview ☐

I do not agree to quotation/publication of extracts from my interview ☐

I agree for my data to be used for further research projects ☐

I do not agree for my data to be used for further research projects ☐

I agree for my data, once anonymised, to be retained indefinitely in the IQDA archive ☐

Signed…………………………………………….. Date…………………………………………….

Participant Name in block capitals ………………………………………………………………………………

I the undersigned have taken the time to fully explain to the above participant the nature and purpose of this study in a manner that they could understand. I have explained the risks involved as well as the possible benefits. I have invited them to ask questions on any aspect of the study that concerned them.

Signed: **Ruth Marie O'Dowd**   Date: 12/12/22

Researcher Name block capitals: **RUTH MARIE O'DOWD**

If during your participation in this study you feel the information and guidelines that you were given have been neglected or disregarded in any way, or if you are unhappy about the process, please contact Michael Murray (michael.j.murray@mu.ie) or Angela McGinn (angela.mcginn@mu.ie) Please be assured that your concerns will be dealt with in a sensitive manner.

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