



A CASE STUDY INTO THE ATTITUDES AND VALUES OF TEACHERS AND LEADERS TOWARDS ENTREPRENEURIAL LEARNING IN WALES

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**This Dissertation is being Submitted in Partial Fulfilment of the Requirement
for the Degree of MA Education Leadership (Wales)**

DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Signed: *KHughes* (candidate)

Date: 24.04.2025

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This dissertation is being submitted in partial fulfilment of the requirements for the degree of MA Education Leadership (Wales).

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STATEMENT 2

This dissertation is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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I hereby give consent for my dissertation, if accepted, to be made available for photocopying and for inter- library loan, and for the title and summary to be made available to outside organisations.

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Abstract

This dissertation explores the attitudes and values of teachers and leaders towards entrepreneurial learning in Wales. Qualitative approaches such as interviews and questionnaires were conducted to assess how teachers and senior leaders view entrepreneurial learning and the impact that has on skill development for pupils in Wales. The findings suggest that while there is a generally positive attitude towards the concept of entrepreneurial learning, there is variation in how it is understood and applied across schools. Many educators see its value in promoting creativity, problem-solving, and independent thinking, yet report barriers such as time constraints, lack of training, and inconsistent guidance. Leadership attitudes were found to be particularly influential, with stronger emphasis placed on entrepreneurial learning in schools where senior leaders actively supported and integrated it into the broader curriculum

The research concludes that the successful implementation of entrepreneurial learning depends largely on a shared understanding of what it means in practice, adequate professional learning opportunities, including school to school and peer to peer working, and strong institutional support. Without these conditions, the embedding of entrepreneurial values into day-to-day pedagogy will remain inconsistent.

The work contributes to the growing field of entrepreneurial learning and Careers and Work-Related Experiences by offering insight into the perceptions and practical challenges faced by educators in Wales. It provides a foundation for further research and offers recommendations to policymakers and school leaders aiming to foster an entrepreneurial culture within the education system.

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List of abbreviations

- CfW - Curriculum for Wales
- ZPD - Zone of Proximal Development
- CWRE - Careers and Work-Related Experiences
- STEM - Science, Technology, Engineering and Maths
- IFS - Institute of Fiscal Studies
- ALN - Additional Learning Needs
- FSM - Free School Meals
- EAL - English as an Additional Language
- BERA – British Educational Research Association
- NAHT - National Association of Head Teachers
- DARPL - Diversity and Anti-Racist Professional Learning

Chapter 1 – Introduction

In Wales, entrepreneurial learning plays a critical role in fostering innovation, economic growth, and the development of a skilled workforce. As the country seeks to diversify its economy and empower individuals to take on entrepreneurial ventures, understanding the processes through which individuals acquire entrepreneurial skills becomes essential. Entrepreneurial learning in Wales is influenced by a range of educational initiatives, programs, and support systems that aim to equip individuals with the necessary competencies to succeed in the dynamic and competitive business environment (Gibb, 2005; Jones and English, 2004). These learning processes are deeply embedded in both formal and informal educational settings, where individuals are encouraged to explore entrepreneurial opportunities, develop practical skills, and adapt to real-world challenges (Peterson and Wu, 2021). In this context, the ability to adapt, acquire knowledge, and learn from experience is key to nurturing a thriving entrepreneurial ecosystem in Wales (Mwasalwiba, 2012).

Entrepreneurial learning, as defined by Peterson and Wu (2021) is a dynamic and interactive process through which individuals acquire, create, and apply knowledge, skills, and capabilities in the context of entrepreneurship. They emphasise the importance of experiences where the process is considered iterative and contextual, with learners continually adapting based on real-world challenges and feedback from their entrepreneurial activities. Huddleston and Stanley, (2012) define the process of acquiring these skills as work related learning whereby, through a range of experiences, individuals develop the skills, knowledge, and competencies necessary to perform effectively in the workplace. Although listing very similar list of skill

acquisition, the focus is on learning that is directly applicable to one's work tasks and professional development. Career awareness as identified by Archer *et al.* (2013) is the understanding and recognition of the range of career options, opportunities, and pathways available to individuals, along with an awareness of the skills, knowledge, and qualifications required to pursue these careers. Career awareness involves the exploration of various career possibilities, gaining insight into the nature of different professions, and understanding how personal interests, abilities, and values align with potential career choices.

Entrepreneurial learning is increasingly seen as a vehicle for learning to further develop creativity, innovation, and to secure the skills necessary to navigate an ever-evolving economic landscape (Donaldson, 2015). In Wales, the educational system has introduced entrepreneurial learning as a means to align with broader policy goals, including economic development, social equity, and the enhancement of employability skills for the future workforce (Welsh Government, 2021). However, entrepreneurial learning is not only about the acquisition of business-related skills, but also about cultivating a mindset that encourages critical thinking, problem-solving, and adaptability, Jones and Iredale (2014), Nabi *et al.* (2018), and O'Leary (2015).

The Welsh Government have made significant strides in integrating entrepreneurial learning into its educational policies, notably through the introduction of the *Curriculum for Wales* in 2022. This highlights the importance of preparing students to engage with the complex, interdependent challenges of the 21st century, promoting entrepreneurial competences across all stages of learning (HWB 2024, Stern, Ferraro and Mohnkern, J, 2018). Despite these progressive developments, the

attitudes and values of the educators responsible for implementing this vision remain relatively underexplored, particularly in terms of how teachers and school leaders interpret and enact entrepreneurial learning in their classrooms and schools.

This dissertation aims to explore the attitudes and values of teachers and educational leaders towards entrepreneurial learning in Wales, by investigating how their perspectives influence the implementation of entrepreneurial education within the classroom and the broader school curriculum. By using a case study approach (Yin, 2018), this research seeks to draw upon qualitative research, including interviews and surveys, conducted with senior leaders within an area of Wales. Through this research, I aim to provide insights into how educators' perceptions of entrepreneurial learning influence its application, and the broader implications this has for the success of entrepreneurship education initiatives within the region. The study will also examine how these attitudes align with, or diverge from, the policy intentions of the Welsh Government and whether any barriers or enablers to effective implementation exist at the local level.

The research will contribute to a developing understanding of the factors that surround educational institutions in Wales such as primary schools, providing valuable insights for policymakers, educational leaders, and teacher educators who are tasked with fostering entrepreneurial competencies in future generations. By examining both the challenges and opportunities that are integral in this area, this study will contribute to the growing body of literature on entrepreneurial education and its practical implementation within a national context, with a particular focus on how local educational systems can support the development of entrepreneurial capabilities among the next generation of learners.

Chapter 2 - Literature review

This chapter aims to gain a comprehensive understanding of the current landscape of entrepreneurial learning and its place in education by exploring a range of literature related to entrepreneurial learning, work-related learning, and career awareness. By reviewing existing studies, theories, and frameworks, this literature review will contextualise the study within the broader body of research, identifying gaps in the literature and highlighting key insights that may inform the implementation of entrepreneurial learning in Wales and how this relates to Curriculum for Wales (CfW). This literature review will serve as the foundation for the research, providing a deeper understanding of the field and will help to structure the research design.

Entrepreneurial learning is a field of study that seeks to understand the processes through which individuals and organisations acquire, develop, and apply knowledge, skills, and experiences to engage in entrepreneurial activities (Pittaway and Cope, 2007). These activities may include market research, business planning, marketing and promotion and financial management. Entrepreneurial learning is closely linked to entrepreneurial education, which aims to equip individuals with the skills and knowledge necessary to become successful entrepreneurs. While traditional entrepreneurship education often focuses on formal instruction in topics like business planning, finance, and marketing, entrepreneurial learning emphasises the development of more intangible skills such as adaptability, resilience, and creativity (Lackéus, 2015).

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Entrepreneurial learning refers to the process by which entrepreneurs acquire knowledge, skills, and attitudes that are necessary to recognise opportunities, take risks, and navigate the challenges inherent in starting and growing businesses. While the term "entrepreneurial learning" (Peterson and Wu, 2021: pp. 2357-2388) is often used interchangeably with other terms such as entrepreneurship education (Kuratko, 2005), entrepreneurial development, (Hisrich, Peters and Shepherd, 2017) and career awareness (Archer et al, 2013), is distinct in that it emphasises learning through experience, reflection, and experimentation rather than formal education alone (Politis, 2005). It includes both cognitive and behavioural aspects and often takes place in informal, experiential contexts, such as trial and error or exposure to diverse networks (Gibb, 2002). For the purposes of this document, the term entrepreneurial learning will be used to describe the process of knowledge acquisition, skill development, and hands on learning experiences that support the development of many entrepreneurial attributes.

The history of entrepreneurial learning in theory has evolved alongside the development of entrepreneurship as a field of study. Early discussions about entrepreneurship were rooted in classical economic theory. Within the works of Jean-Baptiste Say (1803) there is an emphasis on the role of the entrepreneur in allocating resources and driving economic activity. Slightly later, in 1934, Joseph Schumpeter introduced the idea of the entrepreneur as an innovator. He highlighted the importance of entrepreneurship in driving economic growth, often through the process of creative destruction, where new products, services, or processes replace older ones.

During the mid-20th century, there was a growing interest in teaching entrepreneurship, especially in business schools. However, early entrepreneurship education was largely focused on practical skills like business planning and management, rather than on deep theoretical learning. In the 1980s and 1990s, entrepreneurship scholars began exploring the learning process more explicitly. The perception that entrepreneurship could be taught and learned through experience, as opposed to merely being a fixed trait, became more prominent. David Kolb's Experiential Learning Theory (1984) played a key role in entrepreneurial learning. He argued that learning occurs through a cyclical process of concrete experiences, reflective observation, abstract conceptualisation, and active experimentation. His theory aligned well with the idea that entrepreneurs learn through real-world experience, iterating and adapting their strategies as they go. Kolb's theory has been widely adopted to explain how entrepreneurs learn through the direct experience of managing their ventures and reflecting on these experiences to form new knowledge.

By the 1970's Albert Bandura's Social Learning Theory (1977), which focuses on how people learn through observing and imitating others, began to influence entrepreneurial learning. Entrepreneurs often learn through role models, mentors, or peers, and their behaviours are shaped by the successes and failures of others in their community. Social learning theory highlights the role of social interactions, observation, and imitation in the learning process, (Hager 2013). This is especially relevant in the context of networks, mentorship, and entrepreneurial communities, where learning occurs through shared experiences and collaboration (Stewart and Thomas, 2013). Through these networks, entrepreneurs gain access to resources, advice, and knowledge that can accelerate their learning. Manfred, Gassmann, and

von Zedtwitz, (2012) explore this on a global scale and discusses how entrepreneurs learn by exposure to various markets, cultures and business practices which contribute to social learning and entrepreneurial development. This links with the idea that social capital plays a key role in facilitating knowledge exchange and fostering entrepreneurial learning (Jack and Anderson, 2002). However, Rae, (2006, 2010) provides an alternative perspective and suggests that entrepreneurial learning is an active, self-directed process in which entrepreneurs construct their own understanding of entrepreneurial activities through interaction with their environment. This view emphasises the importance of context and personal reflection in shaping the learning process.

More recent theories have highlighted the dynamic nature of entrepreneurial learning (Teece, 2007). Entrepreneurs need to develop self-motivated capabilities to sense opportunities, seize them, and reconfigure their business models in a constantly changing environment. This requires continuous learning, adaptation, and innovation. They argue that it is not a personal experience, it is shaped by the business environment, social networks and market conditions. Entrepreneurs often make decisions based on limited information, which can lead to either opportunities or pitfalls (Shepherd, 2003). Other important skills such as, opportunity recognition, and the ability to seize these opportunities can also provide positive experiences within entrepreneurial learning. Shane, (2000) argues that a person's ability to recognise these opportunities are based on the individual's prior knowledge and how they perceive that information from their environment. Although, Busenitz, and Barney (1997) offer the perspective of cognitive bias, and overconfidence bias which can either drive entrepreneurs to pursue risky opportunities or lead to missed opportunities because of misperceptions, therefore influencing their business

decisions. However, contextual factors and situated learning as explained by Nambisan (2008) and Lichtenstein (2005), demonstrate how important the context is in entrepreneurial learning.

More current day theories call attention to the importance of learning from failure. Corbett, (2005) suggests that failure plays a critical role in the learning process for entrepreneurs. By reflecting on and analysing mistakes, entrepreneurs can build resilience and improve future decision-making. This ability to reflect on past experiences is something that Boud (2013) identifies as being a crucial part of learning. A growing body of research has emphasised that entrepreneurial learning is deeply rooted in practice and reflection, with entrepreneurs often learning most from their mistakes (Politis, 2005; Rae, 2006). Entrepreneurs often engage in a fail-fast strategy, where they launch early versions of their products or services, learn from the feedback and failures, and rapidly iterate, the quicker the entrepreneur can learn from failures, the faster they can change and improve their business idea. (Blank, 2013). Reflection is a critical element in the process of learning, as such entrepreneurs engage in reflective practices to make sense of their experiences and integrate new insights into their decision-making (Cope, 2005). The act of reflecting on past successes and failures can help entrepreneurs develop a deeper understanding of their behaviours and strategies, fostering continuous learning and adaptation (Zimmerman, 2002).

The constructivist view of learning, championed by theorists like Lev Vygotsky and Jerome Bruner, began influencing entrepreneurial learning. Constructivist theory suggests that learners construct knowledge based on their experiences and social interactions. In entrepreneurship, this view emphasises the role of social networks,

mentors, and communities in shaping an entrepreneur's learning journey, rather than passively receiving information. It involves learners engaging with and interpreting their environment, building on prior knowledge and refining their understanding through new experiences. Vygotsky's Zone of Proximal Development (ZPD) concept suggests that learners can achieve higher levels of understanding when they are guided by others. In entrepreneurial contexts, this aligns with the importance of mentorship, networking, and social learning. However, Bransford *et al.*, (2000) suggest that this experience-based approach to learning may not be the most effective approach for mastering complex or abstract subjects as it may not provide enough of a structured, systematic approach for deep learning. Dunn and Griggs, (2000) also highlight that experience-based learning may not sufficiently address individual differences in learning styles or cognitive processing. Some pupils may thrive in a constructivist learning environment, but others may find it confusing or frustrating, especially if they have different learning preferences or needs.

Additionally, Bruner contributed significantly to the development of constructivism, particularly when looking at learning through experiences. He believed that learning is most effective when learners actively participate in discovering information, rather than just receiving it (Bruner, 1960). In the context of entrepreneurship, individuals learn by engaging with challenges, experimenting, and solving problems within real-world contexts. Significantly, Bruner also introduced the concept of the spiral curriculum, the idea that any concept can be taught to any learner at any stage of development providing it is presented in an appropriate way. In a spiral curriculum, learning is revisited over time, with concepts being explored at increasing levels of breadth and depth (Hattie and Yates, 2014). This allows learners to build on prior knowledge and gain deeper understanding as they encounter the same ideas in

different contexts (Bennett and Lemoine, 2020). Although featuring many strengths such as flexibility, and depth of learning, the spiral curriculum also can present fragmented learning experiences which sees concepts being introduced early, but not fully mastered before being revisited (Ramsden, 2003). This can lead to significant gaps in learning (Ainscow, Dyson and Weiner, 2013). Smit and Fritz, (2020) discuss that spiral curriculums can be inconsistent in their application and can cause significant teacher workload through careful planning and resource management. There is also argument to suggest that a spiral curriculum does not suit every curriculum area or learner. Subjects that require sequential learning such as mathematics may not be best taught in a spiral approach as learning in this area often follows a building block approach (Leat and Lofthouse, 2019).

The Curriculum for Wales, (Welsh Government 2020), which will from here on be known as CfW, marks a significant shift in the way education is delivered within Wales. The curriculum aims to prepare students for the challenges of the 21st century, fostering not only academic skills but also key competencies such as critical thinking, creativity, and entrepreneurial thinking, (Donaldson, 2015). As part of this reform, the aim so to give greater emphasis to the development of skills, alongside, or embedded in, a traditional subject or 'area of learning' approach. A school's curriculum should enable learners to gain experiences related to work and careers, developing knowledge of the breadth of opportunities available to them throughout their lives (Welsh Government 2020). Careers and work-related experiences (CWRE) enable learners to develop their knowledge, skills and understanding in preparation for the world of work. The inclusion of CWRE within the curriculum has been driven by the increasing recognition that students entering the workforce are often lacking key skills essential for success in the modern economy (Neck and

Greene, 2011). As traditional education systems have focused heavily on academic knowledge and there has been growing concern that young people are not adequately prepared for the challenges and opportunities they will face in a rapidly evolving, globalised, and digital world, (OECD, 2017). Careers and Work-Related Experiences (CWRE) within CfW involves more than just business education, it is the intention of the curriculum to develop a mindset that encourages creativity and innovation, critical thinking and problem solving, personal effectiveness and planning and organising (Welsh Government, 2020).

There is a clear and complementary relationship between entrepreneurial learning and Careers and Work-Related Experiences (CWRE) within the Curriculum for Wales. Entrepreneurial learning fosters key transferable skills such as creativity, resilience, critical thinking, and problem-solving (Gibb, 2005; Rae, 2007). Both areas aim to prepare learners for the world of work by developing adaptability, initiative, and an understanding of value creation in both social and economic contexts (OECD, 2018). CWRE supports learners in exploring the world of work, building career management skills, and connecting with employers, while entrepreneurial learning encourages them to identify opportunities and develop innovative responses to real-world challenges (Welsh Government, 2020). Integrated enterprise activities, such as setting up a business or engaging in community problem-solving projects, offer meaningful opportunities to embed CWRE outcomes in authentic contexts (Jones and Iredale, 2010). This aligns with the Curriculum for Wales' ambition to develop "enterprising, creative contributors, ready to play a full part in life and work" (Welsh Government, 2020). In addition, it reflects the growing importance of an entrepreneurial mindset not only for entrepreneurs but for all learners navigating an increasingly complex future world of work (European Commission, 2016).

The development of curriculum for Wales aligns to wider worldwide thinking. Countries such as the United States of America, Malaysia, Denmark, Finland and Iceland all have their own way of developing curriculum approaches to developing an entrepreneurial mindset and development of skills. In the United States, educators use Science, Technology, Engineering and Maths (STEM) activities to teach essential skills such as creativity and problem-solving skills (Morris and Kaplan 2014). Where as in Asia, entrepreneurial learning is driven by a combination of government initiatives, university programs, and private sector involvement (Ministry of Education Malaysia, 2018). In many other countries, entrepreneurship is increasingly being woven into curricula at all educational levels, with a focus on fostering innovative mindsets, problem-solving skills, and practical business knowledge (Kim and Lee, 2020).

In Nordic countries such as Denmark, Finland and Iceland entrepreneurial learning has been a key focus for many years, with these countries consistently ranking high in global innovation and entrepreneurship indices (Dal *et al.*, 2016), Denmark places a strong emphasis on fostering entrepreneurship from an early age. The Danish government has introduced a number of entrepreneurship education programs at primary school level where pupils engage in project-based learning, allowing students to work on real-world problems and come up with innovative solutions (Danish Ministry of Education 2019).

These countries have all developed different ways of ensuring that entrepreneurial education in schools plays a pivotal role in preparing their learners for the world of work through different systems and practices across all ages from primary schools to colleges and universities. Increasingly, educational programs are incorporating

experiential learning elements such as internships, business incubators, and entrepreneurial simulations, which allow students to engage directly with the entrepreneurial process (Fayolle and Gailly, 2008).

In Wales, headteachers and senior leaders responsible for curriculum design are increasingly recognising the importance of social capital in developing and delivering the curriculum, particularly within the context of entrepreneurial learning, (OECD, 2020). Research indicates that incorporating social capital into entrepreneurial finance education enhances students' understanding of the role of networks and relationships in business success, (Eric, 2016). Additionally, studies have shown that social capital plays a crucial role in driving entrepreneurial learning and education, highlighting the significance of social networks in fostering entrepreneurial growth (Haj Youssef, 2023) These opportunities to create learning networks and to engage further within their own communities plays a critical role in shaping educational experiences (Barton and Levstik, 2015, Fielding, 2013 and Walker and Dallimore, 2021).

By incorporating social capital into the curriculum, headteachers aim to help students develop essential skills such as collaboration, communication, problem-solving and independence (Bourdieu, 1986). Independence and pupil's ability to encounter challenge within the classroom with resilience and motivation is something that has been a focus of Estyn across Wales. Between 2022 and 2023, 219 schools were inspected by Estyn. It was found that 29% of these schools had received recommendations relating to improving opportunities for learners to develop their independence, and 21% received recommendations related to improving the level of challenge provided during learning opportunities (Estyn, 2023). There has been

much research and reporting to suggests that pupils' in Wales lack some of the integral skills required such as problem solving, adaptability and critical thinking, (Unis Wales, 2021, Future Generations Commissioner for Wales, 2021, Institute for Fiscal Studies (IFS), 2024, OECD, 2016). This aligns with broader educational policies in Wales, which emphasise the need for entrepreneurial learning to enhance employability and equip students with the skills necessary for the modern workforce, (Welsh Government, 2022, Hwb, 2021, Future Generations Commissioner for Wales, 2020). Through collaborative partnerships, mentorship programs, and exposure to real-world challenges, headteachers are aiming to create an environment where students can build the social capital necessary to thrive in future careers, while also enriching the community.

However, there are some challenges that educators face when trying to address the issue of developing some of these skills. Studies have shown, that in some cases where pupils hold biased assumptions and have narrow aspirations further in life can influence the academic effort they exert in certain lessons, the subjects they choose to study, and the jobs they end up pursuing (Kashefpakdel and Rehill, 2018; Young, 2014; Gutman and Akerman, 2008). Further exploration in this area has also shown that the careers pupils aspire to, may be ones that they are most familiar with because of their family or their socio-economic backgrounds (Howard *et al.*, 2015; Huddleston and Stanley 2012; Flouri and Pangouria 2012). Research conducted by Kirkwood (2006) goes further and suggests that parents in certain jobs can highly influence the career aspirations of their children, for example within farming families. In certain areas of higher deprivation and rurality, pupils may have limited options or awareness of the career prospects that are available to them. In some cases, pupils are born into families where the expectation is to continue the family business

(Sullivan 2002). By developing a curriculum that is rich in entrepreneurial opportunities and experiences there is opportunity to raise career aspirations, or to raise knowledge and understanding of diversification in order to improve an existing business (Fayolle and Gailly 2015).

Schools and education settings also have the challenging job of creating environments where effective entrepreneurial learning can take place. According to a study by Morris *et al.*, (2013), senior leaders who understand the value of entrepreneurial learning are more likely to create environments that encourage innovation and experimentation. They focus on fostering skills such as leadership, resilience, creative thinking, and problem-solving and support staff in integrating these concepts into their teaching practices (Gibb, 2005). While some leaders view formal education as a vital tool for shaping future entrepreneurs, others prefer informal learning methods that emphasise mentorship, networking, and real-world problem-solving (Leitch, 2006). In entrepreneurial organisations, senior leaders often lead by example, taking on roles as mentors or coaches to guide their teams through challenges (Hannon, 2006).

There is a growing amount of research which links entrepreneurial learning with entrepreneurial leadership. Rauch and Frese (2016) discuss the distinction between more traditional managers, who control processes, and leaders, who drive change, which further outlines the differing traits between traditional leadership and entrepreneurial leadership. Weick and Sutcliffe, (2015) conclude that school leaders are increasingly responsible for pedagogical implementation and priority planning. It is this link between leadership style, priority planning and autonomy of teaching staff that ultimately build together to create the entrepreneurial climate across the school.

Gupta, *et al.*, (2004) explores the idea that a headteacher who embodies the attributes of an entrepreneurial leader, operates like an entrepreneur, who inspires change and innovation. Their ability to innovate and adapt helps to support their school to continue to thrive and develop under ever increasing pressures. For example, where a school may be facing financial challenges, an entrepreneurial leader may find creative ways in sourcing additional funding avenues such as fundraising or leasing available building or sporting facilities. Mamabolo, (2020) provides valuable contribution to the understanding of how headteachers in school can act as entrepreneurial leaders to secure alternative funding sources for their schools to help with school funding issues. Although, with existing pressures such as managing complex behaviour and safeguarding needs, (Egan, 2021), Additional Learning Needs (ALN) transformation, curriculum reform (Welsh Government, 2020), school policies, performance management (Bush, 2020), managing budgets (Institute for Fiscal Studies, 2022), ensuring well-being of staff (NAHT, 2022), and inspection processes (Estyn, 2023), finding time to create fundraising opportunities or to explore grant options may be challenging.

An additional constraint to the implementation of a curriculum that fully embraces entrepreneurial learning are the implications of the pedagogical principles that are required when teaching. Many of the teaching approaches and experiences that are relevant when delivering entrepreneurial learning, such as linking in with existing businesses (Gibb, 2005), visits and trips, community projects (European Commission, 2016), cross curricular projects, (Bell, 2010) and digital enterprise activities require additional materials and resources and can incur an additional cost to the school, which as previously mentioned is already an existing challenge facing schools across Wales. Leitch, (2006) highlights how educational policies may not

always prioritise entrepreneurial education which could make it more challenging to implement entrepreneurial learning purposefully across the curriculum when there is financial demand elsewhere. This could be said for Curriculum for Wales as a whole, Power, Newton and Taylor, (2020) highlight the cost implications of a curriculum that requires increased resourcing and enrichment activities. Not only is there more demand on the teaching profession in terms of implementation, but a significant amount of funding is required to ensure teachers have the knowledge and skills to make it work.

A feature of the introduction of CfW is increased autonomy for teachers (Donaldson, 2021). Kivistö, and Kivinen, (2023) argue that when educators have the freedom to tailor their teaching methods and curricula, they can create exciting and innovative learning experiences that encourage entrepreneurial skills among pupils. Teachers with greater autonomy can adapt and exceed curriculum expectations, this can lead to more effective entrepreneurship education (Kivistö, et al, 2023). This flexibility allows for the integration of diverse teaching strategies that align with authentic and purposeful entrepreneurial practices (Sommarström, et al 2021). However, according to a study by Pearson (2019), teachers in certain areas reported feeling overwhelmed by the responsibility of creating lessons and assessments from scratch due to a lack of pedagogical training in creative teaching methods. Jones and Iredale (2010) offer the opinion that many educators are not equipped with the knowledge, skills and confidence to teach entrepreneurial concepts. Highfield and Lee (2021) suggest that the majority of classroom teachers just do not appreciate the significance of entrepreneurial learning and therefore favour traditional teacher led learning that can be assessed and monitored more closely. Toutain *et al.*, (2017) suggests that educators would prefer to hold back on the implementation of

entrepreneurial learning and continue to use schemes of work and structured approached to knowledge development rather than skill progression. Kirkley (2017) and Lackeus (2015), reflect on how this over reliance on subject assessment can oppose cross curricula approaches experienced in entrepreneurial learning and it is the conflicting pedagogical approaches that is to blame for the lack of effective teaching in this area. Fejes, Nylund and Wallin (2019) discuss ways in which teachers lack understanding of entrepreneurial education and that educators need time, resources and training to enable this type of pedagogy.

One way that teachers are being supported in Wales to implement CWRE is through Careers Wales. Careers Wales is a Welsh Government funded organisation that provides careers advice and guidance about the world of work. It provides initiatives such as the Young Entrepreneurs Program (Careers Wales. 2021) and it has partnership with businesses across Wales. It aims to connect students with real-world entrepreneurial experiences, helping them develop practical skills such as problem-solving, innovation, and resilience (Careers Wales, 2021). Furthermore, Careers Wales aids in overcoming barriers faced by students in rural or economically disadvantaged areas, where traditional career paths may dominate, by highlighting entrepreneurial opportunities and providing the guidance needed to pursue them (Careers Wales, 2024). However, for entrepreneurial learning to be fully integrated and effective, there needs to be continued collaboration between organisations of expertise such as Careers Wales, schools, and local businesses. This, alongside a concerted effort to change cultural perceptions and raise aspirations in regions with deeply ingrained traditional career values will help develop entrepreneurial learning become a purposeful and embedded part of Curriculum for Wales. During 2023, Careers Wales worked alongside educators across Wales to develop an audit tool

for schools and an educator support resource to help support schools in idea generation and planning processes for entrepreneurial learning that focused on more than the traditional financial literacy-based learning activities, (Careers Wales, 2024 and Welsh Government 2024). Resources like this give purposeful direction for educators and senior leaders to monitor whole school progress against concrete milestones in relation to entrepreneurial learning. This would go some way in addressing the concerns raised earlier in this document.

Despite CfW detailing a curriculum that is adaptable and responsive to learners' needs that allows educators the autonomy to tailor learning experiences, fostering a dynamic and personalised educational environment, Fayolle, (2013) discusses the lack of flexibility within the curriculum, highlighting that there are still many of the same demands of the previous curriculum within the new. These include standardised testing requirements (Hayward and Williams, 2021), subject specific goals (O'Donovan and Hughes, 2020), evidencing progression, (Welsh Government, 2023), and inspection processes (Estyn, 2024). This can make it increasingly more difficult for educators to prioritise and integrate entrepreneurial learning purposefully.

In addition, CfW discusses skills such as creativity, personal effectiveness and innovation as essential skills for pupils to develop within it's CRWE's, however, these skills are dynamic, subjective, and context-dependent, making them difficult to measure with traditional assessment methods (Kaufman, and Sternberg, 2010). Creativity encompasses a broad range of abilities, including originality, flexibility, and flair (Görög, and Tóth, 2021). Similarly, personal effectiveness, which includes skills like self-regulation, resilience, and time management, requires holistic assessment methods that account for the nuances of personal growth and behavioural change

over time, which may not be easily quantifiable (Zimmerman, 2002). Innovation, too, is a complex skill that extends beyond novelty and originality to encompass the application and implementation of new ideas, processes, or products (Gergen, 2009). Assessing these skills demands an understanding of not only how the idea was generated but also its practical application, often requiring longitudinal evaluation (Thomas, 2000). As a result, educators must use a variety of assessment strategies, such as portfolios, project-based evaluations and self-assessment, to capture a fuller picture of a learner's abilities (Bae, *et al.*, 2014). Despite these efforts, ensuring fairness and consistency in assessing such skills remains a considerable challenge, as these assessments are often influenced by personal biases and the inherent subjectivity of the skills being evaluated (Pittaway and Cope 2007). This becomes even more difficult when trying to demonstrate this learning process and the progression of skills to stakeholders (Neck and Greene, 2011).

The pressure to improve standardised test scores or meet government-imposed educational targets can result in entrepreneurial learning being side-lined or being completed as a one-off event. The uncertainty about entrepreneurial learnings long-term impact on students' career outcomes and employability could also play a part in the importance it is given within teaching and curriculum time (Martin *et al.*, 2013). This could in turn provide reason as to why there may be some reluctance from staff, parents, or even students to new teaching methodologies such as project-based learning (Bell, 2010), which is often used in entrepreneurial education (Fayolle, and Gailly, 2008). Managing this resistance can be difficult and creating a culture of entrepreneurial practices can take time to develop and become embedded within the staff base (Henry. *et al.*, 2005). This can stem from a traditional view of education that prioritises academic subjects over practical, experiential learning (Hannon,

2006). Some educators may be hesitant to adopt unfamiliar teaching methods or to move away from traditional pedagogies that emphasise content delivery over skill development, in concern of challenges around standards from external stakeholders (Bae *et al.*, 2014).

Rae, (2007), argues that for entrepreneurial education to be truly effective, it often requires collaboration with local businesses and the wider community. However, headteachers may face challenges in establishing these connections. This could be due to logistical barriers or a lack of available networks, particularly in rural areas of Wales (Almond, 2023). Partnerships with local businesses and entrepreneurs can provide valuable real-world learning experiences for students, but building these connections can be time-consuming and may require expertise (Jones and English, 2004). This is also something that Cunningham and Lischeron, (1991) draw upon when looking at the cultural barriers some schools face where there is difficulty in convincing pupils and parents that entrepreneurial skills are important and valuable (Howard *et al.*, 2015). In some regions there may be a strong focus down certain career paths such as agricultural and food production which would require changing a deeply ingrained cultural values and perceptions (Basnet *et al.*, 2023).

Entrepreneurial learning is a multifaceted and dynamic process that is shaped by a range of personal, social, cognitive, and contextual factors (Kolb, 1984; Rae, 2005). Entrepreneurs learn not only from their own experiences but also through interactions with others (Bandura, 1977), reflecting on their actions, and adapting to their environment. Theoretical models such as experiential learning (Kolb, 1984), social learning (Bandura, 1977), and constructivist frameworks (Piaget, 1973) provide valuable insights into how this process unfolds. These models emphasise

the role of active reflection and social interaction, which are central to the entrepreneurial learning journey (Cope, 2003).

Curriculum for Wales (CfW) encourages the development of essential skills for the future, which aligns with developing entrepreneurial mindsets among students (Rae, 2007). This could help bridge gaps in career opportunities, particularly in rural areas where traditional industries like agriculture dominate (Jones and Williams, 2016). Collaborations with local businesses could provide real-world learning experiences and enhance entrepreneurial education (Hannon, 2005). However, challenges such as teacher preparedness, cultural resistance, and the risk of fragmented implementation must be addressed (O'Doherty, 2017). Overcoming these barriers requires comprehensive teacher training, a clear and consistent framework, to shift cultural perceptions of entrepreneurship, ensuring that students across Wales have equal opportunities to develop entrepreneurial skills that are essential for the modern economy (Kuratko, 2017).

The teaching of entrepreneurial skills in Wales offers both opportunities and challenges. With the recent curriculum reform and the demand for educators to develop broader skill sets in schools, incorporating entrepreneurial education could have an important influence on students' ability to thrive in an evolving, global economy (Welsh Government, 2020; Rae, 2007). However, the successful implementation of entrepreneurial skills in Welsh schools requires careful consideration of the region's unique socio-economic and cultural context (O'Doherty, 2017). Understanding these local factors is essential to ensure that entrepreneurial education is relevant and effective, while also addressing the diverse needs of learners across Wales (Rae, 2005).

Chapter 3 - Methodology

This chapter aims to set out how the research design has gathered data to answer the research question. A case study approach (Hamilton and Corbett-Whittier, 2023) was chosen to explore the attitudes and values of teachers and educational leaders towards entrepreneurial learning within a specific educational context. This allowed for an in-depth examination of the complexities within a single area of Wales, providing valuable insights into the dynamics and perspectives of the participants involved (Yin, 2018). Questionnaires (Stevens, 2023) and follow on semi structured interviews (Kakilla, 2021) were used to collect broad, quantitative data from a larger sample, providing an overview of participants' understanding, attitudes and values towards entrepreneurial learning.

When conducting this research, every effort was made to adhere to ethical standards to protect the rights and welfare of participants. All participants were fully informed about the purpose of the study, and their consent was obtained prior to participation. The research adhered to the ethical guidelines established by the British Educational Research Association (BERA, 2024). Participants were given the option to withdraw from the study at any point without facing any consequences. Confidentiality and anonymity were ensured by assigning unique identifiers to participants and anonymising all data, including the names of schools involved. Data was stored securely in password-protected files and will be retained for five years before being destroyed in accordance with data protection regulations. Additionally, the study was designed to minimise any potential harm or discomfort to participants by ensuring the questions were non-invasive and that the research was conducted in a respectful and supportive environment. These ethical considerations were integral to

maintaining the integrity and trustworthiness of the research process (Israel and Hay, 2006).

When detailing this research methodology, it is important to recognise the positionality of the researcher. This can include the researcher's social identity, background, and personal experiences and how that can influence how they approach, interpret, and analyse their research (Creswell, 2013). In the context of this research, I am the headteacher of one of the schools within the cluster of schools being included within the sample. This offers a particular perspective when considering positionality especially in relation to insider and outsider research (Paechter, 2012). In qualitative research, the insider position refers to a researcher who is a member of the community, group, or culture they are studying. This positionality can be based on shared ethnicity, profession, language, experience, or other social characteristics. According to Asselin, (2003), it offers particular advantages in terms of access, trust, and cultural understanding. An advantage of being an insider researcher is the ability to communicate and navigate the social expectations of the group of people you are including within your research. This can result in deeper insights and more authentic data (Brannick and Coghlan, 2007). Participants may feel more comfortable sharing sensitive or personal information with someone they view as an insider, which can improve the depth and quality of data collection (Chavez, 2008). This comes from the insider having an intuitive grasp of group dynamics, implicit meanings, and local context, allowing them to interpret data in ways that outsiders might overlook (Trowler, 2011). However, the insider position is not without its limitations. Insiders may face challenges related to overfamiliarity, taking knowledge for granted or failing to critically examine shared practices (Mercer, 2007). There is also a risk of bias, where personal beliefs or

emotional ties interfere with objective analysis (Unluer, 2012). As such, reflexivity, where the ongoing critical reflection on the researcher's role and impact on the research, is essential to mitigate these risks (Berger, 2015).

In the case of this research, I as the Headteacher hold a position of leadership and influence, allowing for a deeper understanding of the school community and its dynamics (Bryman, 2016). The insider status provides direct access to key stakeholders, such as teachers, students, parents, and local businesses, facilitating rich, contextual data collection (Stake, 1995). Although Saidin and Yaacob, (2016), highlights that being embedded within the cluster community might lead to biased views or the increased risk of overlooking negative aspects of entrepreneurial learning within the cluster. This could compromise the objectivity of the research, making it harder to critically assess the effectiveness of entrepreneurial initiatives that professionals discuss (Bryman, 2016).

In order to address any potential limitations, steps have been taken to mitigate the influence of bias and to ensure the research maintains academic rigour. While a preference for entrepreneurial learning methods may influence how it is implemented within my own school, efforts have been made to approach the study with critical self-awareness. As a headteacher, my involvement in decision-making processes at a school level allows for valuable insights into the practicalities of embedding entrepreneurial learning within the curriculum (Kuratko, 2017), but that is not to say that this is the same in every school within the cluster. By being a practitioner and a researcher within this study there is the potential for tension to be created, particularly if findings challenge established school priorities or reveal shortcomings in current approaches (Haynes, 2012; Bryman, 2016).

There may also be ethical concerns if the research reflects negatively on the school or cluster. This could place me in a challenging position between my leadership responsibilities and the research objectivity (Simons, 2009). In recognition of these dynamics, the study adopts a reflexive approach throughout, acknowledging the influence of my positionality and taking steps to enhance transparency and credibility (Holmes, 2020; Bourke, 2014). The use of open-ended interview questions has been deliberately chosen to invite a range of perspectives, minimise assumptions, and encourage participants to voice their views freely, thus helping to reduce the risk of partiality in both data collection and analysis.

This research adopts a case study approach, a qualitative research strategy that provides an in-depth, contextual examination of a specific instance, event, organisation, or individual over a defined period of time (Thomas, 2021). Case studies are particularly effective for exploring the complexities and dynamics within a single setting, offering rich insights into a particular context (Smith, 2019). This approach allows for a focused investigation of a limited range of people, situations, or themes, while also providing flexibility in addressing multiple aspects of the phenomenon under study (Yin, 2018). A case study is deemed appropriate for research where the researcher aims to seek trends (Denscombe, 2012), and a collation of many perspectives through a number of data collection methods or through the creation of multiple accounts from a single method (Flick, 2018). Where research involves an in-depth, contextual analysis of a specific instance, phenomenon, or situation case studies are particularly valuable (Creswell, 2013). As such, case studies can help to gain a deeper understanding of complex issues within their real-life context (Simons, 2014), which is particularly pertinent in a school setting where context is important.

However, Thomas (2021) cautions about how findings through case studies cannot be generalised to reflect the views and values elsewhere. Case studies focus on a single instance or a small group of cases, which may not be representative of the larger population and can be difficult to replicate in other areas. Yin (2018) identifies, there are no particular standardised techniques to conducting a case study and conducting them requires a range of skills and flexibility. This makes the reliability and objectivity of them sometimes questionable. To address this, the study prioritises analytical generalisation rather than statistical generalisation, aiming to develop transferable insights that may be relevant to similar contexts (Holmes, 2020). Additionally, the use of multiple data sources, including both questionnaires and semi-structured interviews, supports triangulation, enhancing the credibility and trustworthiness of the findings (Creswell and Poth, 2018). In addition, keeping clear documentation of the research process, including how data was collected, coded, and analysed, strengthens the study's transparency and replicability, addressing concerns around subjectivity and methodological rigour (Creswell and Poth, 2018). Furthermore, Baxter and Jack, (2020) argue that case studies can be highly subjective, this is due to the findings relying heavily on the researcher's interpretation of the data. Researchers may unintentionally allow their personal biases, assumptions, or preferences to influence their analysis and conclusions. In order to minimise these risks reflexive practices have been adopted, these include being transparent about positionality, and actively considering how personal beliefs or roles may influence data collection and interpretation (Bourke, 2014). Another limitation to the case study approach is the time taken to conduct them, Simons, (2009) identifies how case studies typically require extensive data collection, often over a long period of time. This can be resource-intensive, requiring significant time, effort, and access

to people or organisations involved in the case. In order to reduce this, convenience sampling and questionnaires were used to access a greater number of participants in a shorter amount of time.

Initial data collection took the form of a questionnaire, these are appropriate for conducting research across a number of different school settings as they are easily disseminated (Gray 2022). This is supported by Denscombe, (2014) who explains that the use of questionnaires for research is effective as they are inexpensive to administer, they can reach a large number of people quickly and that all participants receive the same questions in the same format, which enhances consistency and reliability. Furthermore, Rea, and Parker, (2014) identify that by using anonymous questionnaires, respondents are more likely to provide honest answers. Although, Fowler, (2014), raises caution in using questionnaires as they can have low response rates, this can be particularly relevant when educators have high traffic email in boxes and are already under time pressures from their day to day role in the classroom. In order to mitigate this, email requests to participate in the research were sent to Headteachers of the schools to disseminate to their teachers. Research conducted by Shih and Fan, (2009) suggest that in educational research, existing relationships or personalising communication can be an effective strategy to improve participant engagement and data quality. Where there is the potential for the respondent to misinterpret the question wording or intent, (Oppenheim, 2000), the use of semi-structured questionnaires were used to allow respondents to expand or add further information to the information given on their questionnaire.

In this example, a case study, that uses questionnaire and semi structured interviews was a particularly suitable research approach due to its capacity to provide an in-

depth and contextualised understanding of complex educational phenomena. This method is well-suited for exploring contemporary issues within real-life settings where the boundaries between the phenomenon and its context are not clearly defined (Yin, 2018). In the context of this research, which examines teachers' attitudes and values towards entrepreneurial learning within a specific school cluster, the case study allows for a holistic examination of practices, perceptions, and interactions as they naturally occur. It facilitates the collection of rich, qualitative data from multiple sources, such as questionnaires and semi-structured interviews, enabling a comprehensive understanding of participants' experiences and meanings (Stake, 1995; Thomas, 2021). Furthermore, the case study's flexibility supports both inductive and deductive reasoning, allowing the researcher to explore emerging themes while also engaging with existing theoretical frameworks. This makes it particularly useful for educational research, where nuanced and context-dependent insights are often needed to inform practice and policy (Gray, 2021). As such, the case study approach aligns closely with the aims of this research, providing depth, relevance, and the opportunity to generate meaningful, practice-informed conclusions.

In order to recognise and mitigate some of the difficulties listed above, such as access to participants, it was important to adopt an appropriate type of sampling. I selected convenience sampling, a type of non-probability sampling (Clark, 2021) due to its practicality and efficiency, particularly given the time and resource constraints of the study (Etikan, Musa, and Alkassim, 2016). As a headteacher of one of the schools within the cluster, it enabled me to seek the views and opinions of teachers and leaders in other schools in a similar geographical area. It also enabled me to reach a wide range of people through a trusted network of fellow professionals. In

support of this, Creswell, (2014) discusses how convenience sampling is effective when doing exploratory research as it can help to gather initial thoughts and insight before conducting a more representative study. However, using convenience sampling limits the ability to generalise the findings from the research (Rivera, 2019). Despite these limitations, convenience sampling was deemed appropriate for the exploratory nature of the study and its focus on gaining initial insights into the research topic.

The sample used for this research consisted of nine primary schools which are geographically closest to my own school and where all pupils from these schools' transition to the same secondary school. This cluster of schools have worked together since the amalgamation of the secondary school in 2018. Which saw two secondary schools join together, and therefore brought together the nine primary schools into one cluster. The cluster is unique in the number of schools that work together, which can make cluster working quite challenging, and the types of school within it. Within the cluster there are large town primary schools, smaller rural schools and both English and Welsh language streams. Although, for the purposes of this study, there is the opportunity to seek the values and attitudes of many educators and leaders about how they view entrepreneurial learning in their setting.

Since the introduction of CfW to develop a shared approach to teaching, learning and progression has been the main focus of the cluster when working together. This means that leaders and teaching staff within the schools have received the same information and training around entrepreneurial learning and all have access to similar amenities in the area. Although how this information has been interpreted and how well these opportunities have been utilised has yet to be reviewed.

Table 1.1 sets out the contexts of the nine primary schools and one secondary school that has contributed to this study. The table provides contextual analysis of each school compared to the national average across Wales. This includes data including the percentage of children receiving free school meals (FSM), pupils who have been identified within the setting as having additional learning needs (ALN), pupils who have English as an additional language (EAL) and the attendance figures from the school. This data has been included to reflect the socio-economic and demographic context of the school and how they compare across the sample group.

Table 1.1

	Pupils on roll	% FSM	% ALN	% EAL	Attendance
National Average		18.4%	15.8%	5.6%	88.9%
School A	58	3.4%	15.5%	1.74%	97.3%
School B	143	15.3%	11.6%	8.1%	91.25
School C	207	28.1%	27.7%	10.4%	94.7%
School D	204	31.2%	28.4%	9.6%	89.4%
School E	113	14.2%	17.3%	5.3%	91.2%
School F	210	11.6%	26.4%	8.7%	93.4%
School G	93	10.8%	9.6%	2.3%	92.0%
School H	52	10.9%	12.4%	4.6%	90.4%
School I	39	12.4%	14.2%	1.5%	93.4%
School J	976	16.3%	28.7%	9.4%	86.2%

*Data collected from school census information - Welsh Government 2022.

The number of schools included in the research offer a varying type of school including small rural schools, larger town schools and a large secondary school. The varying types of school within the sample size offer a range of settings and therefore, offer a heterogeneous sample (Bryman, 2021). Whereby data collected draws upon the views of a group of teachers with a range of experiences and teaching style that each bring their own opinions and values to the study. This is important when looking

at teachers values towards entrepreneurial learning and their attitude towards it. In addition, it helps to evaluate if the values and attitudes are shared or where there are differences, why that may be. Teachers with different experiences and styles bring varying approaches to the classroom. Some may be more traditional in their methods, while others might be more innovative or pupil led.

This range helps ensure that the study reflects a broad spectrum of educational practices rather than just one approach which adds validity, inclusivity, and applicability of the findings. This provides a holistic understanding of educational phenomena and avoids biases associated with narrow sampling (Creswell and Poth, 2018). Additionally, gathering a breadth of opinions supports triangulation, strengthening the credibility and reliability of the research outcomes by cross-verifying data from multiple sources (Denzin, 2017). This ultimately leads to more contextually relevant and actionable findings, promoting evidence-based practice that reflects the complexities of real-world educational settings.

Participants in this research were headteachers, senior leaders, department leaders, and teachers from primary and secondary schools. Participation within the research was by invitation and dependant on informed consent. Bryman, (2016) identifies that when participation within research is voluntary, often, participants who are motivated and interested in the research topic are more likely to respond, which can give valuable insight and data. Saunders, Lewis, and Thornhill, (2016) highlight that when participants choose to take part in the study, it ensures their autonomy and reduces the risk of coercion, it can also make recruitment easier (Fowler 2014). However, Etikan, Musa, and Alkassim, (2016) highlight the potential risk of self-selection bias where voluntary participants do not represent the broader population and that those

who chose to participate may have particular characteristics, interests, or experiences that differ from those who do not volunteer. This can undermine the generalisability of the conclusion.

In case studies where, in-depth opinions and perspectives of a relatively small number of people are collected, it is suggested that a questionnaire with open ended questions is used. The responses to these can then be reviewed and used as part of a further group discussion or focus group (Knight, 1999; Thomas, 2017; Gray, 2021). Questionnaires were created and distributed using Microsoft Teams which is a programme that is used within the cluster to support user participation. The questionnaires contained both open and closed questions, allowing participants to expand on their responses if they so wish to do so, an approach used by Weinberger & Shonfeld (2018), allowing for comparison between the qualitative and quantitative data which strengthened the interpretation of the results.

A cascade method was used to disseminate questionnaires to participants who took part in the research. Cohen *et al.*, (2018) identify that distributing questionnaires via trusted intermediaries allows researchers to reach large numbers of participants without direct contact. This was particularly useful when considering the number of individuals in different settings I was aiming to reach. Requests to participate were sent to the Headteachers of the school via email with an explanation of the research and the expectations of the participants with the view that Headteachers disseminated the survey to their staff. However, as identified by Gray (2022), there is no guarantee that these questionnaires will be disseminated once sent which can affect the response rate and then the validity of the findings.

In addition to using questionnaires, semi structured interviews were also used to gain a further in depth understanding of both teachers values and attitudes towards entrepreneurial learning. Patton, (2015) explains that interviews allow researchers to explore complex, feelings, and attitudes in greater detail. Whereas Kvale and Brinkmann, (2015) identify that by conducting face-to-face interviews, researchers can probe further, clarify questions, or rephrase to suit the participant's understanding. However, interviews do have the potential to be time consuming (Bryman, 2016) and pose the risk of interview bias whereby the interviewers characteristics, behaviours, or expectations influence the responses of the interviewees, (Denscombe, 2014).

In this context, the interviews were carried out one-to-one and were arranged to suit the convenience of the participant. For participants who were geographically nearer these were conducted face to face, and for those further afield an online Microsoft Teams meeting was used. By conducting one-to-one interview, organising a suitable time for two people was more manageable than trying to organise many invitees (Denscombe, 2012). These semi structured interviews were recorded so that an accurate account of the participants' responses and facilitates a detailed and transparent analysis of the data collected which allows the researcher to focus on the interview process rather than taking extensive notes and allows the conversation to flow more naturally than to become disjointed by reviewing what has been said (Braun and Clarke, 2022). The recording of the interviews also supports a more rigorous and thematic analysis of the responses when looking at nuanced language, tone and context (Cohen *et al.*, 2018).

However, researchers must also consider ethical implications, such as obtaining informed consent for recording, ensuring confidentiality, and securely storing data to comply with ethical guidelines and data protection regulations (BERA, 2024). In the case of this study, consent was given by all participants, and all data was securely stored online and was secured with a password. In conducting this research, strict adherence to the British Educational Research Association (BERA) Ethical Guidelines for Educational Research (2024) has been at the centre of the research process. These guidelines provide a framework to ensure that educational research is conducted with the highest ethical standards, this has been achieved by promoting respect for all individuals involved and recognising the diversity of approaches within the field. By aligning with these guidelines, the study upholds principles of respect, transparency, and accountability, ensuring that the rights and well-being of participants are safeguarded throughout the research process.

All participants within my research are teachers and therefore will not require any 'gatekeeper' permission before requested to engage with the research (BERA, 2024). However, all Headteachers of the schools engaging with the research were informed of the nature of the enquiry before the teachers within the school were approached. In order to achieve informed consent from the participants, each questionnaire had a prefaced consent form outlining the nature of the research and how the information would be used. Participants had the opportunity to withdraw at any point during the research schedule, without the need to give a reason or any consequence

The anonymity of all participants was maintained throughout the research. All participating schools and respondents were allocated a reference letter as identified in table 1.1 and those reference letters have been referred to throughout the research document (Thomas, 2021). Questionnaires were completed anonymously and participants in interviews and focus groups were allocated a reference number. All data was stored electronically and was protected by password and two factor authentications.

As this research focuses on qualitative and quantitative data collection, a thematic analysis of the responses has been undertaken. A thematic analysis can be utilised when finding out people's views and opinions (Punch, 2014). This comparative approach was used to analyse the responses and identify any themes amongst them (Thomas, 2021). Braun and Clarke (2012) identify a six-step method including familiarisation, coding, generating themes, reviewing themes, defining and naming themes and reporting. The research conducted has been collated into a research report (Thomas 2021), with qualitative data presented as part of the appendix.

While case studies are invaluable for exploring complex phenomena in depth within their real-world context, they come with several inherent limitations (Hamilton and Corbett-Whittier, 2023). Within this research, limitations include a relatively small sample size and its ability to be generalised across the whole of Wales as it focuses on the experiences of teachers in one geographical area. Additionally, the use of convenience sampling adds some restrictions, while practical, it introduces the potential for sampling bias (Etikan *et al.*, 2016). Moreover, the selected schools and participants may not fully represent the diverse range of educational contexts and

teaching experiences of others across Wales. The reliance on self-reported data through surveys and interviews may introduce response bias (Saris, Satorra, and van der Veld, 2009) as participants may provide answers that they believe are the correct answers or what they should say or think. Participants could also be influenced by their personal perceptions and experiences. Also, as an insider researcher, my positionality may have influenced both data collection and interpretation.

Chapter 4 – Results

This section presents the key findings from the case study, which aimed to explore the attitudes and values of teachers and leaders towards entrepreneurial learning in Wales. The data was gathered through a questionnaire and a semi-structured interview with five participants. The key findings have been organised into three key themes; understanding, perceived value and challenges.

The questionnaire was completed by 23 respondents and the follow up semi structured interview was undertaken with five participants who had already undertaken the questionnaire. These data collection methods provided initial insight into their attitude and values of entrepreneurial learning. Quantitative analysis indicated that 19 of the 23 respondents (82.6%) rated themselves a 7 or above in terms of their understanding of entrepreneurial learning and 20 of the 23 respondents (87%) viewed entrepreneurial learning as a valuable addition to the curriculum, particularly in fostering creativity, problem-solving, and real-world thinking among pupils. Interestingly though, 100% of participants rated one of the other cross cutting themes such as Diversity or Human Rights as more important than Careers and Work-Related Experiences (CWRE).

Thematic analysis of the interview transcripts and the open-ended responses within the questionnaire revealed that only 7 of the 23 participants (30%) felt confident in their ability to deliver entrepreneurial education effectively, often citing a lack of training and clear guidance as challenges to their pedagogy in this area. Open-ended responses revealed a spectrum of interpretations of what entrepreneurial learning involves, with 14 educators associating it narrowly with “*business*” and

“enterprise”, while others understood it more broadly as an “important aspect of the curriculum in order to support children to make progress towards the four purposes, underpinned by the integral skills”. Some participants (26%) reflected on how they are beginning to embed entrepreneurial learning within their own school curriculum through *“children planning, organising and being creative to develop and deliver a show for the community”* or by using outside agencies such as the Arts Council for Wales or the Big Night Out to help support practitioners fund and resource entrepreneurial learning. However, a very few (13%) of participants actually referenced businesses or organisations within the local community who support schools develop entrepreneurial learning opportunities. This was supported by one response from a teacher who stated that *‘there is willingness to take time to plan and deliver this purposefully when we discuss ideas in staff meetings or when we plan together, but when have to try and cover everything else, sometimes it can be left to be a bit of an add on at the end of a term or at Christmas’*. While all interviewees expressed support for the principle of entrepreneurial learning, their enthusiasm often depended on contextual factors such as school leadership priorities and the availability of resources. These interviews added depth to the questionnaire findings, highlighting a general willingness to embrace entrepreneurial approaches, but an uncertainty of how to do this or the time to give it the planning it requires due to other contextual pressures.

Theme 1: Understanding

When examining teachers understanding of entrepreneurial learning further, there were several participants who demonstrated a broad understanding of

entrepreneurial learning. Respondent C described it as *“developing learners’ skills, knowledge and understanding in order to turn creative ideas into actions through real-life contexts.”* This description reflects a holistic view of entrepreneurial learning that also appreciates the development of creativity and practical application. Respondent G noted that *“it supports the development of the integral skills”*. This response again appreciates the wider view of how entrepreneurial learning can develop many skills. These perspectives align with the curriculum aims of pupils responding to real-world problems and applying their problem-solving skills. They show awareness of the cross curricular nature of entrepreneurial learning. This was also acknowledged by participant L who stated that it had relevance *“not just in mathematics”*. However, not all respondents had the same understanding or definition of entrepreneurial learning. Some participants viewed the term more narrowly, focusing more on the traditional concepts of *“starting a business”*, *“making money”*, or *“designing and making a product”*.

Theme 2: Perceived Value

When looking at the perceived value that respondents expressed, there were a few (30%) respondents who referred to the relevance of entrepreneurial learning to pupils’ lives in the future. Some teachers identified that it is a *“tool for preparing pupils with real-life skills for the work place”* and appreciated that *“enterprise activities allow pupils to take ownership of their learning and demonstrate their independence”*. Although, not all participants shared the same positive outlook when discussing entrepreneurial learning in the classroom with some teachers and senior leaders calling it a *“bolt on”*, *“something else we have to fit in”* and *“an end of term activity”*. Despite a few (17%) negative attitudes towards entrepreneurial learning the

majority (65%) acknowledged its potential to promote creativity, independence and transferrable skills including respondent S who identified that it is an “ *Important aspect of the curriculum in order to support children to make progress towards the four purposes, underpinned by the integral skills*”.

Theme 3: Challenges

Even with many (91%) of the participants recognising the value of entrepreneurial learning, there were still practical challenges that emerged as part of the findings. One of the more common barriers to implementation was teachers' varying levels of confidence and ability in teaching entrepreneurial skills. Participant J noted that “*there is a range of abilities and confidence in relation to teachers feeling prepared to teach entrepreneurial skills,*” suggesting that not all staff feel equipped to take on this element of the curriculum. One teacher expanded on this further by expressing uncertainty about how to plan for progression in entrepreneurial learning, and how to assess it meaningfully without reducing the process to a “*tick-box exercise*.” This lack of confidence was often linked to limited access to professional development opportunities. Participant A explained, “*Professional learning is needed to support practitioners to plan, implement and assess progression in this area.*”

Beyond confidence, several teachers also reflected on their willingness and capacity to deliver entrepreneurial learning in a purposeful way. Some (21%) expressed concern that it is often treated as an “*add-on,*” with pressure to “*cover everything*” leading to shallow delivery rather than a meaningful cross curricular, in depth approach. One teacher highlighted the need to shift the mindset from coverage to

purpose, stating that *“teachers need time and space to plan this purposefully, not just squeeze it in.”*

In 34% of cases, teachers indicated that other cross cutting themes, such as diversity, relationships and sexuality education (RSE), and human rights, were viewed as more essential or important than entrepreneurial learning with it being ranked four out of five as most important in 91% of responses. When explored further at interview, these areas were seen as more measurable in terms of outcome and assessment, and directly linked to school improvement priorities. In terms of RSE, support mechanisms including visits from the school nurse and schemes of work such as Jigsaw were noted as being a way of delivering content that was accurate and age appropriate. In addition, when looking at Diversity, schools in Wales have had input from Diversity and Anti-Racist Professional Learning (DARPL). As a result, entrepreneurial learning was sometimes deprioritised, particularly when time and resources were limited. This reflects a broader tension within the curriculum, where teachers are expected to balance multiple competing priorities while still aiming to deliver meaningful, skill-based learning experiences.

To conclude, the findings of this research indicate that most teachers recognise the potential value of entrepreneurial learning when developing skills in creativity, independence and problem solving. However, there is some disparity between the understanding of what it actually involves. Some believe that it has foundations in profit making, product creation and business acumen, where others view it in broader terms, linking it to innovation, creativity, independence and active learning. Whilst there is a willingness amongst teachers to engage with entrepreneurial

learning, its implantation is hindered by a lack of confidence, limited professional development opportunities and uncertainty around assessment and progression. In addition, time pressures and curriculum demands can result in entrepreneurial learning being treated as something extra to cover, rather than embedded purposefully. There is also the suggestion that other cross cutting themes are being treated as a higher priority, with diversity and relationships and sexual education (RSE) being addressed first in school priority plans. This can then further marginalise entrepreneurial learning within everyday classroom practice.

Chapter 5 – Discussion

This chapter discusses the findings of the research in relation to existing literature on entrepreneurial learning. The research aimed to explore teachers' attitudes, values and perceptions of entrepreneurial learning, it has drawn on understanding, value and the challenges they face in implementation within the classroom. Whilst the respondents expressed a positive attitude toward entrepreneurial learning and appreciated its place in developing real world skills, creativity and independence, it did reveal a disparity between the understanding of it and highlighted some challenges to its implementation. The following chapter seeks to explore these findings in more depth, drawing on relevant literature to examine their implications on curriculum development, teaching and learning and professional development.

This research has revealed a potential disparity between the understanding teachers have, and how they define entrepreneurial learning. Some participants expressed a broad view, describing it as a process of *“developing learners’ skills, knowledge and understanding in order to turn creative ideas into actions through real-life contexts”*, which aligns closely with the Curriculum for Wales (CfW). By accomplishing this through the four purposes and the development of the integral skills, aims to support learners to become enterprising, creative contributors who are ready to play a full part in life and work (Welsh Government, 2020). Similarly, these respondents also linked entrepreneurial learning to the development of wider skills such as problem-solving, initiative and creativity as identified by Gibb (2002). He emphasised the development of entrepreneurial skills, not just as a technical or business-related skillset, but as part of a holistic and behaviour-orientated process. However, a few (34%) participants expressed a more traditional understanding, where their view of

entrepreneurial learning is more line with enterprise activity such as profit making and product manufacture. This view has a greater focus on the economic outcome rather than the development of skill. This is in keeping with the findings of Jones and Iredale (2010), who argue that entrepreneurial learning is frequently confused with enterprise education, particularly when it is not clearly differentiated in curriculum documents or teacher education. This misconception risks limiting the impact of entrepreneurial learning and supports the idea that it belongs within business studies or economic education (Moberg *et al.*, 2014).

This variation in understanding may be partly explained by the relatively recent implementation of the Curriculum for Wales and the evolving nature of the integral skills framework. Priestley and Biesta, (2013), identify that educational reforms which emphasise complex or cross-curricular competencies often require sustained professional development and cultural change within schools. Their study showed that even when policy expectation is clear at a national level, how this looks within the classroom can look different. Rae, (2010) identifies that teachers' uncertainty about what constitutes entrepreneurial learning and how it differs from other curriculum areas may reflect a need for more concrete examples, case studies, and shared language across the profession.

Overall, the findings suggest that greater clarity and consistency are needed to support teachers to fully embrace and understand entrepreneurial learning purposefully across the curriculum. This clarity could come from teacher's professional development within this area, even at initial teacher education level, clearer exemplification within curriculum documents, or greater opportunities to

share good practice within this area. By developing a shared understanding of entrepreneurial learning as a cross-curricular, skills-based approach, teachers can be better supported in fostering creativity, develop problem solving skills, and independence in their learners, as envisioned by the Curriculum for Wales (CfW).

When looking at teachers attitudes and value of entrepreneurial learning, the findings of this study suggest most teachers see the value of it, particularly when looking at the development of certain skills such as independence, creativity, critical thinking and problem solving. There was also appreciation of how entrepreneurial learning could develop learners' transferable skills and how they prepare them for real life contexts. These opinions closely link with the existing literature previously explored by Lackéus (2015) and Gibb, (2002) who define entrepreneurial learning as a way to empower learners to take initiative, collaborate and adapt to change. Participants in this study also acknowledges the relevance of entrepreneurial learning in preparing learners for the future by equipping them the skills they will need for the future. This is reflective of the thinking of Rae (2010), who emphasised the importance of developing entrepreneurial mindsets to navigate an increasingly diverse social and professional work places. Priestley and Biesta, (2013) identify that in the context of Wales' national reform agenda, entrepreneurial learning is seen as supporting the broader goals of transformative learning, fostering not only knowledge but agency, innovation and resilience. Some teachers were able to identify that entrepreneurial learning had purpose beyond traditional subject boundaries which enhances learner engagement.

However, this perceived value was not universally viewed by all participants. Some expressed concerns about how it fits into the existing demands of the curriculum and felt it was often treated as an optional “*bolt-on*” rather than a core aspect of learning. This reflects those tensions as identified by Jones and Iredale (2010), who reported that entrepreneurial learning lacks a clear place within the curriculum structure as it stands. This often leads to it being considered as an additional “*thing to do*” rather than incorporated into existing pedagogy and curriculum content. When faced with the pressures of “*covering everything*” in the curriculum, teachers may deprioritise entrepreneurial learning, despite acknowledging its potential value.

From conducting this research, it may be suggested that there is a need for a more embedded or strategic approach to entrepreneurial learning. While educators recognised its potential, there was reason to believe that without clearer curriculum guidance the delivery and impact would remain inconsistent. Moberg *et al.*, (2014), found that entrepreneurial learning is effective when fully integrated across all Areas of Learning Experiences (AOLE's), is appreciated by leaders within the setting and when teachers have quality professional development to support their understanding. Additionally, the OECD (2018) recommends that systems committed to fostering innovation in education must create space for educators to plan, collaborate, and experiment with approaches like entrepreneurial learning which was something participants within this study felt would better support them.

While this study identifies that teachers largely value entrepreneurial learning for its alignment with the goals of the Curriculum for Wales and its potential to develop learner's skillset, this value is sometimes undermined by structural and cultural

constraints. To help ensure it is realised in practice, entrepreneurial learning needs to be endorsed by leaders and teacher as a central aspect of the curriculum, with clear guidelines of how to achieve that, perhaps through some examples of where it is done well. It will also require time, and space within professional conversations and development. This is supported by Highfield, and Lee (2023), who argue that there are six key enablers for the successful implementation of entrepreneurship education, one of these being support from leadership.

Although there is some appreciation of the value of entrepreneurial learning, there are still a considerable number of challenges that are faced by educators and schools to implement it effectively within the classroom. The most prominent of these being the lack of teacher confidence, and the consistency in understanding of how to plan for progression in this area and assessment. Teachers expressed concerns about how to move beyond surface-level profit and loss or fundraising activities into purposeful, coherent activities that allow for holistic skill development. This is reflected in findings from Moberg *et al.*, (2014), who argue that many educators feel ill-equipped to design learning experiences that foster entrepreneurial mindsets due to a lack of pedagogical clarity and structured guidance. Furthermore, Ruskovaara and Pihkala (2015) highlight that without adequate professional development, teachers often struggle to see how entrepreneurial learning can be embedded across subject areas or year groups and in some cases where mixed age classes are taught together, this can be an ever-greater challenge.

In some ways, it is the limited opportunities of professional development around entrepreneurial learning that hinder the effective planning and assessment of it within

Curriculum of Wales. Some participants reported that they did not know how to assess the progression of entrepreneurial learning or were unsure of how to capture development of skills such as creativity, initiative and resilience. This is something that Lackéus (2015), further explains. He argues that traditional assessment systems often fail to accommodate the process-oriented, reflective, and experiential nature of entrepreneurial learning. As a result, teachers may either avoid engaging with it fully or reduce it to isolated activities that lack coherence or depth.

In addition to confidence and training, teachers also reported that challenges around curriculum overload and time pressures were also contributing to entrepreneurial learning being side lined. Some teachers reported that it was difficult to prioritise entrepreneurial learning within the demands of daily planning and accountability measures. This is consistent with findings from Priestley and Philippou (2018), who argue that even curricular reforms that aim to reduce some of the pressures of the previous curriculum, still bring with them high workload and competing priorities, which at the moment seem to be behaviour and Additional Learning Needs (ALN). Similarly, Fullan (2007) identifies that meaningful change in education systems requires more than structural reform; it depends on the cultural readiness of schools and the capacity of teachers to innovate.

Another key challenge identified was the competition between entrepreneurial learning and other integral skills, particularly Relationships and Sex Education (RSE) and Diversity. While these skills are also central to the Curriculum for Wales, participants often felt they were given higher priority due to their direct link to national expectations, external scrutiny and trends. Biesta, (2010) and Sahlberg, (2011)

highlight that there is reason to believe that curriculums can become narrowed and innovation side-lined when accountability pressures dominate.

Structural and cultural constraints within schools also emerged as limiting factors. Some participants felt their school culture was not always conducive to innovation or risk-taking, particularly where leadership priorities were focused on measurable outcomes. This aligns with Hannon (2006) and Jones and Iredale (2010), who emphasise that effective entrepreneurial education requires a whole-school ethos that embraces experimentation, learner autonomy, and failure as a learning process. Without such a culture, even the most motivated teachers may lack the support and confidence to implement entrepreneurial learning in meaningful ways.

This study suggests that entrepreneurial learning depends on more than teacher enthusiasm, it requires a whole school ethos that values creativity and innovation. Although Curriculum for Wales provides a strong foundation from where entrepreneurial learning can flourish, its ambitions can only be realised if teachers are given time, space and professional development opportunities to really facilitate this type of pedagogy.

The findings of this study have several significant implications for classroom practice, professional learning, school leadership, and policy implementation. Although teachers largely value entrepreneurial learning and recognise its relevance to the Curriculum for Wales (CfW), there are substantial challenges to its consistent and purposeful delivery. These include variation in teachers' understanding, a lack of confidence in planning and assessment, and external pressures that do not prioritise

creativity and innovation. In order to address these challenges, there needs to be a co-ordinated response across different areas of the education system.

When looking at classroom practice, the study highlights the need for a more consistent, shared understanding of what entrepreneurial learning means in the context of the new curriculum. The lack of clarity among teachers echoes research by Jones and Iredale (2010) and Fayolle and Gailly (2008), who argue that differing interpretations of entrepreneurial learning often undermine its pedagogical coherence. Teachers require accessible, practical guidance that tells them how to implement entrepreneurial learning into the classroom. This is particularly crucial given the emphasis on teacher autonomy within the Curriculum for Wales, which increases the responsibility placed on individual educators to interpret and enact reform. Priestley and Philippou (2018) note that without structured support, autonomy can become a burden, leading to fragmentation rather than innovation.

A central, imperative finding of this study is the need for professional learning. Participants reported a lack of confidence in both delivering and assessing entrepreneurial learning, which reflects wider findings in literature. Ruskovaara & Pihkala, (2015) found that educators often feel underprepared for skills-based or competency-led education. Therefore, high-quality professional development should be a priority, ideally structured around collaborative inquiry, reflective practice, and modelling of entrepreneurial pedagogy in action (Kennedy, 2014). In addition, fostering 21st-century competencies like entrepreneurship requires not only knowledge transfer but also experiential, project-based learning approaches that many teachers need explicit support to adopt (OECD, 2018).

School leaders also play a critical role in embedding entrepreneurial learning into school practice. As Hannon (2006) and Gibb (2002) argue, a school's culture and ethos significantly shape how innovative pedagogies are embraced or resisted. In this study, some teachers described feeling pressured to focus on more measurable outcomes, particularly in literacy, numeracy, and digital competence. This highlights the ongoing challenge of accountability versus creativity (Biesta, 2010; Sahlberg, 2011). For entrepreneurial learning to really find its place in modern day curriculum, school leaders must create space for risk-taking, experimentation, and cross-curricular planning. As Hargreaves and Shirley (2009) put forward, sustainable change is more likely when leadership fosters professional trust and collective agency rather than compliance.

At policy level, the findings of this study suggest that while the Curriculum for Wales provides a progressive framework, there remains a need for further support in realising entrepreneurial learning. Research on curriculum reform consistently shows that top-down reforms often fail when practitioners are not adequately supported to make sense of new expectations (Priestley & Biesta, 2013 and Ball et al., 2012). Clearer progression frameworks, exemplification materials, and practical case studies would support teachers in recognising how entrepreneurial skills develop over time and how they can be embedded across AoLEs. Additionally, ensuring that entrepreneurial learning is recognised within inspection, planning, and assessment guidance could help shift perceptions of it being an add-on rather than an integral element of curriculum reform (Lackéus, 2015; Welsh Government, 2020).

Finally, these implications must be understood in the broader context of educational change. As Fullan (2007) argues, deep, lasting change depends not only on new structures but on new mindsets and professional cultures. Entrepreneurial learning requires teachers to adopt facilitative roles, shift towards more learner-led pedagogies, and embrace uncertainty—all of which demand time, support, and collective commitment. Without this, there is a risk that entrepreneurial learning remains a policy ideal rather than a classroom reality.

The findings of this research highlight both enthusiasm for and challenges in adopting entrepreneurial learning. In response, a series of recommendations have been developed to reflect on current practice and to plan for potential progress. As shown in Table 2.1, these recommendations reflect the voices of educators and are intended to inform policymakers, school leaders, and teacher educators.

Table 2.1 – Recommendations for supporting entrepreneurial learning in schools

Recommendation	Rationale	Stakeholder involvement
Provide targeted Professional learning on entrepreneurial learning	Teachers expressed a lack of confidence and clarity in delivering entrepreneurial learning.	Welsh Government, Local Authorities, Teacher Training Institutions
Develop clear national guidelines and definitions for entrepreneurial learning	Conceptual ambiguity was a recurring theme; teachers need a shared understanding to ensure consistency in delivery.	Welsh Government, Curriculum Developers
Integrate entrepreneurial learning into existing subjects	Teachers are open to embedding entrepreneurial learning but feel time-constrained.	School Leadership Teams, Curriculum Coordinators
Facilitate peer-sharing and school networks	Interviewees valued informal sharing of good practice across schools.	Local Education Consortia, Schools

As outlined in Table 2.1, the recommendations focus on the need for targeted professional learning which emerged as a consistent theme across both the

questionnaire and interview responses, indicating that many teachers are open to entrepreneurial learning but feel underprepared to deliver it effectively. This provides an opportunity for schools and educators to work together in developing their curriculum further and to further explore how entrepreneurial learning could look like in their school. This could be achieved by greater school to school working where schools who are more confident could share and support other schools to embed entrepreneurial pedagogy. Further research through enquiry projects could also give space and time for practitioners to experiment within their classrooms, talk to learners and other stakeholders to find out what would work in their context and share this practice wider than their own setting.

However, the call for clearer national guidance and definitions reflects the conceptual ambiguity still being felt by practitioners. This suggests that a shared understanding of entrepreneurial learning is still developing. The recommendation to integrate entrepreneurial learning into existing subject areas responds directly to time and workload pressures cited by teachers, while proposals for resource allocation and peer-sharing opportunities acknowledge the importance of institutional support and collaboration. There is also opportunity here for greater emphasis for entrepreneurial learning to be endorsed by stakeholders in the same way as RSE or DARPL. Resources, like those from Careers Wales, are there to support teachers and school leaders to develop classroom practice and audit their schools progress towards entrepreneurial learning. However, educators did not have the same practical knowledge of these frameworks as they did other resources or scheme to support other cross cutting themes. This indicates that in some cases entrepreneurial learning is not held in the same regard, despite the knowledge of the skills it can help

develop in learners. These recommendations are therefore intended not only to bridge gaps in confidence and understanding but also to create more practical, sustainable conditions for implementing entrepreneurial approaches in schools and to promote better outcomes for the learners in our schools.

Chapter 6 – Conclusion

This research set out to explore teachers' attitudes, values, and understandings of entrepreneurial learning within the context of the Curriculum for Wales. As education in Wales undergoes significant reform, developing learners as enterprising, creative contributors has never been more prominent. Entrepreneurial learning, as positioned within this new curricular framework, plays a central role in fostering the creativity, resilience, problem-solving and critical thinking needed for learners to thrive in a changing world. Yet this study has shown that while the principle of entrepreneurial learning is broadly valued by teachers, its realisation in practice is shaped by a variety of opportunities and constraints. The findings revealed that teachers hold a wide range of interpretations of what entrepreneurial learning means, from narrow conceptions focused on business and enterprise tasks, to broader understandings that link entrepreneurial learning with creativity, innovation and real-world application. While some teachers were able to connect this to the aims of the Curriculum for Wales, others lacked confidence in how to plan, implement, or assess this area effectively. A common concern was the lack of clarity around progression and meaningful assessment, which many teachers felt created a barrier to fully embracing entrepreneurial learning.

Another key finding was that although most teachers recognised the value of entrepreneurial learning, it was often perceived as an '*add-on*' to core responsibilities rather than an integral part of the curriculum. These conflicting demands were also highlighted when other cross cutting themes were deemed more important than Careers and Work-Related Experiences. Some respondents reported that themes like Diversity were more strongly emphasised within School Development plans or

other school accountability structures. Without adequate time, professional development, and whole-school support, many teachers struggled to embed entrepreneurial learning in a way that aligned with its intended purpose. Therefore, the findings suggest that for entrepreneurial learning to be fully realised within the Curriculum for Wales, a number of systemic changes are needed including clearer exemplification and progression guidance; investment in sustained, collaborative professional learning; and school leadership that actively values and prioritises creativity and innovation across the curriculum. These findings align with wider research on curriculum reform (Priestley & Biesta, 2013; Fullan, 2007), entrepreneurial education (Lackéus, 2015; Jones & Iredale, 2010), and teacher agency (Kennedy, 2014; Ruskovaara & Pihkala, 2015), and contribute to the growing understanding of how ambitious curriculum intentions can become embedded in practice.

While this study offers some insight into current understanding of entrepreneurial learning, there are some limitations that need to be considered when viewing the findings. In terms of the sample, it was relatively small and context-specific. This study gives an overview of teachers attitudes and values within a small part of Wales, as a result the views expressed within this study may not be representative of educators across Wales. As part of this study, participants were able to volunteer to contribute. This means that potentially their involvement within the study may have been due to their existing interest in the topic, rather than collecting the views of teachers who had no interest, therefore findings may be more positive than if a larger cross section were involved within the research.

Future research could explore how entrepreneurial learning is understood and enacted across a broader and more diverse range of schools in different parts of Wales. This could include further longitudinal studies that track changes over time. It would also be valuable to examine learner perspectives and the impact of entrepreneurial pedagogies on student outcomes, engagement, and the development of skills.

Ultimately, this research highlights both the promise and the complexity of entrepreneurial learning in the Curriculum for Wales. Teachers are key agents in making this vision a reality, but they must be equipped, supported, and empowered to do so. As Wales moves forward with its curriculum reform agenda, listening to and learning from the experiences of teachers will be essential in shaping a system that not only values entrepreneurial learning in principle but realises its potential in practice.

Chapter 7 – Critical reflection

As both a researcher and practitioner, I approached this study not only as an academic exercise but as a means of deepening my understanding of how educational change is interpreted at ground level and to further investigate the values and attitudes of teachers within my cluster towards entrepreneurial learning. The Curriculum for Wales promotes the development of learners as enterprising, creative contributors, yet I was aware through my own practice that this area was often less developed or understood in some schools. By engaging with this research, it has allowed me to reflect critically on both systemic issues and my own role in curriculum implementation.

One of the most significant areas of learning was realising how varied teachers' understandings of entrepreneurial learning were, and how these interpretations were shaped by individual experience, school ethos, and subject specialism. Initially, I assumed there would be greater alignment with the curriculum's expectations. This realisation reminded me of Schön's (1983) concept of the "reflective practitioner"—how professionals constantly reshape their understanding through lived experience. Engaging in qualitative research helped me adopt this reflective stance, encouraging deeper listening and interpretation, and challenging me to suspend assumptions. The process also reinforced the value of practitioner inquiry, which Cochran-Smith and Lytle (2009) describe as a powerful means of generating knowledge from within the profession. It prompted me to view everyday experiences through a more critical lens, and consider how systemic reform requires not just compliance with policy, but deep professional sense-making.

Choosing semi-structured interviews allowed for rich, narrative-style responses, and I was struck by how open participants were in sharing their perspectives. However, I was also aware of my position as an insider researcher. As Mercer (2007) points out, by being in an inside position can provide access and trust, but may also introduce bias or limit critical distance. In hindsight, I could have used additional methods such as observation to triangulate data and provide a broader picture of learning opportunities that are ongoing in schools and to observe teaching methods.

This dissertation has significantly influenced my development as both an educator and a researcher. It strengthened my understanding of how curriculum reform is experienced on the ground, and it gave me greater confidence to question assumptions and engage critically with policy. Brookfield (1995) describes critical reflection as the process of seeing our practice through four lenses, our own experiences, the views of students, colleagues, and literature. This study provided space to do just that, as I considered how entrepreneurial learning is perceived not only by myself, but by my peers and in policy discourse. Professionally, this has reinforced my belief in the value of teacher voice and practitioner-led research. I now feel more committed to embedding reflective inquiry into my daily practice and supporting colleagues in navigating curriculum change. The experience also highlighted the power of research to inform and challenge, rather than to simply document practice.

If I were to undertake a similar study in future, I would consider widening the sample to include a student perspective and possibly explore a longitudinal change in teacher attitudes as the Curriculum for Wales becomes more embedded. I would

also be more proactive in seeking collaborative research opportunities, as Kemmis (2009) argues that practitioner inquiry is most impactful when situated within communities of practice that support critical dialogue. Ultimately, this dissertation journey has reinforced the idea that reflective practice is not a one-off process, but an ongoing commitment to professional growth and critical engagement. It has deepened my understanding of the complex realities of curriculum implementation and has helped me to reframe challenges as opportunities for inquiry, learning, and leadership.

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Appendices

Appendix 1 – Ethics form



PG2 / E1 FORM

APPLICATION FOR ETHICAL APPROVAL

RESEARCH STUDENTS This form is to be completed by the student within SIX months for full-time students and TWELVE months for part time students, after the commencement of the research degree or following progression to Part Two of your course. Once complete, submit this form via the MyTSD Doctoral College Portal at (https://mytsd.uwtsd.ac.uk). This document is also available in Welsh.
RESEARCH STAFF ONLY All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk, with the title 'Ethical Approval' followed by your name.
STUDENTS ON UNDERGRADUATE OR TAUGHT MASTERS PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of research activity: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

Please read the notes for guidance before completing ALL sections of the form.

This form must be completed and approved prior to undertaking any research activity. Please see Checklist for details of process for different categories of application.

SECTION A: About You (Principal Researcher)

1	Full Name:	Kay Hughes			
2	Tick all boxes that apply:	Member of staff:	☐	Honorary research fellow:	☐
	Undergraduate Student	☐	Taught Postgraduate Student	☐	Postgraduate Research Student ☒
3	Institute/Academic Discipline/Centre:	University of Wales Trinity St David			
4	Campus:	SA1			
5	E-mail address:	1815896@student.uwtsd.ac.uk			
6	Contact Telephone Number:	07528234459			
For students:					

7	Student Number:	1815896
8	Programme of Study:	National MA Education
9	Director of Studies/Supervisor:	Alison Evans

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☒	NO	☐
					Date
2	If Yes, please indicate source of approval (and date where known): <i>Approval in principle must be obtained from the relevant source prior to seeking ethical approval</i>	Research Degrees Committee	☐		
		Institute Research Committee	☐		
		Other (write in) Alison Evans	☐		11/2023

SECTION C: Internal and External Ethical Guidance Materials

Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, location-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines. You may add rows to this table if needed.	
1	UWTSD Research Ethics & Integrity Code of Practice ☒
2	UWTSD Research Data Management Policy ☒
3	BERA (2018) ☒

SECTION D: External Collaborative Research Activity

If there are external collaborators then you should gain consent from the contact persons to share their personal data with the university. If there are no external collaborators then leave this section blank and continue to section E.

1	Institution	
2	Contact person name	
3	Contact person e-mail address	
4	Is your research externally funded?	YES ☐ NO ☐
5	Are you in receipt of a KESS scholarship?	YES ☐ NO ☐
6	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Voluntary YES ☐ NO ☐
7		Employed YES ☐ NO ☐
8	Is the research being undertaken within an existing UWTSD ~~Athrefa~~ permission question	YES ☐ NO ☐

	Professional Learning Partnership (PLP)?	below does not need to be answered.				
9	Has permission to undertake the research has been provided by the partner organisation?	(If YES attach copy) If NO the application cannot continue	YES	☐	NO	☐

Where research activity is carried out in collaboration with an external organisation

10	Does this organisation have its own ethics approval system?	YES	☐	NO	☐
	If Yes, please attach a copy of any final approval (or interim approval) from the organisation (this may be a copy of an email if appropriate).				

SECTION E: Details of Research Activity

1	Indicative title:	To what extent does entrepreneurial learning have on pupils' independence and resilience in problem solving?		
2	Proposed start date:	15.11.2023	Proposed end date:	01.09.2024
	Introduction to the Research (maximum 300 words per section) Ensure that you write for a <u>Non-Specialist Audience</u> when outlining your response to the points below: <i>Purpose of Research Activity</i> <i>Proposed Research Question</i> <i>Aims of Research Activity</i> <i>Objectives of Research Activity</i> Demonstrate, briefly, how <u>Existing Research</u> has informed the proposed activity and explain <i>What the research activity will add to the body of knowledge</i> <i>How it addresses an area of importance.</i>			
3	Purpose of Research Activity The aim of this research is to explore if entrepreneurial learning can enhance pupil's independence and resilience when solving real life problems. It aims to observe how pupils encounter, and overcome problems when faced with uncertainty and to observe what happens when the pupils are given increased opportunities to partake in entrepreneurial learning. The need to prepare learners for the world of work and to take their place in society was an area of focus in the review of the Curriculum led by Professor Graham Donaldson. Donaldson (2015). This highlighted that the needs of employers are vital to acknowledge if educators are to prepare learners for a smooth transition into a place of work. Since then, Careers and Work-related Experience (CWRE) has become one of five cross cutting themes in Curriculum for Wales. From the age of three, pupils are encouraged to engage with work related experiences designed to inspire learners to develop resilience and to be adaptable in response to challenges, choices and responsibilities in work and life (Careers Wales, 2022). From research conducted by McGonagle and Zicka, (2020), and Baird, and Parvatham, (2019) it is found that the highest requested skills from employers were the ability to work in a team, self-motivation, verbal communication, problem solving, creativity and initiative. Careers Wales (2022) pick up on many of the same skills required but also add leadership skills and planning to their list of requested skills from employers. The aim of this research to explore how effective problem based entrepreneurial learning is in developing pupil's resilience.			

	Baird, A.M. and Parvato, S. (2019), "Employers' ratings of importance of skills and competencies college graduates need to get hired: Evidence from the New England region of USA", <i>Education + Training</i>, Vol. 61 No. 5, pp. 622-634. https://doi.org/10.1108/ET-12-2018-0250 Careers in the Curriculum (2022) Careers Wales. Available at: https://careerswales.gov.wales/education-and-teaching-professionals/careers-in-the-curriculum (Accessed: 03 November 2023). Donaldson, G. (2015). <i>Successful Futures: Independent review of curriculum and assessment arrangements in Wales</i>. Caerdydd: Llywodraeth Cenedlaethol Cymru. Careers Wales (2023) Careers and work-related experiences (CWRE). Welsh Government. Available at: https://careerswales.gov.wales/sites/default/files/images/careers-and-work-related-experiences-toolkit_2.pdf (Accessed: 03 November 2023). McGuraghe, D. and Zicka, L. (2020), "Employability skills for 21st-century STEM students: the employers' perspective", <i>Higher Education, Skills and Work-Based Learning</i>, Vol. 10 No. 3, pp. 591-606. https://doi.org/10.1108/HESWBL-10-2019-0148
4	Research Question Does problem solving through entrepreneurial learning improve pupils' resilience?
5	Aims of Research Activity This research will take form as action research. Cohen et al, (2007) states that action research is a powerful tool for change and improvement at a local level. The enquiry will be of small scale and will monitor the effects of an intervention on the learners in the setting. The research aims to explore if pupil's resilience can be developed through the use of problem based entrepreneurial activities. By giving pupils regular opportunities to participate in entrepreneurial learning through authentic problems, it aims to explore the impact on pupils' resilience to problems encountered through the production of a product or through the planning of activities that will be pupil inspired and led. This will be explored through the perspective of the teachers and teaching assistants within the setting and the pupils themselves. The cyclical process of action research developed by Kurt Lewin works through a process of planning, action, observing and evaluating (Dickens and Watkins, 1999:135). It will be this process that allows the planning for the entrepreneurial task within the research setting, the action of carrying out the tasks and experiences within the school setting that will give opportunity for observation and evaluation. McTaggart (1997) suggests that the researcher should not just see this cycle as a one-off entire project, but to start with the collection of some general data before planning for action. Therefore, an initial learning experience will be conducted with the learners to provide a base line observation to evaluate current levels of resilience before planning the next to evaluate if the skills learned are developed from learning opportunity to opportunity. Cohen, L., Manion, L. and Morrison, K. (2007) <i>Research methods in education</i>, Routledge eBooks. Dickens, L. and Watkins, K. (1999) 'Action research: Rethinking Lewin', <i>Management Learning</i>, 30(2): 127-140. McTaggart, R. (1997) 'Guiding principles for participatory action research', in R. Taggart (ed.), <i>Participatory Action Research</i>. Albany, NY: State University of New York Press.
6	Objectives of Research Activity - To explore the impact of entrepreneurial learning on pupil's resilience. - To observe and describe any progress in skills made by pupils during the entrepreneurial learning opportunities. - To observe the effectiveness of problem-based learning through entrepreneurial opportunities.
	Proposed methods (maximum 600 words) Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed. You do not need to

	justify the methods here, but should instead describe how you intend to collect the data necessary for you to complete your project.
7	The research proposed in this document is largely exploratory in its nature. Gray (2022) defines this as a method that aims to explore what is happening and to ask questions about it. As Saunders et al. (2012) identifies this can be achieved by talking to experts in the field, people from current businesses or people who had held enterprising activities in the community. Alongside this, some interpretive studies will also be used to explore people's experiences. This multi method approach will be used to best answer the questions presented within this paper. It will also facilitate triangulation, the ability to cross reference one source of data with another with aim to cross validate findings (Clark, 2021). Moran-Ellis et al (2006) identify how triangulation can enable the researcher to cross check findings from both qualitative and quantitate investigation and to balance out any potential weaknesses in each data collection method. This research will mainly use qualitative methods to develop deep insight into the effects of entrepreneurial learning on skills. Although some quantitative data will also be collected at key points through the research process. Qualitative methods can be viewed as less valid and reliable as quantitative methods however, it can also give a deeper understanding as to how and why things happen, and incorporates people's motivations, emotions and interactions. Miles et al (2019) identifies that it is the researcher's role to gain a holistic overview of the study and to understand the ways in which people act. This is why group interviews, observations, photographs and a research log will be conducted throughout the time of this research. Photographs of learners who do not wish to be included will not be used. It will not only help to monitor any potential progress or regression made by the learners, but aims to dive deeper into their actions, thoughts and ideas. Ideas around how the research will take place, including how, themes, topics and ideas is very open to pupil voice and will be constructed with the pupils. The pupils will be given a problem at the beginning of the learning from a resource that has been specifically made by the researcher for this document. This is to make the research more problem based than perhaps is offered by other entrepreneurial resources available currently. This will offer some structure to the process but it is intentional to leave the structure as flexible as possible to give as much opportunity for learning and action to happen naturally. This is why qualitative data collection methods best suit the needs of this research because the researcher can discuss what is being seen in a true learning context During the process of this research the following methods may be used, • One to one semi structured interview with teaching staff to assess and discuss observed changes in behaviour and thinking. • Focus group structured and semi unstructured interviews with learners pre and post learning experience to further explore the pupil's perspective of what skills they are developing through the learning experiences. • Questionnaires provided to teaching professionals to discuss their thoughts on the pupils' progress or development in the skills being observed through this research. • Observations of pupils during learning experiences. Observations to be conducted through the planning, creating, designing, producing and evaluation stages of the development process to observe when and how pupils demonstrate the skills being observed and monitored. The Leuven scale could be utilised to monitor <u>well being</u> and engagement with the tasks. • Spider graphs for pupils to measure their own skills levels in resilience and independence. Pupils will measure themselves on a spider graph 0-10 on where they think their current level is for identified skills at the beginning of the research process and then at the end to monitor pupil perspective of effectiveness. 0 will be identified as having no ability to demonstrate this skill, and 10 being able to confidently demonstrate these skills in a range of situations. • Digital research journal/log will be kept throughout the duration of this research project to document findings.
	Location of research activity

	Identify all locations where research activity will take place.
8	All research will be conducted in one primary school in Wales.
	Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants. If you live in the country where you will do the research then please state this.
9	All research will be conducted in the United Kingdom. There are no specific ethical issues raised by local context or vulnerabilities of participants.

10	Use of documentation not in the public domain: Are any documents NOT publicly available?	NO	☒
		YES	☐
11	If Yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with the current data protection law of the country in question and that of England and Wales. <i>(this box should expand as you type)</i>		

Does your research relate to one or more of the seven aims of the Well-being of Future Generations (Wales) Act 2015?		YES	NO
12	A prosperous Wales	☐	☒
13	A resilient Wales	☒	☐
14	A healthier Wales	☐	☒
15	A more equal Wales	☒	☐
16	A Wales of cohesive communities	☐	☒
17	A Wales of vibrant culture and thriving Welsh language	☒	☐
18	A globally responsible Wales	☐	☒
19	If YES to any of the above, please give details: The focus of this research is about how pupils can increase their resilience as learners it also links with the aims of creating a nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change. The research aims to look at how communities can create solutions to problems to create outcomes for a better future and take a more joined-up approach. The problems presented within the entrepreneurial resource will enable learners to think more widely about their place in Wales and their local community and how they can create a better place for them to live now and for the future.		

SECTION F: Scope of Research Activity

	Will the research activity <u>include</u> :	YES	NO
1	Use of a questionnaire or similar research instrument?	☒	☐
2	Use of interviews?	☒	☐
3	Use of focus groups?	☒	☐
4	Use of participant diaries?	☐	☒
5	Use of video or audio recording?	☐	☒
6	Use of computer-generated log files?	☐	☒
7	Participant observation with their knowledge?	☒	☐
8	Participant observation without their knowledge?	☐	☒
9	Access to personal or confidential information without the participants' specific consent?	☐	☒
10	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☒
11	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☒
12	Investigation of participants involved in illegal activities?	☐	☒
13	Use of procedures that involve deception?	☐	☒
14	Administration of any substance, agent or placebo?	☐	☒
15	Working with live vertebrate animals?	☐	☒
16	Procedures that may have a negative impact on the environment?	☐	☒
17	Other primary data collection methods. Please indicate the type of data collection method(s) below.	☐	☒
	Details of any other primary data collection method: (this box should expand as you type)		

If NO to every question, then the research activity is (ethically) low risk and may be exempt from some of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

If there are no participants then do not complete this section, but go directly to section H.

	Who are the intended <u>participants</u> :	YES	NO
1	Students or staff at the University?	☐	☒
2	Adults (over the age of 18 and competent to give consent)?	☒	☐
3	Vulnerable adults?	☐	☒
4	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☒	☐
5	Prisoners?	☐	☒

6	Young offenders?	☐	☒
7	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☒
8	People engaged in illegal activities?	☐	☒
9	Others. Please indicate the participants below, and specifically any group who may be unable to give consent.	☐	☐
Details of any other participant groups:			

Participant numbers and source	
Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?	
10	How many participants are expected? 28 pupils under the age of 18 where parent/carer permission will be requested. 5 teaching staff
11	Who will the participants be? Pupils at the school Teaching staff at the school
12	How will you identify the participants? Pupils will be randomly numbered 1-28 and identified by P1, P2 etc. Teachers will be allocated a random number and will be identified as T1, T2 etc. As the school this is being conducted in is a small school, there are only three teaching staff and two teaching assistants in the school, so all staff will be invited to participate in the research. Pupils will be identified by random selection after the first entrepreneurial task. Quota sampling will be utilised to effectively get a cross section of pupils across the age groups.

Information for participants:		YES	NO	N/A
13	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
14	Will you tell participants that their participation is voluntary?	☒	☐	☐
15	Will you obtain written consent for participation?	☒	☐	☐
16	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
17	If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐
18	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
19	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
20	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
21	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
22	If NO to any of above questions, please give an explanation			
(this box should expand as you type)				

Information for participants:		YES	NO	N/A
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24	Will participants be paid?	☐	☒	☐
25	Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
26	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
27	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
28	If YES to any question, please provide full details			
<i>(this box should expand as you type)</i>				

SECTION H: Anticipated Risks

Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.			
1	Full risk assessment completed and appended? Yes ☐ No ☒		
2	Risks to participants For example: sector-specific health & safety, emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information <table border="1" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> Risk to participants: 1. School policies relating to health and safety and child and adult protection will be followed at all times. There may be occasions where participants may display discomfort or emotional distress during the entrepreneurial learning or during conversations with the researcher. 2. Additional expectation or responsibility felt by participants because of the research being conducted. Extra time spent involved in activities within the research such as interviews and questionnaires. </td> <td style="width: 50%; vertical-align: top;"> How you will mitigate the risk to participants: If emotional distress is experienced the participant will be reminded that they can withdraw from the research at any time. Opportunities for debriefing will take place so that participants' can be offered additional support if required or opportunities for discussion. This will enable the motivation from participants' to be monitored also. Meetings, questionnaire and interviews will be kept at a timely manner and not be too long or unnecessary. Participants will be reminded that they can withdraw at any time. These will be conducted within working hours of school and will not require any outside workload from the normal school day. </td> </tr> </table>	Risk to participants: 1. School policies relating to health and safety and child and adult protection will be followed at all times. There may be occasions where participants may display discomfort or emotional distress during the entrepreneurial learning or during conversations with the researcher. 2. Additional expectation or responsibility felt by participants because of the research being conducted. Extra time spent involved in activities within the research such as interviews and questionnaires.	How you will mitigate the risk to participants: If emotional distress is experienced the participant will be reminded that they can withdraw from the research at any time. Opportunities for debriefing will take place so that participants' can be offered additional support if required or opportunities for discussion. This will enable the motivation from participants' to be monitored also. Meetings, questionnaire and interviews will be kept at a timely manner and not be too long or unnecessary. Participants will be reminded that they can withdraw at any time. These will be conducted within working hours of school and will not require any outside workload from the normal school day.
Risk to participants: 1. School policies relating to health and safety and child and adult protection will be followed at all times. There may be occasions where participants may display discomfort or emotional distress during the entrepreneurial learning or during conversations with the researcher. 2. Additional expectation or responsibility felt by participants because of the research being conducted. Extra time spent involved in activities within the research such as interviews and questionnaires.	How you will mitigate the risk to participants: If emotional distress is experienced the participant will be reminded that they can withdraw from the research at any time. Opportunities for debriefing will take place so that participants' can be offered additional support if required or opportunities for discussion. This will enable the motivation from participants' to be monitored also. Meetings, questionnaire and interviews will be kept at a timely manner and not be too long or unnecessary. Participants will be reminded that they can withdraw at any time. These will be conducted within working hours of school and will not require any outside workload from the normal school day.		
3	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities N/A		
4	Risks to the investigator For example: personal health & safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest		

	Risk to the investigator: 1. Research bias. It is acknowledged that the researcher may have views and opinions on the subject matter that may subconsciously influence data analysis. 2. Low numbers of participants will limit the extent to which data can be generalised. 3. Compromised reputation and risk of complaint should I not conduct myself in a professional manner.	<i>How you will mitigate the risk to the investigator:</i> Discussions with participants will be clarified so the intended message of what they are saying is included within the research material and not what the researcher thinks they are saying. The researcher intends to be mindful when analysing the data collected to be objective. Ensuring that through sampling measures there will be enough available participants should some wish to withdraw from the process. Positive messages of the value of research should be made explicit to potential participants to achieve high uptake in engagement. Participants will be clearly directed to complaints procedure should any misconduct occur at any point through the research. Participants will be made aware of their right to withdraw and from debriefing meetings, opportunity for participants to express their opinions and feelings about the research will be given. Ethical considerations will be at the forefront throughout the research and BERA (2018) guideline will be maintained at all times.
5	University/institutional risks For example: adverse publicity, financial loss, data protection	
	Risk to the University: 1. Potential risk of data protection breaches if items are not securely stored. 2. Reputational damage if the researcher does not conduct themselves in a professional manner and this reflecting negatively on the University.	<i>How you will mitigate the risk to the University:</i> The university will be informed at all points throughout the research. Data will be securely stored on a cloud-based storage by password and two factor authentications. Ethical considerations will be at the forefront throughout the research and BERA (2018) guideline will be maintained at all times.
6	Environmental risks For example: accidental spillage of pollutants, damage to local ecosystems	
	Risk to the environment: 1. Potential risk to the environment by being careless with resources used within the projects or not disposing of materials carefully.	<i>How you will mitigate the risk to environment:</i> Where possible the children will use the reduce, reuse, recycle mantra when deciding on what materials to use. Consideration to using recyclable materials where possible will be given when creating potential products and discussion with the learners about their impact on the environment when creating solutions to the problems presented. All materials after the projects will be disposed of either through recycling or through suitable means. One of the projects presented to the children will focus solely on sustainable futures.

Disclosure and Barring Service

	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A
7	Does your research require you to hold a current DBS Certificate?	☒	☐	☐
8	If YES, please give the certificate number. If the certificate number is not available please write "Pending"; in this case any ethical approval will be subject to providing the appropriate certificate number.	001813211445		

SECTION I: Feedback, Consent and Confidentiality

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when? Regular debrief will take place after each final learning experience and then at the end of the final project a concluding feedback will be given.
2	Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation. A letter will be disseminated to all potential participants via email outlining the aims and objectives of the research and the methods that will be conducted. Within the letter will be an electronic link where parents and carers can give permission. For pupil assent a full verbal explanation will be given to the pupils of what will be happening and how they will be involved. A child friendly form will be completed where children can opt in or opt out and will have understanding that they can opt out at any future point. This will be accessible for the pupils in the research aged 4 – 11.
3	Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case. Confidentiality will be ensured at all times. All information collected will be kept secured and deleted after the award of MA has been achieved. All information will only be used for the purpose of this research. Anonymity will be ensured throughout the research process, in any written report or appendix ~~people~~ names will not be used and identification of the school will be removed from documentation. Alphanumeric labels will be used when people are identified in the report as set out earlier in this documentation.

SECTION J: Data Protection and Storage

	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?	YES	NO
1	"Personal data" means any information relating to an identified or identifiable natural person ('data subject'). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person. Any video or audio recordings of participants is considered to be personal data.	☐	X
	If YES, provide a description of the data and explain why this data needs to be collected:		
2	(this box should expand as you type)		
	Does it involve special category data (as defined by the GDPR)?	YES	NO

3	"Special category data" means sensitive personal data consisting of information as to the data subjects' – (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) physical or mental health or condition, (f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes).	☐	☒
If YES, provide a description of the special category data and explain why this data needs to be collected:			
4	 (this box should expand as you type)		

	Will data from the research activity (collected data, drafts of the thesis, or materials for publication) be stored in any of the following ways?	YES	NO
5	Manual files (i.e. in paper form)?	☒	☐
6	University computers?	☐	☒
7	Private company computers?	☐	☒
8	Home or other personal computers?	☐	☒
9	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☐	☒
10	"Cloud" storage or websites?	☒	☐
11	Other – specify:	☐	☐
12	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of backup procedures, password protection, encryption, anonymisation and pseudonymisation:		
	All stored data will be stored on a cloud-based system protected by two factor authentications for the length of this research collection. Paper based data collection in the form of the pupil's spider graph will be collected on paper and then analysed and findings will be written up onto an online document. The paper copies will be kept in a locked file cabinet until the end of the research project where the pupils will re-evaluate their learning on the same spider graph. These will then be shredded when the award of MA is achieved.		

Data Protection			
	Will the research activity involve any of the following activities:	YES	NO
13	Electronic transfer of data in any form?	☐	☒
14	Sharing of data with others at the University outside of the immediate research team?	☐	☒
15	Sharing of data with other organisations?	☐	☒
16	Export of data outside the UK or importing of data from outside the UK?	☐	☒
17	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
18	Publication of data that might allow identification of individuals?	☐	☒
19	Use of data management system?	☐	☒
20	Data archiving?	☐	☒

21	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and Data Protection Act (2018) (and any international equivalents, where appropriate):		
	(this box should expand as you type)		
22	List all who will have access to the data generated by the research activity:		
	Only the researcher (Kay Hughes) will have access to the data generated.		
23	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	Kay Hughes – Researcher		
24	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.		
	Data will be stored as outline above, either online on a cloud-based storage system or in a locked cabinet. This will only be stored for as long as needed and will only be used for the purposes of this research study. Data will not be archived as there is no requirement for this.		
25	Please indicate if your data will be stored in the UWTSd Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. (Most relevant to academic staff)		
	No		
26	Confirm that you have read the UWTSd guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	YES	☒
27	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	YES	☒

SECTION K: Declaration

The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this <u>application</u> I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/		
1	Signature of applicant:	 Date: 15.11.23

For STUDENT Submissions:

2	Director of Studies/Supervisor:	Date:
3	Signature:	

For STAFF Submissions:

4	Academic Director/ Assistant Dean:	Date:
5	Signature:	

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (where <u>appropriate</u>). ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT
☒	I understand that it is my responsibility to ensure that the <u>above named</u> research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Academic Director.

RESEARCH STUDENTS ONLY Once complete, submit this form via the MyTSD Doctoral College Portal at (https://mytsd.uwtsd.ac.uk).
RESEARCH STAFF ONLY All communications relating to this application during its processing must be in writing and emailed to pgresearch@uwtsd.ac.uk , with the title 'Ethical Approval' followed by your name.
STUDENTS ON UNDERGRADUATE OR TAUGHT MASTER'S PROGRAMMES should submit this form (and receive the outcome) via systems explained to you by the supervisor/module leader.