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An inquiry into Initial Teacher Education (ITE) students' knowledge of food and nutrition education and their role in supporting pupils in adopting health promoting behaviours.

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Submitted in fulfilment of the requirements of the
Degree of Doctor of Education (EdD)

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Abstract

Food and nutrition education (FNE) is recognised as a vital aspect of promoting health and wellbeing of learners, and, in turn, enhancing educational outcomes for them. The Health Promoting Schools initiative has been in existence for over 40 years (led by the World Health Organisation and UNESCO) and yet concerns about global health are still apparent. There appears therefore to be a misalignment between aspirations for Health Promoting Schools and outcomes for health and wellbeing as realised through professional practice in schools. Teacher education students in Scotland will have an important role in FNE in primary schools, but there is limited research into the role of Initial Teacher Education (ITE) students in relation to this aspect of the Scottish curriculum. While teacher education programmes provide foundational knowledge, the complexity of supporting learners' health promoting behaviours extends beyond simple content delivery. It encompasses exploration and understanding of professional values, ethical reasoning, and the negotiation of opportunities and constraints within educational contexts. Motivated by this gap, this research aimed to explore how ITE students understand their role in relation to FNE and the ways in which they perceive themselves as supporting pupils' capabilities to engage in health promoting behaviours.

Underpinned by the Capabilities Approach, this research adopted a qualitative, interpretivist design using focus groups and individual interviews. Themes emerging from focus groups informed the development of interview questions, allowing for deeper exploration of participants' knowledge, experiences, roles, responsibilities and perceived capabilities. The analysis of findings focused not only on what student teachers knew and did but also on the conditions and resources that shaped their ability to act meaningfully in supporting pupils' wellbeing. The findings indicate how ITE students negotiate professional responsibilities, preparedness and the structural and relational factors that influence their practice. By exploring the values, opportunities and constraints inherent in their emerging professional roles, the study highlights both the challenges and possibilities for fostering capabilities-based approaches to FNE. In doing so, it contributes to theoretical understandings of ITE, the practical development of ITE programmes and the promotion of teacher and learner flourishing in school contexts.

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Author's Declaration

I declare that, except where explicit reference is made to the contribution of others, this Dissertation is the result of my own work and has not been submitted for any other degree at the University of Glasgow or any other institution.

Evelyn McLaren

Abbreviations

BGE- Broad General Education

BTC – Building the Curriculum

CE - Council of Europe

CFE – Curriculum for Excellence

EC - European Commission

EdD- Doctorate in Education

FAO - Food and Agriculture Organization of the United Nations

FNE – Food and Nutrition Education

GIRFEC – Getting it Right for Every Child

GTCS – General Teaching Council for Scotland

HEI - Higher Education Institution

HMIe – His Majesty's Inspectorate of Education

HFSS – (Foods) High in Fat, Salt and Sugar

ITE – Initial Teacher Education

MQuITE - Measuring Quality in Initial Teacher Education

NCLB - No Child Left Behind

OECD – Organisation for Economic Cooperation and Development

PCK – Pedagogical Content Knowledge

PE – Physical Education

PEF - Pupil Equity Fund

RTA – Reflexive Thematic Analysis

SCQF – Scottish Credit and Qualifications Framework

SfPR - Standards for Provisional Registration

SHANARRI- Safe, Healthy, Achieving, Nurtured, Active, Respected, Responsible, and Included.

UNCRC- United Nations Convention on the Rights of the Child

UofG – University of Glasgow

WHO – World Health Organisation

Chapter 1: An Introduction to My Research

Poor diet and nutrition remain significant contributors to ill health, chronic disease and premature mortality in Scotland, with coronary heart disease and cancer identified as the two leading causes of death (WHO/FAO, 2003; Scottish Government, 2025). Recent findings from the Scottish Health Survey 2024 highlight ongoing challenges in dietary patterns across Scotland.

> Just over one in ten adults (11%) met the Scottish dietary goal of consuming five or more portions of fruit and vegetables per day, compared with prevalence rates between 20% and 24% between 2003 and 2021. The proportion of adults who ate no fruit or vegetables/less than half a portion remained at 3%. A mean of 2.9 portions of fruit and vegetables were consumed per day in 2024, the lowest mean recorded.
>
> (Scottish Government, 2025:21)

The survey also noted that children and young people in Scotland are not consuming enough fruit and vegetables and often have diets that are high in fat, saturated fat, salt and sugar (HFSS). These patterns not only undermine current health outcomes but also contribute to the development of long-term health risks associated with non-communicable diseases.

One dimension of this public health challenge is food insecurity. The Scottish Government defines food insecurity as encompassing “a full range of experiences from worry regarding ability to afford food, through to compromising on quality and quantity of food and experiencing hunger” (Scottish Government, 2023b: 21; Scottish Government, 2025: 77). According to the Scottish Health Survey 2024, 13% of respondents reported experiencing food insecurity. Financial constraints can limit the ability to purchase healthier foods, such as fresh fruit and vegetables, which are often perceived as more expensive or less accessible. As a result, individuals may compromise on the quality and nutritional value of food, relying more heavily on lower-cost products that are higher in fat, saturated fat, salt and sugar (HFSS). Adults in single parent households were the most likely to have reported eating less because of a lack of money or resources in the last 12 months (27%), again followed by single adult (18%) and large family (15%) households (Scottish Government, 2025: 84).

Dietary behaviours established early in life are also significant in shaping long-term health outcomes. The Scottish Health Survey 2024 notes that dietary habits learned in childhood can influence behaviour later in life, meaning that early patterns of food consumption can persist into adulthood. Where children and young people grow up in environments where healthier foods are less accessible, affordable or are not modelled, these experiences may contribute to the development of long-term eating habits that are difficult to change.

In response to these interconnected challenges, the Scottish Government has sought to adopt a more holistic and systemic approach to food and health through the Good Food Nation (Scotland) Act 2022. The Act places a statutory duty on Scottish Ministers to endorse outcomes that ensure reliable, dignified access to safe, nutritious, affordable and sustainable food, promote physical and mental health, empower communities to shape their food system and support a population that is educated about good and sustainable food. These ambitions reflect an explicit recognition that improving diet and reducing health inequalities require coordinated action across food systems, education, health and community settings. Findings from the Scottish Health Survey therefore highlight the scale and complexity of dietary challenges in Scotland, demonstrating that improving population health requires addressing both structural issues such as food insecurity and the wider social and environmental factors that shape eating behaviours.

The Scottish Government recognises that addressing health and dietary challenges cannot be achieved through health policy alone, noting that meaningful improvements in diet and health behaviours occur within the everyday environments in which people live, learn, work, and interact (Scottish Government, 2018a). Within this context, education represents a key setting for supporting wider public health objectives. Through the universal nature of schooling, schools are widely recognised as strategic sites for public health intervention (Roberts, 2012). Empirical research supports this position, with studies by Hamilton et al. (2020), Coccia et al. (2021) and Rossiter et al. (2007) demonstrating that educational environments can significantly influence health outcomes, particularly during childhood and adolescence, a critical period for establishing dietary behaviours and lifelong health habits.

In Scotland, policy frameworks position schools as health-promoting environments, emphasising their role in shaping children and young people’s understanding of food, health, and wellbeing (Scottish Government, 2018). The Scottish Government highlights that

‘schools have a pivotal role in supporting healthier dietary choices from an early age’ (Scottish Government, 2021:1). Through food education, school meal provision, and wider health promotion initiatives, schools can equip children and young people with the knowledge, skills, and capacities to navigate complex food environments and make informed dietary choices (Scottish Government, 2014; 2021). By influencing behaviours during early life, schools contribute to broader public health goals, supporting the development of healthier habits that may persist into adulthood.

Health and Wellbeing are central components of the Scottish curriculum through the Curriculum for Excellence. The Health and Wellbeing experiences and outcomes were developed in tandem with Health Promotion Guidance for local authorities and schools, demonstrating an intentional alignment to ensure that children and young people are supported to lead healthy lives (Scottish Government, 2007; Education Scotland, 2009). As articulated by Education Scotland:

> Learning in health and wellbeing ensures that children and young people develop the knowledge and understanding, skills, capabilities and attributes which they will need for mental, emotional, social and physical wellbeing now and in the future.
>
> (Education Scotland, 2009:1).

This vision is reinforced by the principles of Getting It Right for Every Child (GIRFEC) and the SHANARRI wellbeing indicators embedded within the Children and Young People (Scotland) Act 2014. Together with the National Good Food Nation Plan (2024), these frameworks reflect a strong commitment to integrated, preventative, and rights-based approaches to child health and wellbeing. Despite this alignment, however, there remains limited attention to how these policy ambitions are enacted in everyday classroom practice, particularly in areas such as food and nutrition education. This gap is shaped by factors including teacher confidence, competing curriculum priorities, time pressures, and access to appropriate training and resources. Moreover, while schools play an important role in promoting healthier behaviours, wider structural factors such as food insecurity, affordability, and the broader food environment continue to influence dietary choices, indicating that effective public health strategies require coordinated action beyond the education sector.

Situated within this holistic policy context and Scotland's ongoing public health challenges, this research focuses on food and nutrition education as a vital component of promoting lifelong positive health behaviours. While promoting health and wellbeing is recognised as a core entitlement and responsibility within Scottish education, uncertainty remains regarding which aspects teachers prioritise, the extent to which food and nutrition are meaningfully integrated across learning, and the extent to which Initial Teacher Education (ITE) equips student teachers for this responsibility. In light of Scotland's broader ambitions for a healthier, more equitable and sustainable food system, this study investigates ITE students' knowledge of food and nutrition education and their perceived role in supporting learners' capabilities to adopt health-promoting behaviours.

My Professional and Personal Journey

My aspiration to become a primary teacher began at an early age and has been the permanent focus of my professional life. I studied for a Bachelor of Education (Primary) programme at the University of Strathclyde in the early 2000s, where I began to establish the foundations of my educational philosophy and professional identity. Throughout my undergraduate studies, I developed a particular interest in physical education and early years development. I chose elective courses during my undergraduate studies that deepened my understanding of the integral role of health and wellbeing in supporting children's holistic development and gave me additional time in a primary school to plan, implement and reflect on weekly physical education lessons. These experiences, along with school and early year placements, helped me to make clearer connections between the theories and my classroom practice.

My early teaching career began in South Lanarkshire, where I worked across a range of small, medium and larger primary schools in the Larkhall and Clydesdale local authority clusters. These included varied urban and rural contexts and the professional experiences I had allowed me to refine my practice and develop expertise in physical education, health and wellbeing and outdoor learning. During this period, I led several Eco Schools and Health Promoting Schools initiatives, successfully securing awards and funding that supported school improvement and pupil engagement in sustainability and wellbeing education.

My commitment to professional growth led me to return to academic study in 2010 completing a Postgraduate Certificate in Teacher Leadership at the University of Glasgow

(UofG), followed by a Postgraduate Certificate in Middle Leadership and Management in 2012. These programmes enhanced my capacity for reflective leadership and informed my understanding of the complex dynamics of educational change. Around this time, I was appointed as a Principal Teacher in a small rural primary school with a shared headship, where I deputised as Head Teacher for part of the week. I later extended my postgraduate studies to master's level, completing an MEd in Professional Learning and Enquiry in 2014, which further developed my skills in practitioner enquiry and evidence informed practice. During my master level studies in 2013 I was offered a secondment as a Lecturer in Education with a focus on science education at the UofG. This opportunity marked a significant transition in my career, moving from classroom teaching to teacher education. This transition allowed me to combine my professional experience with an emerging interest in research informed practice. Alongside this professional shift I pursued a Diploma in Food Nutrition in 2016, reflecting my ongoing personal and professional interest in health and wellbeing education.

I took up a lecturing position at the University of Glasgow in 2019 and commenced doctoral studies at the university. This stage of my professional and educational journey reflects my sustained commitment to advancing my understanding of teacher education, health and wellbeing and professional learning. I decided that exploring student teachers' perceptions and attitudes towards food and nutrition education would be a compelling and impactful choice for my doctoral dissertation. My interest in this specific topic within the broader domain of health and wellbeing stems from the deeply personal and transformative journey that I have had as a teacher. It is also intertwined with my professional commitment to improving educational outcomes for children in schools. This research is not only an academic pursuit but also a reflection of lived experience, an experience that underpins my passion for understanding, advancing and promoting food and nutrition education within the context of initial teacher education.

From early childhood my health was marked by unexplained chronic illness. Born prematurely, I was frequently ill (with most ailments dismissed and deemed to be a consequence of my early birth). A persistent and recurring case of tonsillitis followed me throughout my life. Despite medical advice to remove my tonsils, my mother, who understood their role as a first line of immune defence, chose not to proceed with surgery. She believed that my tonsils were functioning as they should by producing an immune

response. Her decision was motivated by a desire to protect my long term health rather than remove what she saw as an important part of my immune system. However, while this decision was an attempt to be protective, it meant that the underlying cause of the repeated immune response was never fully explored. No further investigation was undertaken to identify what was triggering the inflammation or how these recurring infections related to my wider immune function and overall wellbeing. As a result, I grew up managing frequent throat infections largely on my own, without a deeper understanding of their cause, the triggers involved, or the role my immune system was playing. My family's history of ulcerative colitis, which led to the death of my maternal grandfather, was never explored or discussed in any detail and I did not make any connection between this history and my own ailments.

In my early teaching career, the physical toll of my unresolved health challenges became increasingly severe. Although I maintained full attendance at work, the cost was immense. During school holidays, the only time my body could rest, I would fall acutely ill and was often bedridden for one to three weeks at a time with debilitating stomach pain, throat and ear pain, and fatigue. The recurring pattern was predictable but remained medically unexplored. Antibiotics were prescribed without any diagnostic depth or consideration of underlying causes. This medical support was superficially reactive rather than proactive in that it provided short term relief rather diagnosing the underlying cause of the medical challenges I was experiencing.

In my late twenties I encountered a wellness organisation that offered both personal and professional development opportunities and from here I began to explore and understand the body and bodily responses more fully. By gaining knowledge on body systems, I was able to explore preventative measures to support my health. I discovered that I had a significant intolerance to dairy and a mild intolerance to gluten. Moreover, I began to connect the relationship between my dietary habits and systemic inflammation in the body. This discovery was a turning point. I began to eliminate inflammatory foods and adopt an alkaline based, whole-food diet. The results were transformative; my energy levels stabilised, my mental clarity improved and the frequent illnesses that defined my life all but disappeared. Through researching aspects of nutrition and body responses I developed a new understanding of the connection between ongoing issues with food intolerances, inflammation and autoimmune conditions such as ulcerative colitis. This gave me a new

appreciation of my family medical history and ignited my belief that nutrition is not an isolated or trivial part of life but is central to wellbeing. Following this personal discovery, I was keen to use this knowledge to bring about positive change in a professional capacity. This deeply personal journey, evolving from chronic illness to informed wellness, is the foundation of my research motivation. I am not only an academic researcher; I am also a case study in the profound impact of nutrition on human health. Through lived experience, I have come to appreciate how vital it is to understand what we consume and how our bodies respond to it. This research is therefore not an abstract academic pursuit. It is a response to my own lived reality. It represents a bridge between personal adversity and professional purpose.

In educational settings where future generations are shaped there exists a significant opportunity to support children and young people to develop the knowledge and agency to make informed dietary choices. Public advocates, such as the celebrity TV chef Jamie Oliver and more recently Joe Wicks, have played a pivotal role in catalysing conversations about food and health, and I will explain this in more detail in chapters three and four. Oliver has used his fame to reform school meals, and this has sparked awareness of the role schools can play in shaping food knowledge. His work has helped to bring attention to the range of benefits that quality nutrition, and nutrition education, can have not just in improving physical health, but in supporting academic performance, emotional regulation and long term wellbeing. His work inspired me to consider how nutrition is addressed in the Scottish education system, particularly in primary education.

My doctoral research considers the education of student teachers who will go on to teach the next generation of children. As a primary teacher and now a lecturer in education, I am uniquely positioned to continue Oliver’s advocacy from within an educational setting. Through this research project I aim to contribute meaningful knowledge in an area that I feel is under researched in Scottish education and which might support healthier educational environments and ultimately healthier lives.

Professional Significance

As a lecturer in initial teacher education and a former primary school teacher, I have observed first-hand how profoundly food and nutrition can affect learners' behaviour, concentration,

emotional regulation and ultimately can impact on overall academic achievement. These experiences have shaped a firm belief that nutrition education must be treated not as a standalone topic in schooling but as a foundation for health, wellbeing and learning. Despite growing evidence linking nutrition with cognitive function and behavioural outcomes (Roberts et al., 2022; Bourre, 2006), my experience suggests that food and nutrition education is inconsistently delivered and is under resourced. In my teaching practice I have consistently encountered a troubling disparity between what current science tells us about food and nutrition, and what learners in schools are actually taught, (I will explore this in more detail in my literature review). Curriculum resources, government guidance and popular health education materials (such as the NHS (online) Eatwell Guide) often promote overly simplistic or commercially influenced narratives. My professional perspective is that these narratives frequently lack depth, use inconsistent language, fail to reflect the latest nutritional science and do not consistently provide young people with the skills to critically evaluate their dietary choices. Consequently, I am concerned that learners may be left without the tools to make informed, health promoting decisions resulting in an educational gap with lasting implications.

Recent research by the Joseph Rowntree Foundation (2025) has identified the role that food insecurity and poor nutrition play in perpetuating cycles of poverty and limiting educational opportunities. Their findings emphasise that children from low income households are disproportionately affected by poor diet quality, which contributes not only to health inequalities but can also lead to lower academic attainment and diminished life chances. This evidence aligns closely with the work of Jenkins et al. (2021) whose systematic review demonstrates that rising food insecurity in the UK is strongly associated with austerity policies and welfare reform rather than individual choice or knowledge deficits. Both these studies show that food insecurity is structurally produced and sustained, reinforcing the need for responses that extend beyond behaviour change approaches. The Foundation (2025) has called for systemic interventions that place equitable access to nutritious food and food education at the heart of the public policy agenda. I view the Initial Teacher Education (ITE) context as a vital, under explored entry point for change as I believe teachers have the capacity to not only model behaviour but also shape curriculum implementation, influence school culture and transmit attitudes and values to their pupils. By examining how student teachers perceive food and nutrition education this study seeks to identify both the barriers and the possibilities that exist within everyday teaching practice related to food and nutrition

education. It is hoped that the findings of this study will inform how initial teacher education can more effectively support student teachers to engage critically with food, health and inequality thereby strengthening their knowledge, ethical awareness and pedagogical confidence to enact more equitable, evidence informed approaches to health and wellbeing in schools.

Navigating the Space Between Research and Practice

Building on my MEd in Professional Learning and Enquiry my decision to embark upon doctoral study would seem like a natural progression in my professional and academic journey. However, the journey was plagued with feelings doubt and imposter syndrome. My masters work fostered an appreciation for research informed practice and encouraged me to critically engage with evidence, question assumptions and explore how theory translates into meaningful change within educational contexts. Through this process, my understanding of research was both reaffirmed and extended beyond what I knew and had experienced of practitioner enquiry. I gained a refreshed appreciation that research is not an abstract or detached exercise but as a dynamic and integral component of professional practice. This was particularly important in the early stages of my development as a teacher educator and undertook the compulsory Postgraduate Certificate in Academic Practice.

Mulholland et al.'s (2023) exploration of imposter syndrome among early career academics highlights the central role of reflective practice within Postgraduate Certificate in Academic Practice (PGCAP) programmes in the UK, demonstrating how structured reflection can support professional learning and pedagogical confidence in higher education teaching, learning and assessment. Through researching the professional learning pathways in preparation for beginning the University of Glasgow PGCAP programme, I became increasingly aware of the need to develop my understanding of higher education pedagogy as distinct from my background in primary teaching. This recognition prompted reflection on the limitations of relying solely on my prior school-based experience when working within university-based teacher education. The learning from PGCAP marked the emergence of a new professional identity as a teacher educator. Engaging critically with the differences in educational settings ignited a deeper professional commitment to my transitioned role and prompted me to intentionally adapt and recontextualise my primary teaching skillset to

support the preparation of future teachers within a university setting. This involved proactively engaging in reflective practice to support my evolving identity and practice.

While the PGCAP offered an important introduction to teaching, learning and assessment in higher education, I believed doctoral study would provide a more sustained and supportive structure through which to deepen my practice, strengthen my confidence and develop the skills required for rigorous educational research.

As I embarked on the EdD process, I viewed the research journey as a submarine adventure, a metaphor for diving into uncharted depths of knowledge and exploration of the often-hidden complexities of educational practice. The submarine is equipped with the tools, systems and resources required for a purposeful journey. I considered the two years of taught courses as the preparation stage. However, the overall success of the journey also depends on collaboration, expertise and continual awareness of the surrounding environment. The ocean that consumes the submarine is vast, dynamic and sometimes unpredictable and this to me represents the research landscape: calm and reflective at times but deep, dark and challenging at others. Navigating this space requires preparation, skills, determination and adaptability.

Just as a submarine can travel both on the surface and deep beneath the water, research allows the practitioner to engage at different levels of depth and complexity. Surface exploration might reveal general patterns or observable phenomena, while diving deeper enables immersion in the lived experiences and underlying meanings that can shape educational practice. This metaphor resonates with aspects of Schön's (1983) work that conceptualises professional knowledge as dynamic, situated and developed through cycles of reflection-in-action and reflection-on-action. My engagement with the research process mirrors this iterative movement of continually surfacing for perspective and context while diving deeper to examine the complexities of professional experience. Reflective of a submarine resting motionless in the dark depths of the ocean, there have been times in my research journey when I have felt suspended in stillness with moments of stagnation brought about either by the weight of uncertainty and imposter syndrome or by the exhaustion of balancing the demands of a full-time career with growing leadership responsibilities alongside my doctoral studies.

Shulman's (1987) work on the knowledge base for teaching has also been influential in shaping my understanding of research within teacher education. His articulation of pedagogical content knowledge (PCK) highlights the interplay between what teachers know, how they teach and how learners understand. This is a framework I am familiar with as a teacher educator, but through my research I have engaged with it on a deeper level, and it has guided my reflection on how teachers' knowledge in particular in areas such as food and nutrition and health and wellbeing is constructed, enacted and supported within Initial Teacher Education (ITE).

Initially, my research interest in food and nutrition education provided a focused and meaningful context through which to examine health promoting behaviours and professional practice. However, as my thinking evolved and my engagement with data and literature deepened it became clear that this area of inquiry illuminated two broader issues. The first issue being the nature and purpose of teacher knowledge and how ITE programmes cultivate the capacity for reflective and research informed practice. The second issue being the purpose of education itself, in particular how it can be centred on principles of care and compassion and focused on developing the capacities and capabilities that enable individuals to flourish. These questions have encouraged me to consider how ITE not only prepares teachers with necessary knowledge and skills but also models and supports a philosophy of education that nurtures human potential, wellbeing and social connectedness. To return to the metaphor of a submarine journey, these philosophical and pedagogical questions represent the moments when the research submarine descends into uncharted waters and visibility is limited. Understanding the philosophical and pedagogical questions requires patience, reflection and courage as my research has helped me to reset my professional compass, refine my professional direction and reaffirm my professional purpose.

My doctoral research has directly supported my professional role and practice as MEduc Programme Leader during my engagement with quality assurance and programme redesign processes. The connection between my research and professional practice has created valuable opportunities for theoretical insights to guide practical decisions and respond to challenges. In turn this has influenced aspects of my research. As my research has evolved my practice has helped me to reframe aspects of my doctoral research in relation to the wider discourse of teacher education reform, professional learning and curriculum design. I will further explain this in my discussion, recommendations and conclusion sections. I have

learned that navigating the depths of research demands not only technical skill and theoretical understanding but also resilience, reflexivity and a commitment to ethical and purposeful exploration.

Research Question

The central concern of this research is Initial Teacher Education (ITE) students' knowledge of food and nutrition education and their perceived role in supporting learners' capabilities to develop health promoting behaviours. As part of this concern the study also examines how one Scottish Teacher Education Institution (TEI) contributes to student teachers' preparation in this area. While Scottish education policy consistently positions the child at the centre of educational practice and signposts health and wellbeing as a core priority, these aspirations are not consistently evident in educational practice or reflected in observed health outcomes. This highlights a disconnect between policy intent and lived experience. The gap between aspiration, practice and outcome raises important questions about teacher knowledge and attitudes towards food and nutrition education. This provides the foundation for this study.

The overarching research question guiding this research is:

What do Initial Teacher Education (ITE) students know about food and nutrition education, and how do they perceive their role in supporting pupils to develop health promoting behaviours?

This question seeks to explore a complex, underexplored intersection of education and health and wellbeing policy. Situating the research in relation to the theoretical concepts underpinning the Capabilities Approach requires not only the exploration of knowledge and practice but also an investigation of values, roles and the conditions under which teachers can support flourishing.

I conducted focus group and individual interviews with student participants to explore the research question through understanding their perspectives. My study considers the teaching students' preparedness to teach food and nutrition education, their values, the challenges and the wider implications of food and nutrition education for capabilities and human flourishing. This framing is designed in the hope that the research is not limited to descriptive accounts

but instead engages critically with theory, policy and practice. The findings will therefore have significance for both the scholarly literature on education and wellbeing and the professional practice of ITE providers in Scotland and beyond.

As you will read in this dissertation, my research project initially began as an exploration of student teachers' knowledge of food and nutrition education and their perspectives on their role in promoting healthy behaviours among children and young people to support flourishing. This was originally a quest to know more about and enhance food and nutrition education in Scotland. However, it evolved into a deeper recognition of the critical role that initial teacher education programmes play in enabling meaningful and impactful learning experiences. What started as a focus on food and nutrition education ultimately became a catalyst for thinking more deeply about the aim and purpose of initial teacher education, the knowledge, skills and dispositions that student teachers need to develop to be effective practitioners and how curriculum design of ITE programmes might support this. While food and nutrition education provided the initial focus of this study and remained an important empirical focus, the findings revealed wider issues relating to ITE programme design, professional responsibility, agency and capability.

Scope of the Research

The scope of this research encompasses a series of interconnected dimensions that provide the foundations for understanding the empirical data at the centre of the study. This research is concerned not only with what ITE students say about Food and Nutrition Education, but with the wider conditions that shape how they understand, experience and enact their emerging professional roles. The empirical data is considered in relation to my professional positioning as a teacher educator, the Capabilities Approach as a conceptual framework for the research as well as a theoretical lens for examining student teachers' experiences and perception, the context of teacher education and the wider social, political and structural influences on food, health and wellbeing in schools. These dimensions are an important part of the overall research process because student teachers' knowledge and intentions cannot be understood independently of the contexts in which opportunities for professional action are created, constrained and negotiated. Together, they establish the conceptual, professional and contextual conditions through which the participants' accounts can be interpreted, ensuring that the research moves beyond examining what student teachers know or do to consider what

they are able to do, why this matters and the conditions that enable or constrain their capabilities to support health-promoting behaviours.

Overview of Dissertation Structure

This chapter has introduced the research by outlining how my research focus grew from my personal and professional experiences (including my current personal and professional context as a teacher educator). It has articulated the overall aim of the research and the guiding research question and highlighted my initial concern with student teachers' preparedness to engage with food and nutrition education and their perceived role in supporting children and young people to live healthy, flourishing lives.

Chapter 2 positions the research more fully within my professional practice as a teacher educator. Through a reflexive stance it examines how my experiences, assumptions and institutional context have shaped the design and conduct of the research.

Chapter 3 outlines the theoretical context of the study, drawing on Berman and Smyth's (2015) pedagogical model to explain how Nussbaum's Capabilities Approach underpins the research. It demonstrates how the Capabilities Approach establishes an integrated philosophical framework by aligning ontological, epistemological and methodological assumptions with the aims of the study and informing the design, focus and interpretation of the research. Drawing on the Capabilities Approach as the theoretical lens, the chapter also explains how key concepts such as capability, agency, structure and responsibility are used to understand student teachers' experiences and perceptions, particularly the distinction between possessing knowledge and having genuine opportunities to act in health promoting ways.

Chapter 4 maps out the educational landscape by establishing the wider educational context within which the research is situated. It examines the political, economic and social influences shaping education across the United Kingdom, before focusing specifically on Scotland. The chapter outlines the structure of the Scottish education system and the principles underpinning its current curriculum: Curriculum for Excellence, paying particular attention to how educational purposes, equity and wellbeing are framed within national policy. It then explains the purpose and structure of Initial Teacher Education in Scotland, with a particular focus on my own institution, as an essential context for understanding the

professional preparation of teachers especially within the areas of health and wellbeing and food and nutrition education.

Chapter 5 provides a detailed examination of the broader policy and structural context shaping food, nutrition and health in the UK. Drawing on international and national evidence, the chapter explores diet and nutrition as key determinants of population health and highlights the structural failures of contemporary food systems that contribute to persistent health inequalities. It critically examines the positioning of schools as sites for health intervention, tracing the development of Health Promoting Schools and school food policy, with particular attention to the Scottish context. This chapter provides essential context for understanding the expectations placed on schools and teachers in relation to food and nutrition education.

Chapter 6 presents literature relevant to the study to explore what is currently known about food and nutrition education, health promotion in schools and the implications for teacher education. It synthesises key research, highlighting debates, tensions and gaps with consideration of teacher preparedness and professional responsibility in supporting health-based learning.

Chapter 7 outlines the methodology I adopted for the study, explaining the research design, data collection methods and analysis strategy. I also discuss the ethical considerations involved and provide a rationale for the methodological choices I made, highlighting how they align with the aims and philosophical foundations of the research.

Chapter 8 presents the findings of my study. First, I draw on data from the focus group discussions and then from the individual interviews. I have organised the findings around key themes that reflect student teachers' perspectives on, and experiences of, food and nutrition education and professional responsibility related to health promoting behaviours.

In Chapter 9, I move into a critical discussion of these findings. Drawing on the Capabilities Approach I interpret the results in relation to the literature and the original research question. I also consider the implications of the findings for initial teacher education design and practice as well as future research.

Finally, Chapter 10 concludes the dissertation by bringing together the key learnings from the research. While food and nutrition education was the initial focus, the findings revealed broader issues relating to ITE. The chapter highlights how these insights point to the need for ITE programmes to support student teachers' flourishing through capabilities as well as and their ability to foster learners' capabilities. It reflects on the limitations of the research and discusses possible implications for teacher education, policy and future research. The chapter concludes by considering the broader relevance of the research in thinking about the purpose and ethical responsibilities of teacher education.

Chapter 2: Positioning My Practice as a Teacher Educator

Introduction

Chapter 1 briefly outlined the personal and professional experiences that shaped my interest in ITE student teachers' perspectives on, and knowledge of, food and nutrition education. However, as a teacher educator, I needed to think carefully about the rationale for undertaking doctoral study. To do this I have built on Dewey's (1933) conception of reflective thinking as a foundational professional disposition. I have been influenced by later theorists such as Stenhouse (1975), Schön (1983) and Cochran-Smith and Lytle (1999) who have all been part of what I consider the teacher researcher movement. I believe they have been fundamental in reframed teaching as an enquiry-oriented practice in which educators are positioned as reflective practitioners and self-critical researchers. These bodies of work challenge traditional assumptions that educational knowledge is produced solely within universities and transmitted to practitioners. Instead, they conceptualise teacher research as systematic and intentional enquiry grounded in practice. I have engaged with this work throughout my Masters studies and drawing on these perspectives and particularly Stenhouse's argument that teachers extend their role beyond implementation to the active production of educational knowledge, I chose doctoral study as a structured and critical space in which to interrogate different forms of knowledge through sustained engagement with educational theory, empirical research and reflective enquiry. Teachers' practice is understood to be shaped by evolving Personal Practical Theories (PPT) (Maaranen & Stenberg, 2017; Männikkö & Husu, 2018) that are developed through experience, reflection and enquiry. This conceptualisation has been central to my own professional learning and underpins both my doctoral research and my approach to teacher education.

Framed through a Personal Practical Theory, this chapter positions me reflexively within the study, making explicit how my values, professional experiences and reflective practice shape my approach to teacher education on the MEduc programme. Engaging in this study provided a space to examine, articulate and extend this PPT, allowing professional learning to be understood not as the accumulation of fixed competencies but as an ongoing, enquiry-oriented process. It provides an opportunity to articulate my positionality as a teacher educator by reflecting on my attitudes and practices in relation to ITE and food and nutrition

education. In doing so, it consolidates how these perspectives have informed the focus of the study and considers my professional responsibilities within teacher education.

Personal Practical Theories

Personal Practical Theories (PPTs) refer to the evolving beliefs, knowledge and interpretations that guide teachers' instructional and interactional decisions in classroom contexts (Maaranen & Stenberg, 2017; Männikkö & Husu, 2018). PPTs are developed and continuously refined through teaching experience that involve reflection, engagement with practice, integrating theoretical understanding, personal values and contextual judgements to support adaptive expertise and responsive, learner-centred teaching (Cornett et al., 1990; Fairbanks et al., 2010; Maaranen & Stenberg, 2017; Männikkö & Husu, 2018). Developing and refining Personal Practical Theories depends on creating opportunities for sustained reflection, allowing teachers to critically examine their experiences, integrate theoretical insights and align their practice with both personal values and learner needs. Education is a complex and contested field of study, encompassing diverse contexts, purposes and knowledges (Furlong & Whitty, 2017). Within this complexity, teachers develop a distinctive form of professional knowledge that integrates theory, experience, values and contextual judgement that cannot be reduced to technical skill or the application of abstract theory alone (Clandinin, 1985). PPTs are dynamic processes that are made visible and refined through reflective processes, including reflection-in-action and reflection-on-action (Schön, 1983, 1987; Beck & Kosnik, 2001; Maaranen & Stenberg, 2017) and provide a practical basis for teachers to notice, interpret and adapt their actions. This process shapes both professional growth and the capacity to integrate theoretical knowledge with situated understanding of learners, content and context, enabling responsive, learner-centred practice (Beck & Kosnik, 2001; Maaranen & Stenberg, 2017).

Knowledge Traditions and the Conditions of Teacher Education

Building on the opportunity that doctoral study provides to critically examine and extend my professional practice and create knowledge in the field of education, it is useful to consider how teachers develop conceptions of teaching, especially in higher education as I further embrace my role as a teacher educator. Mimirinis and Ahlberg's (2021) study examined education doctoral students' conceptions of university teaching across departments in

England and Sweden, identifying six qualitatively distinct conceptions ranging from teaching as the transmission of knowledge to more expansive understandings that emphasise enabling interpretation, critical comparison, and personal, professional and societal development. The relevance to my practice is the progression evident within these conceptions, moving from teacher-centred and content-focused orientations based on what I experienced during my ITE experience towards learner-centred approaches focused on educational change. This trajectory mirrors my own pedagogical commitments within teacher education, in particular, my focus on supporting food and nutrition education where teaching frequently involves ethical complexity, contested knowledge and engagement with learners' lived experiences.

Research in teacher education helps to explain why such progression in practice cannot be assumed. Whitty and Furlong (2017) characterise education as having three broad knowledge traditions: academic knowledge (disciplinary e.g. psychology or history of education and multidisciplinary e.g. comparative and international education); practical knowledge, (including competency-based approaches); and integrated knowledge (a combination of theory and practice through approaches such as action research). These traditions can be understood through Bernstein's (1999) distinction between vertical discourse that is specialised, systematic and discipline-based knowledge as well as and horizontal discourse that is context-bound, experiential and practice-oriented. This is particularly evident within Initial Teacher Education (ITE) where academic scholarship, professional practice, policy priorities and ethical commitments intersect in often contested and dynamic ways. Teacher education has historically fluctuated between these discourses. Brew's (2003) analysis of the relationship between teaching and research highlights an ongoing tension between approaches that prioritise disciplinary research as the main source of valued knowledge and those that frame teaching largely as the development of generic skills and competencies. Such framings risk reducing teacher education to practice-based training that is detached from enquiry, theory and disciplinary understanding. Furlong (2013) similarly argues that the dominance of performative and accountability-driven frameworks has contributed to increasingly narrow conceptions of professional competence. These trends sit uneasily alongside long-standing recognition of teaching as an inherently complex and uncertain practice; as Stremmel et al. (1995) note, student teachers often enter the profession believing there are fixed "right answers" to teaching and viewing teachers primarily as transmitters of knowledge. These assumptions obscure the realities of professional practice and reinforce the need for teacher education to position enquiry and critical reflection as central to professional

development and rather than the rote application of teaching strategies. Within this context education, including teacher education, increasingly operates within rivalrous systems shaped by comparison and competition, such as international league tables and performance metrics, despite Stiglitz (1999) claiming that knowledge is a global public good and is non-rivalrous.

International performance measures such as the OECD's Programme for International Student Assessment (PISA) and the Times Higher Education World University Rankings position education systems and institutions within competitive global hierarchies. While these mechanisms are often justified as tools for quality assurance, they risk narrowing understandings of educational purpose and privileging instrumental outcomes. McMahon et al. (2015) argued that economic pressures following global recession intensified the focus on education as a driver of human capital development, with teacher education identified as significant in economic and social reform. Reflecting this shift, Kennedy and Carse (2020:165) note that the quality of teacher education has become a growing focus of education policy, a trend that Darling-Hammond (2017) attributes to assumptions about the connected relationship between teacher quality and learner achievement.

Kennedy and Carse (2020), drawing on the work of Cochran-Smith et al. (2018), note that Initial Teacher Education (ITE) has undergone significant international reform, driven by heightened policy interest in more flexible and alternative routes into teaching in response to concerns about teacher quality, supply and retention. They note that these international developments reflect two broad and contrasting approaches to teacher education. The first emphasises the role of universities and research in teacher preparation, positioning teaching as an intellectually demanding, research informed profession. The second favours a more apprenticeship-style model, prioritising school-based experience and on-the-job learning (Menter, 2017; Cochran-Smith et al., 2018; Kennedy & Carse, 2020). As outlined in Chapter 3, these differing approaches are evident within the UK context. In England, the second approach has been particularly prominent, with teacher education policy increasingly prioritising outcomes, accountability and rapid entry into the profession. This has contributed to the expansion of non-university-led routes such as School-Centred Initial Teacher Training (SCITT) and programmes such as Teach First. This trajectory contrasts with developments in Scotland, where teacher education has remained firmly university-based following the Donaldson Report (2011) that set a clear expectation that teaching should be underpinned by Masters-level learning and sustained professional development.

Within this context, the purpose of education itself remains contested. Dator (2002) frames education as preparation for participation in future societies, emphasising the acquisition of knowledge, skills and dispositions. While this future-oriented framing is compelling, it raises questions about whose futures are prioritised and how success is defined. For teacher educators, these debates are not abstract but directly shape programme design, pedagogical priorities and expectations of professional competence. These insights affirm my commitment to teacher education as an intellectually and morally engaged endeavour that is situated within higher education. It provides a foundation for articulating my PPT as both a scholarly construct and a lived professional practice. My positioning within these debates is shaped by my professional journey as a primary teacher who has transitioned into teacher education; moving across these professional contexts has heightened my awareness of how conceptions of teaching are constructed, contested and enacted within higher education as well as how pedagogical identity is often assumed to develop implicitly rather than being explicitly theorised, examined and supported. This awareness has been central to the development of my PPT, which frames teaching as an enquiry-oriented, reflective and ethically situated practice. I understand teacher education as a space for cultivating multiple, interconnected forms of professional knowledge (including academic, practical and integrated knowledge) and ethical judgements. These forms of knowledge are best developed through enquiry-oriented pedagogies that foreground reflection, dialogue and engagement with practice, enabling student teachers to critically integrate research, lived experience and contextual understanding rather than simply acquire prescribed techniques or competencies. This underpins both my approach to teacher education and aspects of this research.

Pedagogical Content Knowledge and Professional Judgement

Building on the view of teacher education as a space for developing integrated knowledge, the relationship between academic learning and practice is central to the development of professional judgement. When theory and practice are treated as separate or sequential, the complex ways in which teachers interpret subject matter, respond to learners and make decisions in context can be overlooked. Shulman's (1987) concept of Pedagogical Content Knowledge (PCK) has helped to address this limitation by foregrounding the 'missing paradigm' in research on teaching as the need to understand how disciplinary knowledge and pedagogical decisions are brought together in practice. PCK positions teaching as a

discipline-specific and intellectually demanding endeavour that requires teachers to interpret, represent and adapt content in ways that are responsive to learners and contexts.
This emphasis on integration resonates with longer-standing curriculum traditions that position teachers as knowledge-makers rather than implementers. As briefly mentioned, Stenhouse's (1975) conception of the teacher as an enquirer positions teacher education as a space for developing professional judgement and ethical awareness, where curriculum is understood as something to be questioned and enacted rather than delivered. From this perspective, professional knowledge can be seen as active and enquiry-driven that supports the development of critical and socially just dispositions rather than compliance with prescriptive teaching strategies.

These perspectives are significant in shaping my understanding and approach to teacher education. They reinforce my understanding of professional knowledge as relational, situated and morally engaged, extending beyond procedural competence or the mastery of techniques through 'tips for teachers'. Within Food and Nutrition Education (FNE), in particular, teaching can involve contested knowledge, ethical complexity and engagement with learners' values and lived experiences. Supporting student teachers in this area therefore requires the development of professional judgement that integrates disciplinary understanding, pedagogical sensitivity, ethical awareness and critical engagement with curriculum purpose. As a teacher educator, I draw on PCK and curriculum enquiry traditions to bridge academic scholarship, practical wisdom and philosophical reflection. This has helped shape my professional actions in designing learning experiences that provide opportunities for enquiry, dialogue and reflective engagement with practice. It also positions this doctoral study as a means of examining how such integrated forms of knowledge are constructed, enacted and sustained within teacher education as well as how they inform my own Personal Practical Theory in how to best prepare student teachers to support learners' health promoting capabilities.

Reflective Practice

Darling-Hammond (2006, 2017) positions reflective practice as a fundamental skill for effective teaching, highlighting that teacher education should actively support teachers in critically examining and learning from their experiences, rather than relying on a one-size-fits-all approach to teaching and learning. However, as previously noted, teacher education is

shaped by diverse perspectives on the purpose of education and ongoing pressures for reform. Developing practice within teacher education presents ongoing challenges, particularly when professional learning is framed through linear, theory-into-practice models that treat formal knowledge as separate from teachers' lived experiences. Korthagen et al. (2001) highlight the challenges teacher educators face in fostering meaningful change. They distinguish between externally driven changes that are imposed by policy or institutional demands and internally driven changes that originate from teachers' own reflection and engagement with their practice.

Race (2006) notes that reflection is a powerful tool for deepening learning. It enables both teachers and learners to examine progress and identify areas for growth. Building on Schön's (1983, 1987) distinction between reflection-in-action and reflection-on-action, reflection can be considered as essential in how teachers construct knowledge through experience. Korthagen et al. (2001) drawing on the work of Day (1999), that considers the moral purpose of teachers and utilising their concerns and challenges to enhance improvements within education. Central to this perspective is the notion of practical wisdom (Aristotelian concepts of phronesis), to enable teachers to exercise ethical and contextual judgements rather than simply theoretical knowledge (Aristotelian concepts of episteme). In contrast to traditional theory-into-practice approaches where often formal knowledge as detached from classroom realities, Korthagen et al. (2001) advocate for the ALACT model as an ideal process of reflection. This cyclical process of action, reflection and conceptualisation positions teachers' lived experiences as the starting point for reflection, dialogue and theory building. It can support teachers in developing Personal Practical Theories that integrate experience, values and research informed understanding. This reflection-driven model is considered to not only foster a more authentic and relevant professional growth system, but it also challenges the standardised paradigms of teacher education by recognising the intertwining nature of teacher learning and the evolving personal nature of what can be considered good teaching. It frames teacher development as an internally motivated process in which teachers continually refine their understanding of effective practice. This approach has shaped my practice as a teacher educator, informing my commitment to designing learning experiences that balance aspects of episteme and phronesis. While theoretical knowledge remains essential for understanding broader principles of pedagogy and learning, I emphasise the development of relational, situational and embodied forms of knowing through reflection, dialogue and engagement with practice. In this way, teacher education becomes a space where professional

development is continually formed and refined through the integration of theory, experience and professional judgement. This aligns with Kemmis and Smith's (2008) notion of education as infinite. They argue that there is always more to learn and that professional knowledge is never complete. Within this framing, ITE cannot be expected to provide all the knowledge and skills required across a teaching career. Instead, it establishes a foundation upon which continued learning occurs through experience, reflection and enquiry.

Ethically Grounded Practice and Capabilities

As a teacher educator, I often grapple with the fundamental question introduced at the start of this chapter: what is the purpose of education, and therefore, of teacher education? It is here I often question my role within this space. Although knowing and agreeing with the work of Kemmis and Smith (2008) that ITE does not produce a finished article of a teacher, there is pressure for this to be the case. Reflecting on the knowledge, skills and dispositions I believe teachers should cultivate, I also find myself navigating the tension between aspirational policy directives and the realities of educational practice in Scotland. Key initiatives such as the Curriculum for Excellence (CfE), Getting It Right for Every Child (GIRFEC), A Healthier Future and the Scottish Attainment Challenge all emphasise child-centred and wellbeing-oriented approaches. While I support the underlying principles of these policies, they sometimes sit uneasily with me because they present broad goals often without clear guidance on how teachers can exercise professional judgement in context-specific ways or the resources needed to support this. As stated earlier in this chapter, it is easy to see why some student teachers enter the profession searching for 'right answers' to teaching (Stremmel, 2002:1). Often, these initiatives imply a single strategy can address complex educational challenges yet as outlined in Chapter 3, education operates across diverse contexts and requires nuanced, holistic approaches.

The GTCS Standards for Provisional Registration (SfPR) emphasise the development of reflective, ethical and socially responsible educators, highlighting the professional capacities teachers need to support learners effectively. Complementing this, the University of Glasgow's Graduate Attributes focus on nurturing well-rounded, ethically and socially aware individuals who are subject specialists. Essentially both advocate for the importance of graduates being reflective learners, intellectually curious and committed to learning, therefore recognising that effective teacher education must promote both academic expertise and

personal qualities essential for professional and personal success. However, returning to one of my previous questions of what my role is here? I have thought long and hard about this in an attempt to articulate it. I have narrowed it down to my strong conviction that student teachers should be nurtured as care-centred, compassionate, critically reflective professionals equipped not only with knowledge but with the relational, ethical and practical capacities necessary to promote and support human flourishing. I believe that is why certain policy directives sit uneasy with me as the terminology often disguises the true essence of its aim and purpose.

Scottish Education, in my view, must move beyond attainment-driven metrics to provide learners with the conditions to develop a broad range of skills and capabilities. Drawing on Sen (1999) and Nussbaum (2011), I understand education as a moral endeavour, aiming to enable all learners to realise their full potential. According to Nussbaum (2011), human flourishing requires the development of core capabilities such as bodily health, affiliation, practical reason and play. This will be explained in more detail in chapter 6. This perspective reinforces aspects of the work of Sen (2001) and the notion of freedom as the foundation of development. It challenges the idea that human progress can be defined narrowly by economic or institutional frameworks, instead asserting that people must have the freedom and capability to choose how they live. Similarly, Walker and Unterhalter (2007) emphasise that equal access to resources and knowledge does not guarantee equal outcomes and so education must be equitable in supporting learners to use those resources in meaningful ways, shaped by their circumstances and contexts.

This perspective directly informs my evolving PPT and approach to teacher education. I view the development of student teachers' capabilities as not only their knowledge and skills, but also their ethical and reflective dispositions as central to their professional growth. My study is situated within this policy and philosophical landscape, aiming to explore not only their knowledge of a capabilities approach as well as food and nutrition education but also how student teachers understand their role in promoting food and nutrition education, how they interpret guidance and what supports they need to enact these responsibilities effectively. By doing so, I hope to contribute to ITE practices that enable student teachers to develop their PPTs through reflective, ethically informed and contextually responsive practice.

Approaching Food and Nutrition Education

Building on the desire to develop student teachers' ethical, reflective and professional capabilities, it is important to consider how these principles influence areas of the curriculum. As this study centres around food and nutrition education, I think it is important to examine not only the knowledge that student teachers have, but also how teachers interpret and enact policy guidance in practice to explore how capability development is realised in teaching contexts. In doing so, it can help to build knowledge and capacity in how ITE can support student teachers to translate ethical and reflective principles into meaningful classroom practice. As already explained in chapter 2, food and nutrition education holds a small place within the Scottish curriculum, but I believe it holds a far greater holistic potential within the Scottish Education system. It is not only relevant to health and wellbeing but permeates all curriculum areas offering rich opportunities to connect learning with learners' real lives, aspirations and capacities. In my view, education policy is politically driven and is shaped by neoliberal priorities, as described in chapter 3, that focus on measurable attainment and competition as a way of producing economically productive citizens rather than fostering well-rounded individuals with the capabilities to live healthy, flourishing lives. The Scottish Attainment Challenge is an example of this as although an aspirational mission of using education to improve outcomes for children and young people impacted by poverty, in practice it has often had a counterproductive effect. It has resulted in a narrowing of the curriculum with a dominant focus being placed on literacy and numeracy with other subjects including aspects that contribute to health and wellbeing being undervalued and deprioritised. Inevitably, this narrowing reduces opportunities for food and nutrition education to be meaningfully embedded in school life and neglects the broader potential of education to address social and health inequalities.

In line with this, Cotton et al. (2020) highlight the critical role of teachers as agents of health promotion, advocating for flexible, responsive and evidence informed approaches to food and health education. I share this view, yet in practice there is limited guidance on how or resource to support teachers or ITE programmes to meaningfully develop these capabilities. This study therefore explores how student teachers understand their role in promoting FNE, the experiences they have and what supports they require to enact these responsibilities effectively. I believe a more integrated and comprehensive approach to food and nutrition education not only in school contexts but also within initial teacher education could

contribute meaningfully to tackling these inequalities and supporting the development of young people's capabilities for life. Strengthening its place in curriculum both in school and in teacher education, I also believe would make a significant contribution to education. Therefore, by situating FNE within a capability focused framework, this research aims to inform ITE practices that integrate evidence informed pedagogy with ethical, reflective and contextually responsive practice. The intention is to support student teachers in becoming care centred, compassionate and critically reflective professionals who not only possess knowledge and skills but also the ethical, relational and reflective capacities to foster human flourishing and holistic development in their learners.

Conclusion

This chapter has positioned my practice as a teacher educator by reflecting on the knowledge, some perspectives on teacher education and the role of reflective and ethically grounded practice in shaping professional learning. Drawing on my Personal Practical Theory, I conceptualise teacher education as an enquiry oriented and reflective process that integrates theoretical and practical knowledge, ethical judgement and professional dispositions. The discussion of knowledge traditions has highlighted the need to balance disciplinary and practical knowledge, ensuring that student teachers are equipped not only with technical competence but also the capacity for critical, context sensitive decision making. Similarly, consideration of the conditions of teacher education signifies the importance of creating learning environments that support enquiry, dialogue and reflective engagement, while ethically grounded practice and capabilities emphasise the moral responsibilities of educators to promote human flourishing, equity and wellbeing. This positioning has directly informed my approach to teaching on the MEduc programme, shaping how I support student teachers' capabilities in developing their Personal Practical Theories through reflective practice, professional judgement and adaptive expertise. It has also motivated the focus of this study, which seeks to explore how student teachers understand and enact their role within food and nutrition education and how they perceive their role in promoting health and wellbeing. Keeping Kemmis and Smith's (2008) work and the concept that ITE is the foundational stage of a teacher's career in the forefront of my mind, I find this significant within food and nutrition education, where scientific knowledge evolves, societal relationships with food change and issues such as food poverty, sustainability and public health require ongoing professional engagement.

By reflecting on my own positionality, this research provides a space to examine how my values, experiences and pedagogical decisions influence the learning environment and in turn, how student teachers construct and enact their professional knowledge. It reflects the dilemmas I feel I face as a teacher educator in supporting student teacher's capabilities at the same time as supporting them in being able to promote and support the capabilities of their learners. In doing so, this chapter sets the foundation for the next chapter. Chapter 3 moves beyond reflexive positioning to examine the theoretical foundations of the Capabilities Approach and explain how it has been used as a theoretical context to inform the design, conduct and interpretation of this research.

Chapter 3 Framing my Research - The Capabilities Approach

Introduction

Qualitative research is underpinned by particular assumptions about the nature of reality, knowledge and meaning making. Denzin and Lincoln (2018) argue that researchers often hold particular assumptions about the nature of knowledge and learning and are therefore never neutral observers but active participants who interpret and construct meaning through specific theoretical and epistemological lenses. From this perspective a conceptual framework is not merely a technical or theoretical tool but a dynamic structure that reflects the researcher's values, assumptions and interpretive strategies. Similarly, Maxwell (2013) emphasises that a conceptual framework should evolve from the researcher's interests, disciplinary orientation, professional experience and engagement with relevant literature. Ravitch and Riggan (2017) further argue that robust conceptual frameworks integrate theory, context and experience that enable researchers to position their work within a broader field of knowledge while also recognising and making explicit the assumptions and commitments that shape the research question and design.

This chapter sets out the conceptual framework underpinning the study through the adoption of the Capabilities Approach (CA). It outlines the theoretical foundations of the Capabilities Approach, explains its relevance to education and human development and demonstrates how it informs the design, focus and interpretation of the research. In doing so, the chapter establishes the philosophical coherence of this study and positions the Capabilities Approach as central to understanding student teachers' experiences of food and nutrition education and their perceived role in health promotion.

From Sen to Nussbaum: The Development of the Capabilities Approach

The concept of capabilities was initially developed by Amartya Sen as a way of evaluating wellbeing, inequality and development through a focus on people's real freedoms to live lives they have reason to value (Sen, 2001). Rather than assessing development through narrow economic indicators such as income, utility or Gross Domestic Product (GDP), Sen (2001) highlighted the need to consider the opportunities available to individuals and groups. In

doing so, he reconceptualised development as a process of empowerment and social justice rather than economic growth alone and where freedom, agency and choice are considered central to human wellbeing. Sen emphasised that such freedoms are unevenly distributed and are often limited by structural barriers including poverty, oppression, discrimination and limited access to resources or opportunities.

A key aspect of Sen's work is the distinction between functionings and capabilities. Functionings refer to the achieved states of 'being and doing' that constitute a person's life, such as being educated, participating in social life or acting to support others' wellbeing. Whereas capabilities are conserved as the genuine freedoms or real opportunities individuals have to achieve those functionings that they have reason to value (Sen, 2001). Importantly, Sen did not propose a fixed or universal list of capabilities. He deliberately resisted doing so, arguing that the identification and prioritisation of valued capabilities should emerge through democratic deliberation and remain sensitive to context, culture and purpose (Sen, 2001; 2009). For Sen (2001) this openness was a key element of his work where functionings and capabilities are conceptualised openly and adaptably across diverse social, political and institutional settings to support ethical reasoning and comparative judgement rather than used as a prescriptive theory.

Martha Nussbaum's work builds on Sen's foundational ideas while extending the capabilities perspective in a more prescriptive way. While sharing Sen's concern with human freedom, agency and dignity, Nussbaum (2000, 2011) is more directly concerned with how the concept of capabilities can be practically applied in relation to justice, rights and public policy. She accepts Sen's distinction between functionings and capabilities but places greater emphasis on its ethical implications and in particular the ways in which individuals may possess skills or knowledge yet lack the opportunities to act upon them due to social, material or institutional constraints. Expanding on the notion of 'being and doing', Nussbaum (2011) reinforces the importance of distinguishing between the relational and contextual nature of human freedom so what individuals actually achieve and the genuine opportunities available to them. Individuals may develop competencies or knowledge yet without enabling conditions such as supportive environments, equitable access to resources or freedom from discrimination, they may lack the real capability to translate these achievements into meaningful action.

Concerned with the practical application of capabilities and in an attempt to develop a theory of justice (Robeyns, 2005), Nussbaum (2000, 2011) created a list of central human capabilities which she argues represent the minimum conditions required for a life lived with dignity:

1. Life- live a normal length for human life.
2. Bodily Health- good health, including reproductive health, adequately nourished and adequate shelter.
3. Bodily Integrity- move freely from place to place, secure against violence.
4. Senses, Imagination and Thought- use the senses, to imagine, think and reason in a ‘‘truly human’’ way that is informed and cultivated by an adequate education.
5. Emotions- have attachments to things and people outside ourselves.
6. Practical Reason- form a conception of the good and to engage in critical reflection about the planning of one’s life (protection for the liberty of conscience and religious observance).
7. Affiliation -to live with and toward others, to recognise and show concern for other human beings.
8. Other Species- live with concern for and in relation to animals, plants and the world of nature.
9. Play - able to laugh, play and enjoy recreational activities.
10. Control Over One’s Environment.

Although the introduction of a universal list has generated debate (Robeyns, 2005), Nussbaum acknowledges that her list of central capabilities is neither exhaustive, hierarchical or culturally prescriptive. Instead, she presents it as a universal moral threshold for human flourishing and notes that the central capabilities are interdependent (Nussbaum, 2011). Connected to the concept of functioning the notion of combined capabilities helps to explain how and why access to resources does not automatically translate into real freedoms. Conversion factors are based on the extent to which resources can be converted into valued ways of being and doing depends on a range of personal, social and environmental factors, including individual characteristics, social norms and policies and material or geographical conditions (Robeyns’, 2005). In recognising these dynamics, the capabilities perspective supports human diversity by shifting focus from the access to goods alone towards the broader social and institutional contexts that shape people’s genuine opportunities to achieve

valued functionings. In educational contexts, this framing positions education not simply as a means to economic productivity, but as a key site through which multiple human capabilities may be developed and supported. Education is therefore understood as both shaping individual capacities and as a social institution that plays a critical role in creating, or limiting, the conditions under which learners and teachers can exercise agency, judgement and responsibility.

Capabilities as a Conceptual Framework for This Study

Building on this theoretical foundation, this study adopts the concept of capabilities as its overarching conceptual framework in order to prioritise questions of human flourishing, agency and justice within Initial Teacher Education (ITE). In contrast to approaches that focus primarily on attainment or competence, a capabilities lens directs attention towards what student teachers are genuinely able to be and do within the conditions of their professional preparation.

As Walker (2022) notes, wellbeing is best understood through the dynamic interaction between capabilities, realised functionings and the conditions that enable or limit this process. This insight is particularly significant in educational contexts, where teachers and learners may have certain knowledge or skills yet lack the freedom to act upon them due to institutional constraints, policy pressures or dominant discourses that restrict professional autonomy. From this perspective educational practice cannot be understood solely in terms of individual competence, instead it should also account for the wider conditions that enable or limit meaningful action. The notion of combined capabilities and conversion factors highlights the interdependence between individuals' internal capacities and the external social, material and institutional conditions that shape opportunity (Nussbaum, 2000, 2011; Robeyns, 2005).

Within this study these concepts provide a conceptual lens for considering student teachers' experiences of food and nutrition education and their perceived role in health promotion. Focusing on capabilities rather than outcomes alone enables an exploration of the enabling and limiting conditions that shape student teachers' opportunities, knowledge and perspectives in relation to health promoting behaviours, with particular attention to food and nutrition education.

Education, Curriculum and Professional Agency

Within a capabilities perspective education occupies a central role as both a capability in its own right and a key means through which other human capabilities are expanded (Sen, 1992; Nussbaum, 2007; Walker and Unterhalter, 2007). Education therefore should be considered not merely as instrumental or economic tool but as a public good that contributes to human dignity, inclusion and social justice by supporting both individual flourishing and collective responsibility (Gracia-Calandín and Tamarit-López, 2021). From this perspective schooling plays a formative role in enabling individuals and communities to develop the intellectual, emotional and moral capacities necessary for participation in democratic and social life.

Drawing on the work of Amartya Sen and Martha Nussbaum and informed by Walker's (2012) educational interpretation of the Capabilities Approach, I view education as a practice shaped by values, human relationships and the social contexts in which teaching and learning occur. Nussbaum (2011) places human dignity at the centre of social institutions, arguing that societies have an ethical responsibility to create the conditions under which individuals can flourish. In educational contexts, this involves more than the transmission of knowledge; it includes nurturing critical thinking, imagination, empathy, ethical reasoning and concern for others alongside academic learning. Within Initial Teacher Education (ITE), this framing highlights the formative nature of professional learning. ITE should not solely focus on the development of pedagogical skills and subject knowledge but also provide meaningful opportunities for professional identities, values and responsibilities to be reflected on and shaped. Therefore, from a capabilities perspective, teacher education can play a key role in influencing how future teachers understand their responsibility for promoting learners' wellbeing, dignity and flourishing within schools. Exploring food and nutrition education through this lens therefore enables analysis of how student teachers perceive health promotion as part of their professional and ethical role and whether they feel supported and empowered to enact this responsibility within contemporary educational contexts.

Curriculum plays a particularly significant role in this process. While a Capabilities Approach is often applied to questions of outcomes and wellbeing Walker (2012) argues that its true potential lies equally in how knowledge and curriculum are interpreted and enacted within educational institutions. She highlights how education, including higher education and teacher education, has increasingly been influenced by neoliberal priorities, particularly

through an emphasis on employability, accountability and economic competitiveness, shaping curriculum priorities and practices. From a capabilities perspective curriculum has the potential to shape values, identities and agency rather than simply delivering content. In ITE this raises critical questions about how this can be done to enable the meaningful development of teacher capabilities by shaping what knowledge is valued, how professional responsibility is understood and the extent to which student teachers are supported to exercise critical judgement, ethical reasoning and care rather than being limited by narrow performance expectations. Curriculum structures play a central role in shaping professional agency as they can either enable or limit teachers' capacity to act on what they have reason to value. Within this conceptual framing teachers are not viewed as passive implementers of policy but as moral and civic agents whose professional judgement and practice shape learners' opportunities, identities and futures, who require supportive structural and professional environments to develop and enact such agency (Sen, 2001; Nussbaum, 2010; Walker, 2022). Applied to this study a Capabilities Approach provides a conceptual lens for exploring how curricula, both school and ITE, has shaped student teachers' opportunities to engage with food and nutrition education.

Conceptual Mapping of a Capabilities Approach

Berman and Smyth (2015) argue that the development of a conceptual framework is a fundamental component of high quality doctoral research. They propose a pedagogical model designed to align the what, why and how of research with the philosophical dimensions of ontology, epistemology and methodology. Within this framing, a conceptual framework serves not only as a theoretical construct but also as a pedagogical and intellectual tool that supports research development through coherence across philosophical positioning, professional experience and research design, enabling reflexivity and scholarly independence (Berman and Smyth, 2015).

What is your conceptual framework?		
WHAT ontology	HOW methodology	WHY epistemology
Context for the research problem	Research themes(s)	New knowledge
Key concepts Relationships	Explicit research questions Research design	New theorising Extent (limits) of generalising
Establishment of terminology and common language Boundaries for conclusions and theorising	Methodology (data gathering, organising, analysing, interpreting) Validity (conceptual, practical …)	Implications for practice

(Berman and Smyth, 2015:130)

Drawing on this pedagogical model this study adopts a Capabilities Approach as conceptual framework that aligns its ontological, epistemological and methodological dimensions. Ontologically, the study is grounded in the view that educational realities are relational and socially constructed and emerge within specific contexts. Educational practices and health related behaviours are shaped through the interaction between personal agency and wider institutional, cultural and material conditions. Epistemologically, the study adopts an interpretivist approach that recognises knowledge as constructed through lived experience, dialogue and reflection. The participants are considered as knowledgeable agents whose narratives show insight into both individual experience and aspects of the wider institutional, cultural and policy influences that have shaped those experiences. Methodologically, the use of qualitative methods and reflexive thematic analysis aligns with these commitments by enabling the exploration of the complexity and contexts regarding the participants' experiences. The table below illustrates how the philosophical foundations of the study align with its conceptual framework by mapping a Capabilities Approach onto Berman and Smyth's (2015) model across key research dimensions.

Research Dimension	Berman & Smyth Alignment	Capabilities Approach Contribution
Ontology	Clarifies assumptions about reality	Human flourishing as relational, contextual and dignity based
Epistemology	Aligns "what counts as knowledge"	Knowledge as constructed through lived experience and agency
Methodology	Justifies methodological coherence	Qualitative, interpretive, reflexive thematic analysis
Professional Practice	Bridges experience and theory	Teacher education as moral and relational work
Scholarly Contribution	Supports synthesis and reconceptualisation	Reframing FNE through capabilities rather than knowledge transfer

This mapping reinforces the role of a Capabilities Approach as the guiding conceptual framework for the study that informs its philosophical positioning and research design. Situating food and nutrition education within this framework enables a considered examination of how educational structures and practices shape student teachers' opportunities, responsibilities and agency. In doing so, the chapter establishes a conceptual foundation for the analysis that follows. The next chapter situates the study within the Scottish policy and educational context by mapping the educational landscape in Scotland.

Chapter 4: Mapping the Educational Landscape in Scotland

Introduction

This chapter discusses the context for the study in relation to the Scottish curriculum, the approach to initial teacher education (ITE) in Scotland and the specific university programme within which the research is situated. In doing so, it provides the policy and structural backdrop necessary to understand how food and nutrition education is positioned within Scottish ITE practice.

Scotland is one of the four countries, alongside England, Wales and Northern Ireland, that makes up the United Kingdom (UK). While the UK is formally a unitary state there are aspects of policy and practice that are now largely devolved. Referendums during 1997 resulted in the central UK Westminster Parliament transferring governmental powers and functions in policy areas, such as health and education, to regional governments in Scotland, Wales and Northern Ireland and to mayors and local authorities in England. As a result, education systems across the UK are governed separately within each nation. In England, education is overseen by the UK Government's Department for Education (DfE). In Scotland, responsibility lies with the Scottish Government, supported by its executive agency Education Scotland. In Wales, education is governed by the Welsh Government's Department for Education and Skills, and in Northern Ireland it is overseen by the Department of Education, supported by the Education Authority (EA). Across all four nations, education remains a significant area of public expenditure and a key policy mechanism for social and economic development, although its organisation, curriculum frameworks and priorities vary according to devolved policy contexts.

Differences and Similarities in UK Education

The devolved nature of education within the UK means that although there are some broad similarities in decision making, the systems in each country have developed in distinctive ways that reflect political priorities and cultural heritage and traditions. Each country has developed its own curriculum, qualifications framework, approach to school governance and

inspection regime. Despite these differences, there are some consistent features across the four nations. All children having a legal right to education from age five to sixteen. Education is predominantly delivered through publicly funded schools at primary (aged 5-11) and secondary (12-16) education levels, although there are also private sector schools. All countries offer a form of pre-school education for three to four year olds. Tertiary education (further and higher education) is delivered by universities and colleges which are independent institutions but rely on public funding and student tuition fees (Bryce et al., 2018).

Food and Nutrition Education in the UK

Despite each nation in the UK having its own education system and curriculum there is a shared commitment to embedding food education within schools. The core learning outcomes around food are broadly consistent and centre around understanding food origins and sustainability, learning basic cooking skills and applying principles of nutrition and healthy eating to make informed food choices.

Table 1 adapted from the work of the Jamie Oliver Food Foundation provides an overview of the ways in each nation has embedded food and nutrition education into its school curriculum.

England: Published in 2014	**Wales: Initial roll out from 2022**
In relation to food and nutrition education, Cooking and Nutrition, a discrete strand within Design and Technology for Key Stages 1 to 3, was introduced. All maintained schools in England are required to follow the curriculum, although they do have the opportunity to enhance with additional subject content.	Food and nutrition education is from 3 to 16 years. Food education is taught through the Health and Wellbeing Area of Learning and Expertise. GCSE Food and Nutrition from September 2025. The curriculum is statutory.
Northern Ireland: Updated in 2014	**Scotland: Published in 2010**
Primary phase has no specific 'food' subject but does provide contexts in which work with food can be undertaken. At Key Stage 3, Home Economics is statutory. The curriculum is statutory.	Food and nutrition education is from 3 to 18 years. Many subjects support food education, which are cross-referenced, e.g. Health and Wellbeing, Technologies, Science. The curriculum is statutory.

Table 1: Adapted from Jamie Oliver Food Foundation, (2017: 17)

Education in Scotland

The Scottish Government, led by the Cabinet Secretary for Education and Skills has overall responsibility for education in Scotland. It sets national priorities in relation to school standards, quality and improvement and the teaching profession with a range of responsibility including curriculum reform, inclusive learning and lifelong learning, there are several national agencies that play key roles within Scottish education; Education Scotland who oversee quality improvement, inspection and professional learning within schools, the Scottish Qualifications Authority (SQA) who oversee assessment and certification (National 5s, Highers, Advanced Highers) and the Scottish Funding Council (SFC) who oversee funding and quality assurance for colleges and universities. Prior to 2025, Scottish education was supported by several national agencies, including the Scottish Qualifications Authority (SQA) and Education Scotland, which together played key roles in qualifications development, curriculum support and national improvement work. However, a programme of educational reform is currently underway in Scotland, which is restructuring these arrangements and has replaced existing bodies with three new national organisations. These include a qualifications body, Qualifications Scotland; an independent inspectorate, His Majesty's Inspectorate of Education in Scotland (HMIE); and a national agency for Scottish education, retaining the name Education Scotland but with a renewed focus on curriculum improvement and professional support (Scottish Government, 2025).

Scotland's education system spans early years, primary, secondary and tertiary levels, delivered mainly through publicly funded schools, alongside some private and faith schools. There are thirty two local authorities that are responsible for delivering school education, employing teachers, providing facilities and interpreting national policy in local contexts. Schools remain within local authority control (unlike academies in England). Strategic direction is delivered through frameworks like Curriculum for Excellence (CfE), Getting It Right for Every Child (GIRFEC), the National Improvement Framework, wellbeing indicators SHANNARI, UNCRC and Learning for Sustainability action plan.

The Scottish Curriculum

The Scottish curriculum, Curriculum for Excellence (CfE), was introduced in the 2010 with the purpose of creating a coherent, flexible and enriched learning experience for children and

young people aged 3 to 18. Its aim is to develop four capacities in young people: successful learners, confident individuals, responsible citizens and effective contributors. The curriculum is designed to offer a broad general education (BGE) from ages 3–16, followed by a senior phase (ages 16–18 years) in which they begin to specialise and work towards formal qualifications.

Within the Broad General Education (BGE), experiences and outcomes are provided at early level (approx. 3-5 years), first level (approx. 6-8 years), second level (approx. 9-11 years) and third and fourth level (approx. 12-16 years) as well as Higher and Advanced Higher course specifications in the senior phase, are designed to align with the Scottish Credit and Qualifications Framework (SCQF). The SCQF provides a unified framework for recognising and comparing the level and credit value of learning across academic and vocational pathways. Within this structure, learning progresses from broad, experiential learning in the BGE into certificated qualifications in the senior phase, with increasing SCQF levels reflecting greater depth, complexity and specialisation. In the senior phase, learners can undertake a range of national qualifications, including National 3, National 4 and National 5 awards (SCQF levels 3, 4 and 5), followed by Highers and Advanced Highers (SCQF levels 6 and 7), alongside vocational and skills-based awards depending on individual progression routes. All of these qualifications are credit-rated within the SCQF, ensuring consistency in level, progression and recognition across diverse learning pathways. Highers and Advanced Highers typically form the principal routes for progression to higher education, although the broader qualifications framework also supports a range of post-school destinations, including further education, training and employment.

Health and Wellbeing in Curriculum for Excellence

Curriculum for Excellence (CfE) places Health and Wellbeing as a central component of Scottish education. It is one of the eight curriculum areas within CfE as well as a named core subject along with literacy and numeracy as responsibility for all staff to ensure that it underpins learning at every stage from early years to senior phase. Health and wellbeing as a core subject should be a continuous priority throughout a learner’s journey and support children and young people to develop the skills, knowledge and attributes needed for learning, life and work.

Health and Wellbeing as a Responsibility of All

The overall health and wellbeing of learners is considered a responsibility of all staff within CfE. This approach recognises that wellbeing is fundamental to learning and achievement and that every adult in a school contributes to it. It is the responsibility of all staff to embedded health and wellbeing practices across the whole school experience. This involves educators creating a safe, supportive and inclusive learning environments and collaborating across professions and communities, encouraging active and outdoor learning and fostering citizenship, employability and positive role modelling in line with SHANRRI wellbeing indicators.

Health and Wellbeing as a Curriculum Area

The dual expectation of health and wellbeing within CfE provides opportunities for direct learning and teaching as a curriculum area as well as an overall holistic approach to support the overall wellbeing of learners. Health and wellbeing as a curriculum area is structured learning across several organisers:

- Mental, emotional, social and physical wellbeing
- Planning for choices and changes
- Physical education, physical activity and sport
- Food and health
- Substance misuse
- Relationships, sexual health and parenthood

(Scottish Government, 2010)

There organisers are broken down into a range of experiences and outcomes that children and young people are entitled to. This is presented through planned lessons and activities either as discrete lessons or through interdisciplinary learning opportunities. These learning opportunities are designed to help learners develop the knowledge, skills and attitudes needed to build positive relationships and a healthy lifestyle through making informed decisions and manage risk. To support and encourage healthy, active lifestyles every child and young person is entitled to two hours of quality physical education per week. Learning opportunities

also support the development of informed choices about food, relationships and substance use.

Food and Nutrition Education within Curriculum for Excellence

Food and nutrition education in Scottish schools is a key component part of the Health and Wellbeing curriculum area, with the food and health organiser aiming to equip learners with the knowledge and skills to make informed, healthy choices throughout life. The curriculum expectation is for learners explore what constitutes a balanced diet and develop lifelong habits that support physical and emotional wellbeing. Through engaging and practical experiences learners should develop a knowledge and understanding of the importance of variety and balance in food and drink as well as the varying dietary needs across life stages. Part of this learning also includes developing an appreciation of the social and cultural significance of food and the enjoyment it can bring. Beyond knowledge and understanding learners should also develop safe and hygienic practices, including oral health and food preparation and be able to apply these in everyday situations and routines (Scottish Government, 2010). Finally, learners should be given the opportunity to explore factors that influence food choices such as cost, availability, sustainability, seasonality, culture, religion, peer pressure, advertising and media. Within Scottish education it is hoped that this approach supports learners in becoming confident individuals who can make responsible decisions about their health and wellbeing while also fostering awareness of broader societal and environmental issues related to food. This aligns with the expectations set out in the Schools (Health Promotion and Nutrition) (Scotland) Act 2007.

Food and nutrition education is also present in the CfE Science and Technologies curricular areas. Within the Science curriculum food and nutrition fall under the biodiversity and interdependence section of the curriculum where learners are expected to explore food chains and develop an appreciation of how animals and plants depend on each other for food. In the Technologies curriculum, the food and textiles provide opportunities for pupils to engage with food preparation by developing practical skills alongside understanding of nutrition and healthy eating practices.

The Scottish Context of Initial Teacher Education

Initial Teacher Education in Scotland is situated exclusively within the university sector, a model that differs from the more diversified systems seen in countries such as England or the United States (Perry et al., 2019). Scottish ITE programmes are accountable to university academic standards, Education Scotland and the General Teaching Council for Scotland (GTCS) which accredits all ITE programmes and sets and governs the professional standards for teaching.

The GTCS Memorandum on Entry Requirements to Programmes of Initial Teacher Education in Scotland (2024), accreditation guidelines (2023) and the Standards for Provisional Registration (2021) form the foundation of initial teacher education programmes in Scotland. The GTCS Memorandum (2024) sets out the minimum standards for admission to teacher education programmes in Scotland. Its purpose is to ensure consistency, transparency and fairness in the recruitment process helping applicants understand what is required and guiding higher education institutions in their admissions and interview procedures. It supports the integrity of the teaching profession and contributes to maintaining high standards in Scottish education. The GTCS standards for provisional registration (2021) articulate the knowledge, skills and professional dispositions that prospective teachers must acquire by the end of the teacher education programme. They emphasise the development of reflective, ethical and competent practitioners capable of delivering high quality learning for all pupils. The GTCS accreditation guidelines (2023) require ITE programmes to include content on:

- Educational theory and pedagogy
- Childhood development and psychology
- Curriculum planning and assessment
- Legal frameworks and statutory guidance
- Inclusion and additional support needs
- Parental and learner involvement
- National curriculum priorities (e.g., literacy, numeracy, health and wellbeing)
- Values of social justice, integrity, trust and respect

In addition to meeting GTCS requirements, ITE programmes in Scotland must align with the Quality Assurance Agency (QAA) for Higher Education's guidelines. The QAA ensures that all academic programmes conform to the Scottish Credit and Qualifications Framework (SCQF), establishing progression in academic rigor and depth of knowledge across the years of study. The Self-Evaluation Framework for ITE (Education Scotland, 2018) is the final quality assurance and enhancement framework that Scottish ITE programmes are accountable to. This process is designed to support universities in evaluating and enhancing the quality of their Initial Teacher Education programmes. It provides a structured approach to identifying strengths and areas for improvement across three key areas: leadership and enhancement, student experience and outcomes for students. The framework complements existing quality assurance processes and aligns with the GTCS Standards for Provisional Registration by promoting collaborative evaluation with partners and encouraging evidence based improvements in programme delivery and student support. The integration of QAA, GTCS and Education Scotland frameworks create a layered curriculum structure that must be both academically rigorous and professionally relevant.

ITE programmes are further influenced by national educational policies and priorities. Reports such as Putting Learners at the Centre (Muir, 2022) have introduced additional considerations. These include recognition of student teachers' personal aspirations, an emphasis on a collaborative curriculum co-creation and a desire for simplification and coherence within programmes within a complex policy landscape. ITE programmes should also prepare future teachers to critically engage with and enact curriculum. CfE is predominantly considered a learner centred curriculum. This current curriculum promotes an integrated and holistic view of education, encouraging interdisciplinary learning, critical thinking and learner autonomy. As Ozga (2000) noted, understanding the ITE curriculum requires examining both its source (policy, standards, ideology) and scope (what is taught, how and to what end). In Scotland, this complexity reflects the multifaceted nature of ITE in terms of preparing individuals to become not only skilled practitioners but also engaged, ethical and responsive educators.

The Master of Education Primary Programme (MEduc) with Teaching Qualification at the University of Glasgow

The MEduc programme at the University of Glasgow is a professionally accredited route into primary teaching in Scotland. It is a five-year integrated master's degree that combines and progresses undergraduate and master's level study. It combines academic study with practical experience offering a broad social science perspective on education alongside pedagogical practice. Through a blend of university-based learning and school placements students develop the knowledge, skills and reflective practices needed to meet the GTCS Standard for Provisional Registration (2021). This programme provides a foundation for student teachers as adaptable and enquiring professionals that will continue to grow and develop throughout their teaching careers.

The programme is structured around four thematic strands (see Appendix 1) and school-based placements (School Experience) that progressively build knowledge and skills to support student teachers in demonstrating the standards of provisional registration:

- Education in Practice (EiP): Years 1-4
- Education and Society (EaS): Years 2-5
- Curriculum Enquiry (CE): Years 1-5
- Educational Electives (EE): Years 3-4
- School Experience (SE): Years 1-4

EiP strand focuses on specific themes as students develop their professional identity and practice including teacher identity, learning theories, child development, curriculum theory, lesson planning, assessment theory and inclusive practice. The EaS strand aims to enable students to critically explore education in its broader social, cultural and global contexts. This strand places sustainability, social justice and critical pedagogy at the centre of enquiry to support students in preparing to become teachers who are both reflective and future focused. The CE strand aims to develops students' ability to critically engage with both subject knowledge and teaching practice. Drawing on Shulman's concept of pedagogical content knowledge (PCK), the strand explores the interplay of content and pedagogy in terms of how particular topics can be organised, represented and adapted to meet the diverse needs of

learners. This involves considering not only what is taught, but also how and why it is taught. Across years one to four students progressively build their enquiry skills in relation to the primary curriculum, laying the foundations for ongoing critical reflection and professional growth. In year 5 students can apply enquiry skills in the Master's level dissertation where students investigate an aspect of teaching practice. The EE course offers students the opportunity to pursue areas of interest that complement their chosen context of education. Through a range of elective options students develop disciplinary, pedagogical or interdisciplinary understandings that enrich their professional practice. The course emphasises the value and impact of these areas in enhancing teaching and learning within the primary classroom. Finally, the School Experience (SE) strand is based on a school–university partnership that aims for close collaboration between academic study and professional practice. It is structured around five key pillars:

- learning in student clusters,
- support from a dedicated School Experience Tutor (SET),
- participation in seminars during placement,
- engagement in learning observations and
- joint assessment between school and university staff.

Together, these elements aim to create a coherent, supportive and practice focused framework that enables students to integrate theory with classroom experience through a progressively more demanding remit in alignment with the GTCS Standards for Provisional registration.

Food and Nutrition Within the MEduc Programme

Food and nutrition are addressed within health and wellbeing curricular area of the programme. This cuts across both the CE strand and EE3 courses. All students experience food and nutrition as part of the CE strand but only approximately one sixth of students so around 30 students select the health and wellbeing elective where food and health education is explored in more depth.

Curriculum mapping shows that in the CE3 course students are provided with one two-hour lecture session on food and health. This session introduces a wide range of resources and

themes covering physical activity including the Daily Mile initiative, the Eatwell Guide and its interactive resource, the Better Eating, Better Learning guide, the NHS Food Scanner app and explores topics such as healthy and unhealthy energy giving foods, eating disorders and the development of lesson learning intentions and success criteria with links to interdisciplinary learning (IDL). While these resources provide breadth, the short two hour teaching time frame means there is limited space for critical engagement with their value and appropriateness. For example, although discussion of eating disorders raises important health issues that relates to an aspect of BGE second level experience and outcomes, it takes a deficit approach to food and health and it draws heavily on a high profile sporting personality account (Freddie Flintoff) rather than on wider educational research. Similarly, while IDL is highlighted the specific focus on food and health within interdisciplinary practice is not strongly foregrounded. Additional resources, such as Farm to Fork, are made available through Moodle, offering students further materials to explore food and health education beyond the lecture. While these types of resources can be useful, students may not engage with these during their notational study hours.

In the Educational Elective 3 Health and Wellbeing option students participate in two two-hour seminar sessions designed to develop their understanding of nutrition, health promotion and wellbeing in the primary classroom. The sessions introduce students to a range of resources including the Food Standards Scotland materials and explore risk factors for low physical activity and obesity in Scotland. A large part of the second seminar content is sugar in food to demonstrate one example of a whole school or classroom activity for a health and wellbeing day. Several topics from CE3 are revisited, these include the Daily Mile initiative, the Eatwell Guide and eating disorders. Students also engage in lesson planning tasks that ask them to consider how they would implement healthy eating within a classroom context. While the sessions provide breadth of content and practical applications there are some concerns from an initial teacher education perspective. The compressed timeframe with multiple complex topics covered in just four hours limits opportunities for critical engagement and reflection. There is minimal exploration of the capabilities students are developing and limited consideration of the social, political or cultural influences on learning which are essential when addressing health and nutrition in diverse classroom contexts. Additionally, some content such as eating disorders although present some definitions and statistics does clearly outline how this material is directly relevant to primary education. The sessions rely heavily on resource based learning rather than research informed critical

discussion. This raises questions about how effectively students are supported to make pedagogically informed decisions in promoting food and health education.

Although food and nutrition education is covered in the health and wellbeing, science and technologies curricular areas, within the MEduc programme, food and nutrition are not explicitly covered in relation to the science or technologies curriculum areas. The current structure of the programme includes issues such as social justice, child protection and wellbeing all covered within the programme in terms of the overall responsibility of a teacher in Scotland. However, it does not appear to facilitate a cohesive, overarching health promoting ethos for student teachers across the strands. As a result, opportunities to integrate food and nutrition education across the broader primary curriculum as well as time to make connections between may be limited leaving student teachers without a comprehensive framework for health promoting capabilities in learners.

Conclusion

This chapter has outlined the complex landscape of education in the United Kingdom, demonstrating how devolved governance has shaped four distinct but broadly aligned national systems. Despite differences in policy structures, curriculum organisation and inspection arrangements, all four nations share a commitment to providing high-quality education and to embedding core areas such as health and wellbeing, food education and child development within their curriculum. Scotland's Curriculum for Excellence (CfE) endorses a holistic, learner-centred approach that positions wellbeing as both a curricular area and an area of responsibility of all staff to utilise the interconnectedness of educational experiences, health and children's wider social contexts. Within Scottish education, food and nutrition education holds a significant place, aiming to equip learners with the knowledge, skills and values required to make informed choices in relation to diet, lifestyle and overall wellbeing.

However, this chapter has also highlighted important challenges in translating these aspirations into practice, particularly within initial teacher education. While the MEduc programme at the University of Glasgow provides some opportunities for student teachers to engage with food and nutrition and broader wellbeing issues, the lack of a systematic, integrated programme design, the breadth of content and the resource-focused approach may

constrain deeper critical engagement. Opportunities to meaningfully connect food and nutrition education across the wider curriculum or to explore the sociocultural and political influences shaping children's food environments appear limited. This raises important questions about how well-prepared teachers are to promote a coherent, research informed and socially responsive approach to food education in schools.

Collectively, the contextual, curricular and professional considerations explored in this chapter illustrates the importance of a robust, integrated food and health education agenda is. This study is situated in Scotland within the UK and so will focus on Scotland due to devolved powers within health and education. As subsequent chapters will examine, the principles of the health promoting school initiative as an approach that has shaped educational policy and practice across the UK and more widely in Europe, provide an important context for understanding how schools can support children's wellbeing beyond academic learning. Building on the educational context outlined in this chapter, this model emphasises whole school responsibility for health, recognising that curriculum, environment and community engagement all play a role in shaping young people's choices and behaviours. Yet the wider food landscape marked by government spending constraints, variations in food standards, ongoing concerns about food adulteration and marketing practices creates powerful pressures that schools and teachers must navigate. Understanding this broader context is essential for strengthening teacher preparation and ensuring that food and nutrition education can genuinely support children and young people to lead healthy and informed lives.

Chapter 5: Food, Health and Inequality in the UK Context

Introduction

International evidence has long established diet and nutrition as central determinants of population health. As noted in chapter one, a joint WHO/FAO (2003) Expert Consultation report highlighted the strong links between dietary patterns and the growing burden of chronic diseases and emphasised that nutrition should be positioned at the forefront of public health policy. Critically, the report stressed that effective responses must extend beyond individual behaviour to encompass wider societal, economic and environmental factors, including food production systems, availability and affordability, while also recognising the complementary role of physical activity. Current policy and research debates about school food, children's health and nutrition policy in the UK are closely linked to how food is produced, sold and regulated, as well as how responsibility for public health is organised. While a robust food system has the potential to underpin population health, environmental sustainability and social wellbeing, the current UK food system has been recognised as failing to meet these aims (Food Foundation, 2023). Rising living costs, time scarcity and the dominance of highly processed, energy-dense foods have contributed to a context in which food is often a source of anxiety rather than nourishment. Diet is now a leading risk factor for preventable disease, contributing to widening health inequalities and sustained pressure on public services such as the NHS.

This chapter examines the structural conditions shaping food, health and inequality across the UK. It argues that diet-related outcomes are not simply the result of individual choice but are produced through systemic inequalities embedded within the food system. In doing so, it provides the wider socio-political and economic context within which school-based health and nutrition initiatives operate.

Structural Failures in the UK Food System

The Food Foundation's Broken Plate report (2023) provides an example of these systemic failures in England. Assessing eight key metrics spanning diet quality, health outcomes and sustainability, demonstrates how the affordability, availability and marketing of unhealthy

foods consistently shape dietary patterns in ways that undermine health. Many individuals lack the financial resources to purchase nutritious food, while the most accessible options are often nutritionally poor. At the same time, marketing practices further influence decision-making, contributing to obesity, diet-related disease and entrenched inequalities. The report emphasises that these challenges are structural rather than individually driven, as social and commercial determinants of health have a far greater influence on dietary patterns than knowledge, motivation or personal responsibility alone (Food Foundation, 2023).

Comparable patterns are evident in Scotland. As noted in chapter one, data from the Scottish Health Survey (2023) show that most adults and children do not meet dietary recommendations, particularly in relation to fruit and vegetable intake, while food insecurity has increased, disproportionately affecting households with children and those in deprived areas. These findings reinforce the argument that poor diet is not simply a matter of individual choice but is shaped by affordability, access and broader socioeconomic conditions. Further evidence from the Food Standards Scotland's Dietary Intake in Scotland's Children (DISH) (2025) report provides detailed evidence of high intakes of sugar, saturated fat and discretionary foods (confectionery, savoury snacks, cakes, pastries, sugary drinks, puddings, etc.) among children. It also reflects similar socio-economic trends in diet quality as England. Together, the findings of these reports reinforce the conclusion that poor diet is structurally patterned and closely linked to inequality across the UK.

Neoliberalism, Responsibility and Public Health

Despite a growing evidence base demonstrating the structural determinants of diet and health, public discourse continues to frame diet-related outcomes as matters of individual responsibility. This framing obscures the broader economic, political and environmental conditions that shape dietary choices and constrain people's capacity to act on health advice. The UK food system reflects broader neoliberal priorities that prioritise market efficiency, competition and profit maximisation, often at the expense of public health and environmental sustainability. Within this system, food companies are incentivised to produce and promote foods that are cheap, profitable, energy-dense and convenient, often at the expense of nutritional quality and sustainability (Food Foundation, 2023). As a result, individuals are increasingly tasked with managing health risks generated by structural forces beyond their control. These dynamics have been intensified by prolonged periods of austerity within the

UK, which have constrained public spending on preventative health and shifted responsibility for wellbeing away from the government towards education. Here, schools have increasingly been positioned as sites for intervention and they often carry expectations that extend far beyond their remit. In Scotland, this tension is reflected in the Good Food Nation Plan (2025), which acknowledges food insecurity and diet-related ill health as systemic issues requiring coordinated policy responses. However, while the Good Food Nation (Scotland) Act (2022) signals a commitment to addressing structural food inequalities, its ambitions sit alongside ongoing budgetary pressures and an increasing reliance on individual and education based interventions rather than in the restructuring of the food environments in which choices are made.

Within this context, schools have become central to public health strategy. Schools are increasingly expected to teach healthy eating, cooking skills and lifestyle behaviours as a key mechanism for improving population health. However, such approaches are inherently limited when enacted within food environments characterised by inequality, affordability constraints and the aggressive marketing of unhealthy products. This highlights a critical distinction between knowledge and capability: individuals may understand what constitutes a healthy diet, yet lack the material, financial or environmental conditions necessary to act on that knowledge. Scottish evidence consistently illustrates this gap, reinforcing calls for policy approaches that move beyond education alone to address the structural determinants of food choice.

Conclusion

This chapter has described some structural, economic and political factors shaping food, health and inequality in the UK. It has demonstrated that diet-related health outcomes are deeply embedded within systemic inequalities and cannot be understood solely through the lens of individual behaviour. This context is essential for understanding the role increasingly assigned to schools as sites of intervention. The following chapter builds on this foundation by examining how these broader structural challenges intersect with education policy through the development of Health Promoting Schools, and how schools are positioned to respond to issues of food, health and inequality in practice.

Chapter 6: Health Promoting Schools, Policy Responses and School Food in Practice

Introduction

Building on the structural context outlined in Chapter five, this chapter examines how education systems, particularly schools, have been positioned as key sites for addressing issues of food, health and inequality. It focuses on the development of Health Promoting Schools (HPS), the role of policy and legislation and the practical challenges of implementing health and nutrition initiatives within educational settings. The chapter begins by tracing the origins and development of the Health Promoting Schools movement, before considering the Scottish policy context. It then explores the role of public pressure and celebrity advocacy in shaping school food debates and finally examines how funding, standards and market conditions influence the realities of school food provision across the UK.

Health Promoting Schools: Origins and Development

Health Promoting Schools (HPS) represent a long standing attempt to integrate education with broader health promotion objectives. The European Network of Health Promoting Schools (ENHPS) emerged from a collaborative initiative launched in 1991 by three international agencies in Europe: The European Commission (EC), the World Health Organisation (WHO) Regional Office for Europe and the Council of Europe (CE) (Barnekow Rasmussen & Rivett, 2000). Its development was aligned with the principles underpinning the WHO's Global School Health Initiative introduced in 1995, which sought to promote and strengthen health promotion and education through schools at local, national and international levels. Both initiatives were informed by key global health frameworks including the Ottawa Charter for Health Promotion (1986), the WHO Expert Committee recommendations on Comprehensive School Health Education (1995) and the Jakarta Declaration (1997). The ENHPS was designed to support and develop health education within school communities, promoting schools as 'settings that continuously strengthen their capacity to support healthy living, learning and working' (WHO, 2025:1). Barnekow Rasmussen and Rivett (2000) describe that through the integration of health education, the creation of supportive environments and the development of active partnerships between educators, families and

wider communities, the ENHPS reflected the WHO's vision of health promotion as a holistic process to enable individuals to take greater control of their health through meaningful experiences while simultaneously strengthening educational achievement. Around 2017, ENHPS transitioned into operating as a non-governmental organisation and renamed as the Schools for Health in Europe (SHE) Network. It continues its core commitment to health promotion through schools, ensuring that the ENHPS foundational principles of integrating education, health and wellbeing within the school setting are sustained and further developed with the ongoing support of a range of European institutions.

The concept of the Health Promoting School (HPS) has developed significantly in the UK over the past four decades reflecting an increasing awareness of the vital role schools play in shaping children's health and wellbeing. Bowker et al. (1999: 610) noted, the UK has been part of the European Network of Health Promoting Schools (ENHPS) since 1993. Historically, schools in the ENHPS incorporated health topics within the curriculum and used whole school activities such as themed days, assemblies or community health events to raise awareness and encourage participation across the school community (Bowker et al., 1999: 619). As part of the commitment to the ENHPS, many schools aimed to support pupils in developing long term healthy eating habits by creating more positive food environments through offering healthier canteen options.

Early reports from the UK's participation in the ENHPS highlighted several key challenges. Bowker et al. (1999) observed that schools faced significant challenges in aligning health education with the practical realities of school life, particularly in balancing the teaching of healthy choices with the provision of food options that allowed pupils to put those lessons into practice. Several structural and policy related challenges were also identified by Bowker et al. (1999) in their review of activity on food and nutrition by UK schools involved in the ENHPS. This review evidenced the limited capacity that UK school had to operate as effective health promoting environments due to legislative and administrative changes from the 1980s that weakened schools' roles in supporting healthy eating and nutrition. They noted, as did McIntyre et al. (2022), that the Education Acts (1980, England/ Wales and Scotland) removed the statutory nutritional standards that previously governed school meals and reduced local authorities' obligations to provide them, except for pupils entitled to free school meals. These Acts also made the provision of school milk optional and abolished fixed meal pricing which resulted in reducing the consistency and quality of food provision. Then

the Local Government Act (1988) introduced compulsory competitive tendering, requiring local education authorities (LEAs) to contract out school meals services. Although many contracts included clauses promoting healthy eating there was often challenges with monitoring and enforcing these standards (Bowker et al., 1999). Also, around this time the Education Reform Act (1988) devolved financial control to individual schools, meaning schools became responsible for their own catering budgets. Consequently, schools often relied more heavily on revenue from tuck shops and vending machines that frequently promoted less healthy food choices.

While these early challenges identified by Bowker et al. (1999) highlighted the limitations of policy support for school-based health promotion, the landscape has evolved over the past two decades with renewed efforts to improve school food standards and embed health within educational policy. The World Health Organisation has continued to refine guidance for school-based health promotion. In 2018, the WHO updated global standards and indicators for HPS, providing clear benchmarks for implementing health promoting policies in schools. In 2021, it published a review of contextual factors influencing the implementation of school food and nutrition policies, highlighting the role of governance structures, resource allocation, curriculum pressures and local community contexts. Together, these developments demonstrate the continued relevance of structural, policy and contextual factors first noted by Bowker et al. (1999). This shows that while the HPS model has strengthened over time the interplay between policy, school capacity and context remains critical to the effectiveness of health promoting initiatives.

The Scottish Experience

In Scotland, these early challenges experienced by HPS initiatives informed the development of a more formalised approach to health promotion within education. Healthy public policy has long been recognised as a cornerstone of efforts to improve population health by addressing the conditions in which choices are made (Joffe & Mindell, 2004), and Scotland has sought to embed this principle more explicitly within its education system.

A key turning point was the introduction of the Schools (Health Promotion and Nutrition) (Scotland) Act 2007, which established a statutory framework requiring all schools to function as health-promoting environments. This legislation positioned health and wellbeing

as a shared responsibility across the entire school community and required local authorities to embed health promotion within planning and improvement processes. Importantly, it reintroduced a strong regulatory focus on school food by mandating nutritional standards for school meals and promoting equitable access, thereby aligning education policy with broader public health objectives. This legislative framework has been supported by wider curricular and policy developments. As discussed in chapter four, the introduction of Curriculum for Excellence (CfE) embedded Health and Wellbeing as one of its core curricular areas, positioning it as a responsibility of all teachers rather than a discrete subject. This reflects a whole-school ethos consistent with HPS principles, where health is integrated across learning, school culture and the wider environment. Complementing this, Getting It Right for Every Child (GIRFEC) has reinforced a holistic, child-centred approach to wellbeing, emphasising the interconnections between health, education and social outcomes.

More recently, Scotland's approach to food policy has been further developed through initiatives such as Becoming a Good Food Nation and the Good Food Nation (Scotland) Act 2022, which aim to create a more coherent, rights-based and systems-oriented approach to food. These policies explicitly recognise food insecurity, diet-related ill health and unequal access to nutritious food as structural issues requiring coordinated action across sectors, including education. In this sense, schools are positioned not only as sites of learning but as key settings within a broader public health infrastructure. Scotland has taken a comparatively progressive approach to school food standards. In addition to food-based standards, nutrient-based standards have been implemented to regulate levels of energy, fat, sugar and salt in school meals. These measures are intended to ensure that the nutritional quality of food aligns with national dietary goals and supports children's health and wellbeing. Alongside the expansion of free school meal provision, particularly in the early years of primary school, reflect a commitment to reducing socio-economic inequalities in access to healthy food and will be discussed in more detail further sections within this chapter.

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Joffe and Mindell (2004) argue, policies that reshape food environments rather than merely 'nanny' citizens enable genuine choice and reduce reliance on invasive medical interventions. However, despite this strong policy architecture, significant challenges remain. Financial pressures, workforce constraints, accountability demands and rising food costs continue to shape the capacity of schools and local authorities to deliver on policy ambitions. Variations in local implementation mean that the extent to which schools can function as fully health-

promoting environments is uneven. Furthermore, while policy frameworks emphasise whole-school approaches and structural change, in practice there remains a reliance on education-based interventions that place responsibility on schools and individuals rather than fully addressing the wider food environment. As earlier research suggests, the tension between policy aspiration and practical reality persists. While Scotland's policy landscape reflects a clear commitment to integrating health, education and food systems, the effectiveness of these initiatives is ultimately mediated by resource availability, governance structures and the broader socio-economic context in which schools operate.

The sections that follow examine how these tensions have played out in practice across policy, schools and public discourse, providing the wider contextual conditions within which food and nutrition education is expected to be enacted. They explore the role of public pressure and celebrity advocacy in reshaping debates around school food and food insecurity before discussing the government spending on school meals across the UK. This highlights how funding mechanisms, nutritional standards and cost pressures shape the everyday realities of school food provision. Together, these sections establish aspects of policy and structural context that can impact on food and nutrition in schools and therefore influences teachers' work and responsibilities. This provides a necessary foundation for Chapter seven, which critically reviews the literature on food and nutrition education and teacher education in relation to health, food and nutrition.

Celebrity Intervention, Public Pressure and the Visibility of School Food

Although initiatives such as Health Promoting Schools have existed for over four decades, questions that I consistently revisit is why is there still a persistence of diet related ill health especially within developed countries like Scotland? And why has there been so limited progress? One explanation lies in the extent to which school food and nutrition have remained marginal within public and political discourse until moments of heightened visibility that have forced attention onto the issue. A prime and pivotal example of this was Jamie Oliver's television series Jamie's School Dinners (2005).

Oliver's School Dinners initiative and the subsequent Feed Me Better campaign publicly exposed the poor nutritional quality of school meals and drew attention to the everyday realities of children's food experiences within schools. The 2005 Channel 4 documentary

televised encounters with pupils, parents, catering staff and local authorities to show the standard of school meals and the long term health implications of poor nutrition. The programme revealed the outcome of cost pressures, outsourcing and deregulation on school meal quality. Oliver's advocacy aligned with the World Health Organization's Health promoting Schools Framework, emphasising the need for schools to be active participants in fostering health and wellbeing. His work demonstrated the powerful impact of integrating better nutrition into school systems, not only in improving students' physical health but also in enhancing their academic performance and mental wellbeing. The public response was substantial and led to the removal of highly processed foods such as the infamous turkey twizzlers from school menus, the reintroduction of mandatory nutritional standards in England and the recognition that earlier cost driven approaches had compromised the quality of school meals (Twiner et al., 2009), alongside increased government funding and renewed attention to cooking education through initiatives such as the School Food Plan (2013).

However, the campaign also provoked significant resistance, particularly from some parents and sections of the media. For many families, Oliver's proposed changes were perceived as an external moral judgement on parenting practices and children's preferences, some of this will be explored later in this section. Parents expressed concerns about portion sizes, affordability, cultural relevance and children returning home hungry, particularly in low income communities where school meals represented a key source of daily nutrition. In this sense, resistance to Oliver's reforms reflected not simple opposition to healthier food, but deeper anxieties linked to food insecurity, class, autonomy and trust in institutional authority. This backlash highlights a critical tension within school food reform. While Oliver framed poor nutrition as a public health crisis requiring urgent intervention, many parents experienced the reforms as a loss of choice and control within already constrained circumstances. The controversy revealed how food practices are deeply embedded within social, cultural and economic contexts and how top-down reforms, even when well intentioned, can generate resistance when they fail to adequately engage with lived realities. Jamie Oliver's intervention therefore illustrates both the potential and the limitations of celebrity advocacy. While the campaign successfully catalysed policy change and public debate, it also exposed how structural inequalities shape responses to health interventions. That meaningful reform depended on a high profile celebrity and that such reform was met with resistance rooted in socioeconomic conditions, highlights the fragility of school-based solutions that do not fully address wider food system inequalities.

Renewed Public Pressure: Celebrity Advocacy and Food Insecurity

As Scotland and the wider UK continue to grapple with the practical challenges of sustaining health promoting school environments, public attention has increasingly turned to the structural conditions that shape children's daily experiences of food at school. This concern intensified during the COVID-19 pandemic, when public known figures such as Marcus Rashford (footballer) and Joe Wicks (social media influencer) became central voices in national conversations about child health, nutrition, food poverty and the responsibilities of the state. Rashford's high-profile campaigning for the extension of free school meals and the provision of holiday food and his partnership with the FareShare charity that raised over £20,000,000 to provide free meals to vulnerable children during the pandemic provided not just awareness of and support for child health and nutrition (De Menezes, 2020). With a slightly different emphasis, Wicks focused on promoting children's physical activity during periods of school closure. His online 'PE with Joe' sessions reached over one million viewers worldwide, positioning physical activity as a key component of child health and wellbeing during the pandemic (Bakare, 2020). While both initiatives were met with widespread public support, these campaigns echoed aspects of Jamie Oliver's earlier interventions, illustrating the recurring role of celebrity advocacy in compensating for structural policy limitations. Wicks attracted criticism concerning the individualisation of responsibility for child health and the limits of celebrity-led interventions, issues that were explored earlier in the chapter. Both campaigns nevertheless generated significant public engagement with questions of child health, inequality and state support. This has provided real-world illustrations of Joffe and Mindell's (2004) argument that large-scale improvements in diet and wellbeing require structural measures that ensure healthy choices are accessible, affordable and culturally normalised. The pandemic made visible many of the barriers they describe, including limited access to affordable nutritious foods, socioeconomic constraints that force families to prioritise cost over quality.

Following this surge in public awareness, a broader combination of public figures and charities continued to apply pressure on governments. In 2023 and 2024, celebrities such as Kate Winslet, Ed Sheeran, Olivia Colman, Dua Lipa, Gary Lineker and Tom Kerridge signed open letters calling for the expansion of universal free school meals in England (Food Foundation, 2023; Sky News, 2024). These endorsements highlighted the link between

hunger and poor educational outcomes, the intensifying cost-of-living crisis and the need to ensure that no child is excluded from healthy eating because of family circumstances (LBC, 2023). These celebrity interventions aligned closely with ongoing campaigns led by the National Education Union and The Food Foundation, which have long argued that universal provision reduces stigma, supports children's health and contributes to more equitable learning environments (National Education Union, 2023). Crucially, the heightened visibility generated by these public figures and celebrities has reframed school food as an issue of social justice and children's rights, rather than a peripheral welfare concern. It has also highlighted the issue of the adequacy of current funding models, particularly as schools strive to enact the health promoting principles embedded within curriculum, policy and in initiatives such as health Promoting School Schools all while facing rising costs and significant budgetary pressures. This evolving public pressure provides important context to the following section exploring government spending on school meals as it is evident that tensions between ambition, cost and implementation remain.

UK Government Spending, School Meals and Structural Inequality

Building on the discussion of whole school approaches, where schools are expected to embed health and wellbeing throughout everyday practice, government spending on school meals represents a critical mechanism for translating these educational and health ambitions into real outcomes. Joffe and Mindell (2004) emphasise that the consumption of healthy foods is strongly influenced by both price and availability, an aspiration that remains relevant to school-based nutrition policy in the UK. Even when children and their families are aware of healthy and unhealthy foods and the health challenges associated with food choices, the higher cost of nutritious meals compared with energy-dense, less healthy foods continues to create structural barriers. Ensuring equitable access to healthy food therefore requires deliberate policy measures backed by adequate financial resources, so that all children have the capability to choose and consume nutritious foods as a foundational aspect of their health and wellbeing**.**

Government investment in school meals represents one of the most direct ways to address these barriers and create health promoting school environments. Funding for school meals not only supports compliance with national nutritional standards but also ensures that children can put knowledge about healthy eating into practice by accessing nutritious meals daily. By

aligning financial resources with policy objectives, governments can reduce inequities in dietary access and enable schools to provide consistent, high-quality meals that reinforce educational messages about nutrition. Although the funding landscape in the UK has evolved over time, longstanding tensions remain between policy aspiration and practical implementation. As noted in chapter four, education and health are devolved matters within the UK meaning that each nation has control over public spending including determining its own school meal policies and budgets. The UK Government influence what is possible across the four nations based on the Block Grant and the Barnett Formula. The block grant allocated by the UK Treasury to each nation provides the main source of funding for devolved services. Its size is adjusted annually using the Barnett Formula. This formula allocates a per-capita share of changes in UK Government spending on comparable services in England. When the UK Government increases expenditure on devolved areas such as education, health or child welfare the devolved nations receive a proportional uplift in their block grant known as a Barnett consequential. This mechanism means that national policy changes such as those relating to school meals can indirectly affect the budgets of devolved governments even though implementation decisions ultimately remain their responsibility.

There are also differences across the nations implementation of school meals and universal free school meal (UFSM) entitlements. The UFSM is a policy whereby all children and young people within a school, region or country receive a school meal at no cost (Cohen, 2023). In England, universal free school meals are available to children in the first three years of primary school with this being extended, in September 2026, to all school children whose families receive Universal Credit (Defeyter et al., 2025). Whereas in Scotland, free school meals extend to the first five years of primary school with children in the final two years of primary school being eligible for free school meals if their parent or caregiver receives the Scottish Child Payment. Northern Ireland continues to provide means-tested FSM entitlements only, based on a family's income and received benefits. Wales provide all primary children with universal free school meals. This overall free school meal approach, although varied across nations, directly aligns with Joffe and Mindell’s (2004) emphasis on structural determinants.

School Meal Funding Versus Actual Costs

Across the UK, evidence indicates a persistent mismatch between funding rates per school meal and the actual cost of producing meals that meet nutritional standards. In England, the funding rate typically stands at £2.61 per meal (rising to £3.00 in London) yet estimates suggest the real cost of producing a standard school meal average at around £2.91 once ingredients, labour and overheads are accounted for (School Food Matters, 2024). In Northern Ireland, the discrepancy is even more pronounced with the Education Authority estimating that it costs approximately £4.28 to produce a school meal, yet only £3.10 is charged to paying parents following a 2025 price increase of 50p. Despite this increase, the difference between production cost and price charged highlights a significant government subsidy per meal. Wales faces similar pressures, with the cost of providing a school meal being between £3.20 to £3.40 placing additional strain on local authorities attempting to uphold nutritional commitments. This is also true for the funding rate per meal in Scotland estimated at around £3.33 often falls short of the actual costs of producing a compliant, nutritious school meal, resulting in budgetary shortfalls for local authorities and caterers (Brennan et al., 2022). Despite Scotland's comparatively higher per-meal allocation relative to other UK nations, rising food prices, labour costs and the demands of nutrient-based standards mean that the real cost of meal provision frequently exceeds the reimbursement schools receive. This gap places pressure on catering services to stretch limited resources, potentially constraining menu quality, portion sizes or the ability to source fresh and sustainable ingredients. Collectively, these patterns illustrate a structural issue across systems, so even where governments demonstrate strong policy commitments to school food provision, per-meal funding rates often fall short of the real production costs. This creates ongoing financial pressures that risk undermining the quality and sustainability of school meal programmes.

School Food Standards and Food Quality

Building on each nation's government commitment to reduce socio-economic barriers to healthy eating through free school meal provision the development of school food policy reflects an effort to use structural interventions to promote child health. Although this ambition is often constrained by the practical challenges of funding and the rising cost of

producing nutritious meals. Over the past decade, all four UK nations have also revised their school food standards to reflect evolving dietary guidance and public health priorities. In reviewing these changes during the COVID-19 pandemic, McIntyre et al. (2022) noted that while the four nations follow broadly similar principles, there are notable differences in both policy frameworks and implementation. Each nation has food-based standards governing what schools can serve, but Scotland and Wales have gone further by introducing nutrient-based standards that specify minimum and maximum levels for energy, fat, sugar and other key nutrients (McIntyre et al., 2022). These measures aim to ensure not only that healthier food types are offered, but also that the nutritional profile of school meals aligns with wider health promotion objectives.

This focus on improving the nutritional quality of school food intersects with wider concerns about food quality within the UK food system. The London Food Commission (2025) highlights that food adulteration remains far more widespread than most of the public realises. They define food adulteration as any preventable, deliberate change that reduces food quality or introduces avoidable risks. While legislation distinguishes adulteration from accidental contamination, the Commission notes that both forms undermine consumer trust. Manufacturers may profit by substituting cheaper ingredients, misrepresenting products, or using unnecessary additives to extend shelf life, create product variety or increase the market share. Examples include replacing lean meat with mechanically recovered meat, mislabelling imitation foods, passing frozen items as fresh, diluting staple ingredients and adding fillers or bulking agents. Such practices compromise food integrity and disproportionately impact low income households, who are more vulnerable to reduced-quality foods (The London Food Commission, 2025).

The London Food Commission (2025) further argues that weak regulatory structures, limited transparency and the dominance of industrial interests exacerbate these problems. Although thousands of new food products and ingredients enter the market each year, safety assessments typically evaluate additives in isolation rather than in the combinations in which they are consumed. This practice leaves the cumulative effects of what the commission refer to a ‘chemical cocktail’ unknown. They note that protecting the public requires stronger independent oversight, more transparency, tighter standards and political pressure to ensure that public health and not market forces drive decision making. Given the physical, social and psychological significance of food, addressing adulteration and ensuring high food quality is

essential not only within consumer markets but also within publicly funded settings such as schools, where nutritional standards and food integrity are central to supporting children's health and wellbeing. This echoes Joffe and Mindell's (2004) call for structural interventions alongside education. In this context, it appears particularly positive that Scotland and Wales have taken proactive steps by establishing nutrient-based school food standards, signalling a stronger commitment than other nations to protecting food quality for children.

Marketing and the Promotion of Unhealthy Food

While concerns outlined by the London Food Commission (2025) about the lack of public knowledge of food adulteration and the variable quality of food standards highlight how industry practices can prioritise profit over public health, a related issue is the role of marketing, particularly celebrity endorsements, in shaping dietary choices. As noted earlier in this chapter, public figures can play a positive role in raising awareness of food insecurity, child health and nutrition and in mobilising public and political attention around these issues. However, within a neoliberal, market-driven food system, the same mechanisms of influence can also be leveraged in ways that undermine public health. Marketing is a powerful tool for food and drink companies seeking to expand their market reach. Children and young people are particularly susceptible to such influence, especially from celebrities they admire (Bragg et al., 2016). When this influence is used to promote foods high in fat, sugar and salt (HFSS), it contributes to environments in which unhealthy choices are normalised and even glamorised. This tension highlights the contradictory role of celebrity influence and adds another layer to concerns about food quality, regulation and the commercial interests that shape food choices and ultimately health promoting behaviours.

This problem extends even further when considering international evidence on the effects of food advertising more broadly. McDermott et al. (2003) highlighted that the alarming rise in childhood obesity cannot be attributed to a single cause, but the heavy promotion of foods HFSS plays a significant contributing role. Drawing on a comprehensive review commissioned by the UK Food Standards Agency, McDermott et al. (2003) demonstrated that advertising for HFSS foods has a measurable influence on children's food preferences, purchase requests and consumption patterns. The review was a pivotal piece of scholarship that has significantly advanced evidence informed understanding of health promoting behaviours. McDermott et al. (2003) stressed the role of 'pester power' where children's

exposure to persuasive advertising increases pressure on parents to buy advertised foods, further reinforcing unhealthy dietary habits. This body of evidence demonstrates that commercial food promotion, whether through traditional advertising, digital media or celebrity endorsement, acts as a powerful force in normalising high calorie but nutrient deficient foods in children's everyday lives.

McDermott's et al. (2003) findings were similar to a study exploring celebrity food and drink endorsements and their potential impact on young people, Bragg et al. (2016) identified music celebrities featured in the 2013 and 2014 Billboard Hot 100 Chart and the brands they endorsed from company websites, YouTube commercials, advertising databases and media reports. They then evaluated the nutritional quality of those products using the Nutrient Profile Index for foods and added-sugar content for beverages, before using Teen Choice Award nominations to gauge each celebrity's popularity among young people. The study found that out of 590 total celebrity endorsements, 18% were for food and beverage brands and this was second only to consumer goods. Sixty-five music celebrities endorsed 57 different food and drink brands with 81.5% having at least one Teen Choice Award nomination so indicating a strong child and young person appeal. Bragg et al. (2016) noted that the nutritional profile of the endorsed products was overwhelmingly poor with 71% of non-alcoholic beverage endorsements promoting sugar-sweetened drinks and 80.8% of endorsed foods classified as energy-dense and nutrient-poor.

This combined body of evidence illustrates that problems related to food quality and nutrition extend far beyond food production and manufacturing practices. Within a neoliberal food system, powerful marketing strategies make unhealthy options more visible, more desirable and more socially validated, particularly for young people. The prioritisation of market freedom, profit maximisation and inconsistent regulatory intervention enables food and advertising industries to shape dietary norms through pervasive branding, targeted advertising and paid celebrity endorsements. As a result, the influence of marketing represents a significant public health concern and warrants consideration alongside broader issues of food quality, regulation, industry responsibility and the structural conditions that normalise unhealthy food environments.

Conclusion

This chapter has examined how schools have come to be positioned at the centre of efforts to address food, health and inequality within the UK. Building on the structural context established in Chapter 5, it has shown that while initiatives such as Health Promoting Schools and school meal policies represent important attempts to embed health within educational settings, their effectiveness is fundamentally shaped by wider economic, political and social conditions. Schools are increasingly expected to mitigate the consequences of systemic inequalities, yet they operate within constrained environments characterised by financial pressures, policy fragmentation and market influences that limit their capacity to do so.

Across the chapter, a consistent tension emerges between policy aspiration and practical implementation. The development of Health Promoting Schools reflects a longstanding commitment to holistic, whole-school approaches to health and wellbeing. However, as both historical and contemporary evidence demonstrates, the success of such approaches depends not only on educational commitment but on the structural conditions that surround schools, including funding, governance and the wider food environment. The Scottish policy context illustrates a more formalised and statutory approach to health promotion, yet even here, implementation is uneven and shaped by resource limitations and local variation.

The chapter has also highlighted the role of public pressure and celebrity advocacy in bringing issues of school food and child health into sharper focus. While such interventions have been effective in raising awareness and catalysing policy change, they also expose the fragility of relying on high-profile individuals to drive reform in the absence of sustained structural action. Similarly, analysis of school meal funding, standards and provision across the UK reveals persistent inequalities and systemic challenges, particularly the mismatch between policy commitments and the financial resources required to deliver them. These issues are further compounded by broader concerns around food quality, marketing and the commercial determinants of health, which continue to shape children's food environments in ways that often undermine health-promoting efforts within schools.

Taken together, chapters five and six demonstrate that current challenges relating to child health, food insecurity and dietary inequality cannot be understood as issues of individual behaviour or knowledge alone. Rather, they are embedded within wider food system failures,

neoliberal policy priorities and uneven public investment. Within this landscape, education plays a crucial but inherently limited role. While schools are important sites for health promotion, knowledge alone does not equate to capability, particularly where access to affordable, high-quality food is constrained. These insights raise critical questions about how food and nutrition education is conceptualised, enacted and supported within schools and importantly how teachers are prepared to navigate these complex and contested issues. The discussion presented across these chapters therefore provides the necessary contextual foundation for the next stage of this research. The following chapter moves beyond policy and structural analysis to critically examine the literature on food and nutrition education and teacher education, focusing specifically on what is currently known about how teachers are prepared to engage with health, food and nutrition in practice.

Chapter 7: Exploring the literature on Food and Nutrition Education, Teachers and Initial Teacher Education

Introduction

The preceding chapters established the policy, curricular and socio-cultural contexts shaping food and nutrition education (FNE) within schools, alongside the positioning of schools as key sites for promoting children's health and wellbeing. Drawing on global and national policy frameworks, including health promoting school initiatives, these chapters highlighted both the ambitions placed upon education systems and the persistent challenges associated with translating these ambitions into meaningful practice.

Building on this foundation, this chapter explores existing literature relevant to this research on food and nutrition education, health promotion and initial teacher education (ITE). Rather than providing an exhaustive overview, the review focuses on key debates, theoretical perspectives and empirical findings that are relevant to the focus of the study. Guided by the Capabilities Approach as a theoretical lens, this chapter reviews literature relevant to school-based food and nutrition education (FNE), health promoting behaviours, and teacher education. It traces the evolution of FNE, from early knowledge-focused approaches to more holistic, capability oriented perspectives that consider social, cultural, and environmental contexts. The review highlights persistent structural, curricular and professional challenges that shape the delivery and impact of nutrition education, including the role of teachers in enabling pupils' real opportunities to develop health promoting behaviours. It considers what is known about Initial Teacher Education (ITE) in this area by examining how student teachers' knowledge, confidence and professional preparedness influence their food and nutrition teaching capacity. The review identifies gaps in the literature, particularly the limited empirical focus on ITE students' perspectives, which provides the rationale for this research. This situates the research within broader debates on educational equity, wellbeing and the ethical responsibilities of teachers in fostering learners' capabilities.

Literature Search Strategy

In line with Punch's (2013) work that literature reviews should be systematic in their searching, screening and analysis, I approached the review process as a structured and

deliberate inquiry into my own area of professional interest. The literature search was undertaken to explore what is already known about food and nutrition education (FNE), health promoting behaviours and initial teacher education (ITE), with the aim of deepen my understanding of the problem of practice that has emerged through my work as a teacher educator. This process enabled me to engage critically with relevant theoretical and empirical perspectives, while also identifying gaps and tensions that this research seeks to address. Given the interdisciplinary nature of the research, which sits at the intersection of education, health and teacher development, the search strategy was designed to be comprehensive while maintaining a clear focus on educational contexts.

The primary literature search was conducted through the University of Glasgow Library, drawing on a range of education-focused databases selected for their relevance to research on schooling, teacher education and educational policy. These included several educational databases such as ERIC, the British Education Index, the Education Research Index, the Australian Education Index, Teacher Reference Centre, ProQuest Academic, Child Development and Adolescent Studies, Education Source Ultimate and SAGE Research Methods. These databases provided coverage of peer-reviewed empirical studies, theoretical discussions and policy related research relating to food and nutrition education and teacher education across diverse educational contexts. These sources were particularly valuable in identifying research that bridged educational and public health perspectives, as well as literature addressing qualitative research design and analysis to provide rigour and credibility of the review. Google Scholar was also used selectively to identify seminal texts, newly accepted peer-reviewed literature yet to show via databases and grey literature. In addition, backward citation searching of key texts and forward citation tracking were employed to locate influential studies and more recent research building on established work.

Keywords and phrases were combined using the Boolean operators OR and AND to balance breadth and specificity, allowing related terms to be grouped while ensuring that retrieved studies addressed the intersection of food and nutrition education, health promoting behaviours and initial teacher education. These included combinations of terms related to food and nutrition education, health promoting behaviours and teacher education as well as concepts associated with the Capabilities Approach. The asterisk (*) was used as a truncation and wildcard operator to capture multiple word variations and broaden the search; for example, school* retrieved records including school, schools and schooling, while educat*

captured education, educational and educator in an attempt to capture all relevant literature using varied terminology (see Appendix 2). Search terms were developed iteratively and refined throughout the review process as familiarity with the literature increased.

To manage the scope of the review and ensure relevance to the research focus, inclusion and exclusion criteria were applied (see Appendix 2) to prioritise peer-reviewed literature published in English within the past ten years, with this timeframe later expanded where seminal or foundational works were required. This was particularly relevant to gain deeper insight into developments in aspects of education. Titles and abstracts were initially screened for relevance, followed by full text reading of sources deemed most pertinent to the research focus. In keeping with Punch's (2013) emphasis on analytical engagement rather than descriptive summarisation, the literature was organised thematically rather than chronologically. Analytic notes and reflective memos were used to identify recurring themes, tensions and gaps, particularly in relation to teacher preparedness for food and nutrition education, the role of schools and teachers in health promotion, and the ethical and equity dimensions of food education. The relative absence of capability oriented frameworks within this body of literature was also noted.

This process informed the development of the research question, the adoption of the Capabilities Approach as a theoretical concept and the design of the empirical study. The literature review therefore functions not only as contextual background but as an integral part of the research design.

The Evolution of School-Based Food and Nutrition Education

Early school-based food and nutrition education (FNE) research was shaped by work conducted in the United States of America (USA) during the 1980s and early 1990s. In a similar way to Bowker et al. (1999), who identified legislative and administrative changes in the UK during the 1980s that constrained schools' capacity to function as effective health promoting environments, Contento et al. (1992) noted that federal initiatives such as the 1977 Child Nutrition Amendments and the Nutrition Education and Training (NET) Program prompted more systematic, classroom based investigation into how nutrition education could support disease prevention. Together, these studies illustrate how structural and policy frameworks, whether through investment or restriction, directly shaped the scope, intensity

and effectiveness of school-based nutrition education. Prior to this, there was limited empirical research on this topic despite widespread agreement about the preventive potential of nutrition education. Contento et al. (1992) identified two dominant approaches to FNE during this time. The first focused on general nutrition education that emphasised nutrient knowledge, food groups and influences on food choice. This was often integrated across the curriculum and underpinned by a knowledge–attitude–behaviour (KAB) model that dominated health education at the time. The second approach comprised targeted behavioural interventions aimed at reducing specific health risks and frequently incorporated broader lifestyle behaviours such as physical activity and smoking prevention. These interventions drew on what Contento et al. (1992) described as a social learning theory as it highlighted modelling, skill development and self-efficacy. Across both approaches, Contento et al. (1992) found consistent improvements in children's nutrition knowledge, skills and self-efficacy. However, they also noted that there were variable attitudinal change and limited evidence of sustained dietary behaviour change. Contento et al. (1992) concluded that these limitations were mainly due to the short length of nutrition programmes. They recommended that that longer, multi-year interventions are needed for meaningful and lasting changes in learner behaviour.

Structural and Curricular Constraints on Food and Nutrition Education

Subsequent reviews reinforce the concerns of Contento et al. (1992). Lytle (1994) drawing on several reviews conducted within the same time period also noted the two types of approaches discussed by Contento et al.'s (1992). Their recommendations align with Contento et al.'s (1992) findings, emphasising that nutrition education must be allocated adequate time and delivered through consistent, coherent and sustained learning opportunities that focus on behaviour change and are appropriately aligned with learners' stages of cognitive development in order to achieve meaningful impact. Lytle (1994) also recommended coordinated commitment across multiple levels of governance. They noted that federal agencies should work collaboratively with state and local governments to ensure sustained investment and resource allocation for nutrition education initiatives. They advocate that schools are not only sites of instruction but also as health promoting environments so school lunches through cafeteria provision and food related policies should model healthy food practices and provide consistent access to nutritious food options. Together, these recommendations reinforce the view that nutrition education is most effective

when embedded within supportive school structures and wider policy frameworks that align educational messages with everyday food experiences.

Consistent with the findings of earlier reviews, Norton et al. (1997) had similar findings in their study of nutrition education in Ohio primary schools. From surveying Ohio primary school teachers during 1992–93 they found strong professional support for nutrition education but limited instructional time to do so, with most teachers delivering fewer than fifteen hours per year and often within one term throughout each school year. This insufficient duration echoes Contento et al. (1992) and Lytle's (1994) conclusions that short programmes are unlikely to produce sustained behavioural change. Furthermore, Norton et al. (1997) highlighted additional structural factors influencing programme effectiveness, noting that teachers with prior training or experience in nutrition were significantly more likely to deliver nutrition education. Similarly to Lytle (1994), they concluded that the absence of clear leadership, adequate resources and coordinated collaboration with food service personnel constrained the consistent and effective implementation of nutrition education within schools. These structural limitations resonate with Shepherd et al.'s (2006) UK based findings that looked beyond classroom learning and teaching and individual knowledge acquisition to wider determinants of health when exploring young people (aged 11–16) and healthy eating. They identified a weak alignment between health education messages and food environments such as poor school meal provision and limited availability of healthy food options as significant barriers to healthy eating. Taken together, these studies demonstrate that although schools have long been recognised, through the 1980s, 1990s and into the twenty-first century, as important sites for nutrition education the ways in which it has been delivered based on inconsistent provision, limited instructional time and insufficient systemic support, have undermined the potential for sustained dietary behaviour change in children and young people.

More recent literature indicates that the challenges identified in earlier evaluations of elementary school nutrition education have persisted into the current USA context. Perera et al. (2015) examined nutrition education following the enactment of the No Child Left Behind policy. The USA No Child Left Behind Act (NCLB) was a federal education policy, enacted from 2001, that prioritised school accountability through mandatory annual standardised testing in core subjects of reading and mathematics. The aim of the No Child Left Behind (NCLB) act was to reduce educational inequalities by closing the achievement gaps among

disadvantaged learners. However, in exploring the opportunities and challenges of improving nutrition education in Oregon elementary schools Perera et al. (2015) found that although childhood nutrition is recognised as foundational to academic performance, healthy development and long term disease prevention, nutrition education received limited curricular emphasis within elementary schools. This was evident despite most states mandating the inclusion of nutrition and dietary behaviours within health education. It could be said that the No Child Left Behind act inadvertently led to curricular pressures that limited FNE programme delivery as Perera et al. (2015) noted that as FNE was not assessed through standardised testing as part of the NCLB act that there was a decline its teaching time from approximately five hours per school year in 2000 to just over three hours by 2006. This conclusion is consistent with the more historical findings mentioned earlier in this chapter, indicating that inconsistent and short term nutrition education often lacks the structure and continuity needed for sufficient depth and support for lasting positive behavioural impact.

Whole school and Health Promoting School Approaches

The reduction in dedicated teaching time for food and nutrition education (FNE) reflects a broader pattern in which the prioritisation of assessed academic outcomes frequently marginalises health and wellbeing initiatives. In response to these limitations, increasing attention has been directed towards whole school and multicomponent approaches. Health Promoting School (HPS) frameworks emphasise the alignment of curriculum, school environment and community partnerships as a means of supporting pupil wellbeing (Bowker et al., 1999; Lee et al., 2020). Evidence suggests that such integrated approaches are more effective than isolated classroom lessons in influencing pupils' knowledge, attitudes and behaviours related to health (Chaudhary et al., 2020).

Lee et al. (2020), through their examination of structured school-based programmes such as the Hong Kong Healthy School Award, illustrate how Health Promoting School (HPS) frameworks can facilitate the integration of nutrition education and contribute to positive health and wellbeing outcomes for children and young people. Consistent with earlier work (Bowker et al., 1999) and qualitative evidence from Australian primary schools (Love et al., 2020), their findings affirm the potential of whole school approaches to support health promotion. However, Lee et al. (2020) advance this literature by conceptualising HPS implementation as a complex and sustained process that extends beyond isolated health

events, curriculum topics or the provision of healthier food options. They highlight that many HPS evaluations rely predominantly on quantitative indicators, offering limited insight into whether healthy food related practices are meaningfully embedded within school culture, curriculum and community relationships.

This concern is reinforced by Love et al.'s (2020) qualitative exploration of food and nutrition education (FNE), which demonstrates how competing academic priorities often constrain the depth and consistency of health promotion within schools. Although teachers and stakeholders recognised child health as important and positioned schools as appropriate sites for FNE, nutrition education was rarely embedded as a core curricular component. Instead, it tended to be delivered through whole school initiatives, specialist-led sessions or integration within subjects such as physical education or science. While such approaches address biomedical aspects of health, they frequently overlook the social and cultural meanings of food and eating (Sanderson, 2013). Together, these studies identify persistent structural and pedagogical challenges that include limited policy coherence, curriculum pressures, inconsistency in teacher confidence and restricted access to appropriate resources that undermine the sustainability of FNE within HPS frameworks. As a result, nutrition education is often implemented in inconsistent or surface level ways, limiting its capacity to support lasting behavioural and cultural change. In response, Lee et al. (2020) argue for a cross-curricular approach that positions FNE as a core and integrated element of the curriculum, thereby strengthening whole school efforts to foster meaningful, sustained health promoting practices.

Global Perspectives on Food and Nutrition Education

International studies demonstrate that these challenges are not context specific. This limited, curriculum-wide approach in Australian primary schools echoes broader patterns observed internationally. Esdaile et al. (2024) found that between 79% and 89% of teachers across studies conducted in the United States, Greece and Finland reported incorporating nutrition content into their teaching either as standalone lessons or integrated within other subject areas such as science, mathematics or humanities. However, the actual teaching time devoted to FNE was limited, with as little as one to ten hours being taught annually. This broader international pattern is also reflected in the work of Follong et al. (2021) who examined integrative approaches to nutrition education in primary schools. Here it was also noted that lessons on

food groups and healthy food choices were typically incorporated into subjects such as maths, science or literacy. The review highlighted that the effectiveness of this integrative approach was inconclusive, largely due to inconsistent detail regarding nutritional content and limited information on the implementation of discrete, subject-specific nutrition lessons within schools. Evidence synthesised by Chaudhary et al. (2020) highlights some progression in schoolbased nutrition education by demonstrating how structured interventions can positively influence children's knowledge, attitudes and behaviours. Their review had a different focus from Follong et al. (2021) as it explored the impact of school-based interventions in promoting healthy eating among children and adolescents. Thy found that school interventions can improve a young people's nutrition knowledge, attitudes, behaviours and in some cases body composition. However, as with earlier research, the overall impact of the educational experiences depended heavily on programme design. Interventions that took a whole school environmental or multicomponent approach were consistently more effective than isolated classroom based lessons.

Similarly, a recent study in Nepal provides insight into how nutrition education can be strengthened in Asian school settings. Raut et al. (2024) highlighted that, despite ongoing government and NGO efforts to promote healthy food choices, young people continue to display limited nutrition knowledge, negative attitudes and poor dietary practices. Within their research they acknowledged that misleading information, limited availability and affordability of nutritious foods, misconceptions about healthy diets and broader socioeconomic constraints all contribute to unhealthy eating patterns, exacerbated by the rising availability of fast foods and processed products. In response, Raut et al. (2024) designed a quasi-experimental study to examine the effectiveness of a school-based nutrition education programme among 12–19-year-olds from two private schools in Nepal. Students receiving weekly one-hour sessions demonstrated improved nutrition knowledge and more positive eating-related attitudes and behaviours including reductions in emotional and uncontrolled eating and increases in cognitive restraint compared with the control group. From this, the authors concluded that tailored nutrition education can be effective in promoting healthier dietary behaviours among adolescents and recommended its integration into wider public health and school-based programmes. The study's focus on secondary-aged learners limits the direct applicability of its findings to primary education contexts, where developmental stages, curricular structures and pedagogical approaches differ, as noted in studies such as Norton et al. (1997) and Love et al. (2020). Nevertheless, the findings remain

significant in demonstrating the potential of structured, school-based nutrition education to positively influence young people's knowledge, attitudes and behaviours This also shows the significance of schools as key sites for health promoting educational interventions across age phases.

Building on these findings, similar structural and curricular challenges are evident within European contexts, where research likewise highlights persistent constraints on the effective delivery of food and nutrition education. In Germany, rising rates of childhood obesity and recognition of schools as critical environments for shaping dietary habits have prompted curriculum analyses that reveal both strengths and gaps in school-based nutrition education (Prade et al., 2022). Prade et al. (2022) conducted a qualitative analysis of secondary school curricula in Germany, focusing on nutrition education within scientific and home economics frameworks. The study found that nutrition and human biology are generally taught up to grade 8 (typically around 13 years old so at primary aged level), while more complex topics are introduced from grade 9 onward (typically 13years onwards so the equivalent of secondary school level). The study noted that practical and everyday relevant content such as nutrition for disease prevention, food quality and practical dietary guidance is limited, despite its potential to significantly enhance students' nutritional literacy. Home economics courses, which could address consumer and practical nutrition issues were found to be inconsistently offered with it only being available in three of six states within the study. The findings also showed that electives or honours courses that could supplement nutrition education were not universally accessible. Similarly to the findings of Norton et al. (1997), Perera et al. (2015), Love et al. (2020), Raut et al. (2024) and Lee et al. (2020) implementation and teaching time are highly dependent on individual school priorities, leading to considerable variability and gaps in coverage. Prade et al. (2022) concluded that nutrition education would benefit from intensified teaching within secondary education, the introduction of home economics across all schools and standardised curriculum content across states.

A complementary perspective comes from Spain, where Pérez-Rodrigo and Aranceta (2001, 2003) emphasise that nutrition education should be progressively incorporated into the school curriculum for all ages, from early childhood through secondary education. In exploring the experiences and challenges in nutrition education in schools, Pérez-Rodrigo and Aranceta (2003) found that although national curricula in Spain include food and nutrition education, its implementation is often vague or general and relies heavily on the willingness, capacity

and initiative of overburdened teachers to design and deliver educational activities. Similarly to the research already discussed, they concluded that effective programmes should focus on behaviour change, be tailored to local community needs and account for individual factors such as cultural background and equity. Consistent with these findings, Kealey et al. (2000) highlighted that teacher characteristics, prior training, access to suitable educational materials and support from school leaders are key determinants of the extent and quality of food and nutrition education. This will be explored later in this chapter. Furthermore, this research aligns with broader international evidence discussed earlier, emphasising that food and nutrition education is most effective when environmental and behavioural factors are addressed simultaneously. Incorporating parental and community involvement, alongside creating supportive school food environments, including the quality of school meals, can reinforce classroom learning and maximise the overall impact of nutrition education interventions.

From Knowledge Transmission to Food Literacy and Capability

Food literacy is commonly understood as encompassing dietary knowledge, food preparation skills, and an awareness of sustainability, ethics and food systems situated within broader economic, cultural and environmental contexts. More recent literature positions food literacy as central to the development of learners' capabilities, shifting food and nutrition education (FNE) away from an exclusive focus on knowledge transmission towards a more holistic approach that enables children and young people to navigate increasingly complex food systems (Ares et al., 2024). Building on this perspective, effective FNE is understood to extend beyond classroom based instruction, requiring supportive school and community environments that enable learners to engage with nutrition, sustainability, ethics and food practices as lived and socially embedded experiences (Renwick et al., 2021).

Historically, FNE in schools in England was provided within the secondary schooling sector and provided practical, skill-based cookery lessons that emphasised hands-on learning and life skills (Rutland & Turner, 2020). This traditional model continues to offer valuable experiences that can support internal capabilities, including knowledge, practical skills and dispositions that provide useful life skills as well as pathways into vocational sectors such as catering, hospitality and food product development (Hart and Page, 2020; Rutland & Turner, 2020). This aligns with Ares et al. (2024), who emphasise that food literacy competencies

develop progressively through experiential learning and interaction with socio-cultural and environmental contexts. However, Rutland & Turner, 2020 have noted that as societal challenges evolve and with the growth in global health and environmental challenges, there is increased recognition that food education should extend beyond basic cookery to include broader concepts of nutrition that align with twenty first century needs. Policy frameworks increasingly reflect this expanded understanding of food literacy. Such as in Scotland, the Schools (Health Promotion and Nutrition) (Scotland) Act 2007 mandates health promoting school environments, supporting the development of pupils' food related capabilities by embedding food education across the wider school context (Ares et al., 2024).

Cultural, Social and Contextual Dimensions of Food

Building on the historical pattern identified between the aspirational aims of health promotion, including food and nutrition education (FNE), and learners' lived experiences in schools, evidence spanning several decades shows that practice has frequently remained inconsistent, short term and focused on knowledge transmission, thereby impacting its potential to achieve sustained positive dietary behaviour change (Contento et al., 1992; Lytle, 1994; Joffe & Mindell, 2004; Broken Plate Report, 2023). Daniel and Gustafsson (2010) highlight that the emphasis of FNE remains largely on what children eat rather than on the social, cultural and contextual conditions that shape food practices. From this perspective, nutrition education that prioritises information alone risks being disconnected from the realities of children's everyday lives. Instead, sustained impact is more likely when food and nutrition education prioritises behaviour change. The literature increasingly suggests that more meaningful and sustained impact is achieved when FNE is embedded within learners' wider cultural, social and environmental contexts and delivered through developmentally appropriate, adequately resourced and consistently implemented approaches (Contento et al., 1992; Lytle, 1994; Pérez-Rodrigo & Aranceta, 2003). Pérez-Rodrigo and Aranceta (2003) emphasise that without this contextual responsiveness, nutrition education is unlikely to resonate with learners or support lasting health promoting behaviours. This shifts attention away from individualised models of behaviour change towards a more relational understanding of food practices as socially situated and structurally influenced.

Research examining food practices within school settings reinforces this position. Hart's (2016) study of English primary schools highlights how children's food choices are shaped

by complex social processes operating within school communities, which can both enable and constrain access to balanced meals, snacks and drinks across the school day. Despite the importance of food to pupils' daily experiences, Hart (2016) notes that food related school activities have received relatively little attention as social practices within educational research, even though they play a significant role in shaping wellbeing, identity and school culture. This aligns with broader critiques of biomedical and prescriptive approaches to FNE, which prioritise scientific knowledge at the expense of social and cultural dimensions (Sanderson, 2013).

Lee et al. (2020) highlight that schools adopting an HPS approach should establish socially supportive relationships with learners. But caution that framing food choices through moralised or fear-based narratives can reinforce stigma, guilt or anxiety, particularly for children who have limited control over their diets due to socioeconomic or familial circumstances. Instead, Lee et al. (2020) advocate for approaches that promote informed understanding of nutrition while remaining sensitive to learners' cultural, religious, socio-economic and medical contexts. From this perspective, schools should function as safe and inclusive spaces, free from 'fear and exploitation' (Lee et al., 2020: 609), where nutrition education empowers rather than marginalises.

The importance of cultural sensitivity in nutrition education is not new. De Garine's (1972) early work cautioned against the uncritical transfer of Western dietary models into diverse cultural contexts, arguing that nutrition programmes must be grounded in careful, context specific analysis of food practices if they are to support genuine wellbeing. (Empirical evidence continues to support this position. Estecha et al. (2021), drawing on Global School-based Student Health Survey data from over 24,000 adolescents across eight South Asian countries, demonstrate how nutritional outcomes are shaped by a complex dynamic between behavioural, social and environmental factors, including hygiene practices, sedentary behaviour, peer relationships and parental support. Consistent with De Garine's work, Estecha et al. (2021) findings show variation across national contexts. While school-based interventions hold considerable potential there is a need for culturally adapted, contextually relevant school-based interventions that enable young people to critically engage with health information within the realities of their everyday lives (Estecha et al., 2021; Lee et al., 2020).

Extending the emphasis on cultural and contextual responsiveness in FNE, research highlights the complexity of supporting children with specific dietary needs in school settings. Twiner et al. (2009) demonstrate that school food provision, including food and nutrition education, cannot be understood solely in nutritional or policy terms as food practices are embedded within social, cultural and religious contexts and identities. Although they welcoming reforms aimed at improving nutritional quality, Twiner et al. (2009) analysis of the English school meals debate illustrates how attempts to accommodate religious dietary requirements, such as halal provision, can generate unintended tensions and feelings of marginalisation among different groups. The study further highlights challenges in accommodating religious practices such as fasting during Ramadan and notes that limited understanding of dietary requirements, exacerbate tensions and mistrust among families. Children's partial understandings of religious food rules, combined with inconsistent school practices, require them to navigate complex negotiations between home, school and peer expectations, shaping both identity and belonging (Twiner et al., 2009).

Similarly, research focusing on food allergies demonstrate the importance of inclusive, socially responsive school environments. From qualitative interviews with mothers of children with food allergies Caner (2023) highlights the emotional and social burdens experienced by families managing food allergies within school settings, particularly where staff lack training or confidence in responding to anaphylaxis. The study also noted insufficient communication and occasional insensitivity from the learner's peers and other parents. Feldman et al. (2024) further demonstrate that children with food allergies rely heavily on peers and school staff to ensure safety yet note that knowledge gaps and inconsistent communication can heighten anxiety and limit self-management. Their findings also suggest that inclusive education must attend to children's differing needs and preferences in how food related learning is delivered. As children without allergies demonstrated limited understanding of food allergy risks and preferred more passive approaches to FNE such as video-based presentations whereas children with allergies predominantly favoured interactive classroom discussions (Feldman et al., 2024). These findings reinforce the importance of informed teacher practice and whole school approaches that consider dietary diversity, safety and social belonging.

Collectively, these studies illustrate that effective FNE should engage with the social, cultural and contextual realities of learners' lives. While a full spectrum of diet related medical

conditions have not been explored due to word count constraints the literature explored demonstrates that FNE is strengthened when it is embedded within supportive school environments that are aligned with inclusive policies and are responsive to diversity in identity, access and experience. Approaches that recognise food as a social practice rather than viewed purely through a scientific, biomedical lens are better positioned to support children's capabilities to navigate a school food environment safely, confidently and in ways that promote wellbeing and support health promoting behaviours. This reinforces the argument that FNE should move beyond knowledge acquisition to empower learners to engage meaningfully with food, health and identity within the contexts they inhabit.

Family, Media and Socioeconomic Contexts Shaping Children's Food Practices

Alongside school-based influences, children's food practices are shaped by family dynamics, media exposure and wider socioeconomic conditions. The literature consistently highlights that food and nutrition education operates within complex home and community contexts that can both support and constrain the development of health promoting behaviours.
Studies by Turner et al. (2006) and Kelly et al. (2006) provide insight into parental perspectives on children's food choices and responsibility for dietary decision making. Their findings suggest that parents generally view themselves as primarily responsible for their children's food knowledge and consumption. However, despite demonstrating awareness of the health risks associated with diets high in sugar and fat, parents frequently reported difficulty translating this knowledge into practice. Factors such as children's exposure to food marketing, peer influence and 'pester power' often complicated household purchasing decisions, creating tensions between parental intentions and everyday food choices. This aligns with earlier findings discussed in chapter six (McDermott et al., 2003), illustrating how media and peer cultures shape children's food preferences in ways that extend beyond parental control. Importantly, Turner et al. (2006) and Kelly et al. (2006) also highlight the emotional and practical constraints faced by families. Time pressures, feelings of guilt associated with limited time spent with children and financial considerations were frequently cited as contributing to the purchase of less healthy food options. These findings illustrate a persistent disconnect between nutritional knowledge, intentions and actual food practices within families, reinforcing the need to consider the structural conditions under which food choices are made.

The influence of socioeconomic factors is further illuminated by Lombe et al. (2016), whose analysis of data from the 2007–2008 US National Health and Nutrition Examination Survey examined the relationship between household food insecurity, nutrition knowledge and health risk among low income adults. Their findings demonstrate that while nutrition knowledge was associated with reduced health risk among food-secure households, this relationship did not hold for individuals experiencing food insecurity. Structural constraints such as limited access to affordable healthy foods, stress related to food availability and quality as well as the complexity of food access systems were found to undermine the effectiveness of nutrition education. For individuals experiencing poverty, engagement with nutrition guidance was often reactive in that it responds to existing health conditions rather than taking preventative measures.

Similarly to the previous section, these studies highlight the limitations of food and nutrition education approaches that focus narrowly on individual knowledge acquisition or behaviour change. They demonstrate that a child's and a family's capacities to act on nutritional information are shaped by social, economic and environmental conditions that extend beyond the school gate. From a capabilities perspective, these findings reinforce the importance of recognising how unequal access to resources, time and environments can constrain an individual's real freedoms to adopt health promoting food practices. This reinforces the need for FNE that is responsive to a learner's lived realities and teacher awareness of the broader policy, community and structural contexts that these educational experiences are situated within.

Health promoting Behaviours, Capabilities and the Role of Student Teachers

Across the literature, there is growing recognition that health promoting behaviours cannot be adequately understood as straightforward result of knowledge transmission or individual motivation alone. Instead, research increasingly conceptualise food practices as shaped by the interaction between personal agency, available resources and the wider social, economic and environmental conditions. Drawing Sen's conception of capabilities, Gombert et al. (2017) frame food choice as a constrained practice, where individuals' real freedoms to act are influenced by contextual factors rather than simply by information or motivation. From this perspective health emerges not solely from individual behaviour but from the extent to which

people are enabled to convert knowledge into meaningful action within the conditions and circumstances of their lived experiences (Venkatapuram, 2007; 2011).

This reframing has significant implications for food and nutrition education (FNE) in schools. Rather than encouraging compliance with normative dietary messages, a capabilities oriented approach positions FNE as supporting children's developing capacity to make informed, reflective and contextually meaningful food choices (Hart & Page, 2016; Ares et al., 2024). However, the literature suggests that pupils' capabilities are frequently constrained by inconsistent curriculum delivery, limited experiential learning opportunities and school food environments that do not align with educational messages. Hart and Page (2016), for example, demonstrate how such structural inconsistencies restrict learners' ability to translate nutritional knowledge into practice, particularly in secondary school settings. Furthermore, Welch et al. (2012) note that reductionist framings of food that rely on binary distinctions between 'good' and 'bad' foods have been shown to generate guilt and anxiety among children, ultimately limiting agency and wellbeing rather than supporting it. In contrast, they advocate for pedagogies that align more closely with capability oriented approaches by broadening food literacies to include pleasure, culture, sustainability and ethics.

Within this context, teachers are considered as 'key agents' in shaping whether and how children's health related capabilities are supported (Cotton, et al., 2020:1). The literature consistently identifies teachers not only as curriculum deliverers but also as mediators of values, norms and practices related to food and health within school environments (Bowker et al., 1999; Love et al., 2020; Raut et al., 2024). However, concerns regarding teacher knowledge, confidence and professional preparedness recur across studies (Cotton, et al., 2020; Buttigieg Fiteni & Mimirinis, 2025). Research by Albuquerque et al. (2013) highlights that educators often conceptualise FNE either through a narrow biomedical, nutrient-focused lens or as a broader, socially situated practice. Their findings suggest that teaching practice is frequently grounded in the former, a reductionist framing that can limit engagement with the cultural, ethical and contextual dimensions of food explored earlier in this chapter.

Structural constraints further shape teachers' engagement with FNE. Lack of time, limited curriculum priority and restricted access to reliable nutrition related information have all been shown to significantly constrain teachers' capacity to implement meaningful and sustained FNE (Perikkou, 2015; Love et al., 2020). As a result, responsibility for navigating complex

and contested food related issues is often transferred to individual teachers without sufficient institutional support, leading to variability and inconsistency in practice (Love at al, 2020). Importantly, teacher education research suggests that these challenges cannot be addressed through the development of technical subject knowledge alone. Korthagen's (2003) model of teacher development emphasises that practice is shaped by deeper layers of belief, professional identity and sense of purpose. In complex and sensitive areas such as FNE, unexamined assumptions about food, health and responsibility may significantly influence how curriculum intentions are interpreted and enacted.

Research focusing specifically on ITE students reinforces these concerns. Studies indicate that while student teachers generally recognise the importance of FNE, many report feeling underprepared to teach it effectively (Peralta et al., 2016; Coccia et al., 2020). Differences across teaching phases are evident, with those preparing for secondary education often demonstrating lower engagement with whole school health approaches (Rossiter et al., 2007). Furthermore, student teachers' personal health beliefs, self-efficacy and dietary practices have been shown to influence their intended pedagogical approaches, highlighting the interconnectedness of personal and professional preparedness (Coccia et al., 2020). Drawing on a large national sample of primary teachers, Perikkou (2015) conceptualises teachers' engagement with school-based nutrition programmes as a developmental process shaped by experience, motivation and contextual constraints. These findings suggest that confidence and professional judgement in FNE are not automatically acquired through ITE alone.

Evidence from school-based research further highlights why this developmental framing matters. Caparosa et al. (2014) demonstrate that a substantial proportion of foods and beverages consumed within schools originate outside formal meal provision particularly through classroom rewards, celebrations and fundraising activities with unhealthy items significantly outnumbering healthier options. Their findings highlight how informal, relational classroom practices can undermine school nutrition policies. This positions teachers as influential role models through everyday decisions rather than formal instruction alone. Building on this, Daniels et al. (2025) show that teachers continued use of food rewards, especially confectionery, is shaped less by health knowledge or perceptions of harm and more by perceived practical and social barriers, including affordability, beliefs about pupil acceptance and the normalisation of these practices among colleagues. Together these studies suggest that teachers' food related practices are embedded within institutional norms

and limited policy awareness. This reinforces the importance of addressing ethical, relational and structural dimensions of food education within teacher preparation rather than relying solely on individual behaviour change or knowledge transmission.

Contemporary food environments introduce further complexity by reshaping the conditions under which children and families engage with food and health knowledge. The growing availability of digital food information tools, including food labelling systems, scanning apps and social media content, increasingly influences how health and nutrition are interpreted and acted upon. While such tools may expand access to information, the literature cautions that they can also narrow the range of understandings available to learners by promoting reductive, rule based interpretations of food and amplifying moralised or fear-based health messages (Welch et al., 2012; Esdaile et al., 2024). From a capabilities perspective these risks constraining rather than expanding learners' agency, as numerical scoring systems and claims of objectivity may limit opportunities for critical engagement, particularly when the reliability of the evidence is uncertain (Langer, 2024).

When food related knowledge is framed in binary or prescriptive terms, learners' freedom to develop informed, context sensitive judgements about eating may be reduced, particularly for those whose food choices are shaped by socioeconomic, cultural or familial constraints. In such contexts, the role of teachers becomes pivotal. Without sufficient disciplinary knowledge and professional judgement, teachers may struggle to mediate or critically contextualise these messages, potentially reinforcing inequitable, anxiety-inducing or exclusionary narratives around food and health within the classroom. Alternatively, where teachers are equipped to engage critically with digital food information, they can support the development of learners' capabilities to interpret health messages reflectively, navigate complex food environments and make meaningful choices within the realities of their lived circumstances.

Viewed through a capabilities lens, these findings highlight to me, the important role teachers play in proving children with opportunities to develop health promoting behaviours. Teachers' knowledge, beliefs, confidence and access to professional support shape whether FNE expands or constrains pupils' real freedoms to engage with food in informed, reflective and socially grounded ways. It could be concluded that this positions ITE as a critical site for intervention, where future teachers can begin to develop not only foundational knowledge of

food and nutrition but also the professional judgement, ethical awareness and reflective capacity required to navigate the complex social realities of contemporary FNE.

Implications for Initial Teacher Education and Research Gaps

Collectively, the literature reviewed points to the centrality of ITE in shaping future teachers' capacity to engage meaningfully with FNE. Evidence that teachers' preparedness develops over time and is influenced by experience, self-efficacy and contextual support reinforces the importance of ITE as a foundational phase in professional learning (Perikkou, 2015). Rather than positioning FNE as an additional curricular burden, ITE programmes have the potential to support student teachers in developing reflective habits, confidence and professional dispositions that enable engagement with the ethical, cultural and socio-economic dimensions of food and health.

The literature suggests that the effectiveness of FNE depends less on access to curricular resources or informational tools and more on teachers' capacity to interpret, contextualise and critically mediate food related knowledge (Korthagen, 2003). Insights from professional learning research emphasise that such capacity is most effectively developed through sustained, practice connected and collaborative learning experiences that explicitly address subject specific pedagogies (Darling Hammond et al., 2017). For FNE, this implies the need for structured opportunities within ITE for student teachers to examine their own assumptions about food, health and responsibility, to critically engage with contested knowledge sources and to reflect on how these can and do shape their pedagogical decision making.

Despite the range of literature on FNE, health promoting schools and teacher education, there remains limited empirical research that focuses on ITE students' perspectives through a capabilities oriented lens. In particular, little is known about how student teachers conceptualise their role in supporting pupils' health related capabilities, how they navigate tensions between policy aspirations and classroom realities, or how their ethical positioning and emerging professional identities influence intended practice. This therefore establishes a rationale for this research. Addressing these gaps could play a key role in strengthening the alignment between aspirational policy goals for FNE and the lived realities of school practice. It is within this space that this research is situated, it aims to explore and provide empirical

insights into ITE students' knowledge of food and nutrition education and their perceived role in supporting pupils' capabilities to adopt health promoting behaviours.

Conclusion

This chapter has shown that food and nutrition education is shaped by structural constraints, cultural contexts and social inequalities. While schools are consistently positioned as key sites for health promotion, inconsistent provision and limited systemic support undermine sustained impact. Central to addressing these challenges are teachers and the ways in which initial teacher education prepares them to engage ethically, critically and confidently with food and nutrition education. The next chapter builds on this review by outlining the research methods adopted for this study. It will explain how ITE students' perspectives were explored and how aspects of the Capabilities Approach informed the design, data collection and analysis.

Chapter 8: Research Methods

Introduction

This chapter outlines the methodological approach adopted to explore initial teacher education (ITE) students' knowledge of food and nutrition education (FNE) and their perceived role in supporting pupils' health promoting behaviours. The study is located within an interpretivist qualitative research paradigm, reflecting an interest in how participants make meaning of their experiences within specific institutional, curricular and socio-cultural contexts. Empirical research in education commonly involves activities such as observing, listening, reading and engaging participants through structured or semi-structured tasks (Carter, 2018). Within interpretivist research, qualitative methods are particularly suited to accessing participants' subjective experiences and interpretations (Creswell, 2017). It appears fitting to utilise student voice to explore what has been experienced and to reflect on practices within the MEduc Programme. As this study gathered student teachers' voices in order to explore their knowledge and how they understand and negotiate their emerging professional responsibilities, qualitative methods were selected as the most appropriate means of addressing the research question.

Consistent with guidance from the Higher Education Academy (2017), which advocates dialogical and collaborative approaches within higher education research, this study adopts methods that enable participants to articulate their perspectives in depth while recognising the relational nature of knowledge production. The chapter outlines the study's methodological orientation, participant recruitment, data collection methods, analytic approach, and ethical considerations.

Research Design: A Capabilities-Informed Interpretivist Approach

This research is informed by the Capabilities Approach, which functions as both a theoretical context that has helped to inform and shape the research design, conduct and interpretation of the data. Rooted in Sen's (1999) focus on agency, freedom, opportunity and constraint, Nussbaum's (2011) Capabilities Approach conceptualises capabilities in terms of what

individuals are ‘able to be and do’. This offers a powerful lens for examining professional formation within initial teacher education.

Building on the conceptual framework outlined in chapter three, the design of this study is also shaped by Berman and Smyth’s (2015) pedagogical model, which foregrounds the importance of coherence between ontology, epistemology and methodology in doctoral research. Rather than reiterating this framework, its influence is operationalised here through the alignment of philosophical positioning with methodological choices. In this sense, the Capabilities Approach provides the substantive lens through which this coherence is enacted, while Berman and Smyth’s model offer the structural logic that underpins the research design. Consistent with the ontological position that reality is socially constructed and relational, I have endeavoured to avoid decontextualised accounts of practice in favour of approaches that capture the complexity of the students’ educational experiences. Rather than treating student teachers’ knowledge or preparedness as individual attributes, this study considers how relational and structural factors enable or constrain what participants are genuinely able to do and be in relation to food and nutrition education. Similarly, the interpretivist epistemological stance (where knowledge is understood as co-constructed through dialogue, experience and reflection) directly informs the selection of methods used in this study. In line with Berman and Smyth’s (2015) assertion that methodological decisions must align with what counts as knowledge, this study adopts qualitative approaches that focus on participant voice and meaning making.

Adopting a capabilities-informed approach has several implications for the research design. First, it necessitates methods that allow participants to express their experiences and reasoning in their own terms, enabling a focus on agency and voice. Second, it requires sensitivity to issues of power, dignity and ethical responsibility, particularly given the researcher’s institutional role. Third, it encourages analytic attention to the distinction between functionings (what student teachers report doing) and capabilities (the opportunities and freedoms available to them to act meaningfully within educational contexts). This alignment between philosophical commitments and methodological practice is the reason why the choice was made to gather data through collaborative focus group discussions as a primary method. These groups enabled a relatively ‘hands-off’ facilitative role for me as the researcher, while creating a supportive peer environment in which participants could generate discussion, prompt one another’s ideas and articulate potentially shared but possibly

divergent experiences. This collective dialogue was subsequently complemented by individual interviews to provide space for deeper reflection and allowed participants to elaborate on their personal experiences, constraints and opportunities that may not have emerged fully within the group setting. In this way, the methods reflect both the interpretivist emphasis on co-constructed knowledge and the capabilities focus on agency, voice and context.

In this study, the Capabilities Approach does not function as a prescriptive analytic template. Instead, it operates as a theoretical lens that informs the questions asked, the interpretation of data and the reflexive stance I adopted as the researcher. This is consistent with Sen's (1999) emphasis on evaluative reasoning and Nussbaum's (2011) insistence on treating individuals as ends in themselves rather than as instruments of policy or institutional agendas. It also reflects Berman and Smyth's (2015) view of the conceptual framework as an intellectual tool that supports coherence and reflexivity across the research process.

Researcher Positionality and Reflexivity

The researcher's positionality is a significant consideration in this study. As explained in chapter two, as a teacher educator and programme leader for the MEduc programme, I occupy an insider role within the institutional context being researched. This positioning provides insight into the structures, expectations and constraints of initial teacher education, but also raises ethical and methodological considerations related to power and influence. In line with Berman and Smyth's (2015) emphasis on reflexivity as integral to maintaining coherence between philosophical stance and research practice, reflexivity was embedded throughout the research process. To address these issues, data collection was scheduled at the end of the teaching semester to minimise perceived power imbalances and reduce the risk of participants providing socially desirable responses based on my role within the programme. Participation was voluntary, with clear assurances that involvement or non-involvement would have no impact on academic progression.

My engagement with and grounding in the Capabilities Approach supported ongoing reflexive scrutiny by orienting analysis towards questions of justice, agency and responsibility. This helped to resist deficit-oriented interpretations that might locate limitations solely within individual student teachers, instead directing attention towards

institutional, curricular and structural conditions shaping professional learning. In this sense, reflexivity functioned not only as an ethical requirement but also as a methodological practice that sustained alignment between the study's conceptual framework and its empirical execution.

Participants and Recruitment

Purposive sampling was used to recruit participants from the University of Glasgow's MEduc programme. Following ethical approval from the College of Social Sciences, all fourth and fifth year primary student teachers on the programme were invited to participate via their university email accounts. Fourth and fifth year cohorts were included in order to capture students in the final stages of their initial teacher education (ITE) journey, as some student teachers exit the programme with a teaching qualification at the end of fourth year, while others continue into a fifth year of master's level study. Information sheets were provided that outlined the purpose of the study, what participation would involve and participants' rights that included the right to withdraw at any time. In total, twenty three students initially expressed an interest in participating in the study. Of these, seventeen took part in the focus group discussions, with six participating in the individual follow-up interviews. This combination of participation enabled both collective exploration of shared experiences and more in-depth individual reflection, consistent with the study's interpretivist and capabilities-informed approach.

As stated in the previous section, although I am not directly involved in teaching or supervising these cohorts, my role as programme leader needed careful consideration of the recruitment process. Conducting the study at the end of the face-to-face teaching period was intended to minimise coercion and support the generation meaningful data.

Data Collection

Punch (2013) acknowledges that the most common data collection method in qualitative research is interviews. Carter (2018) explains the flexibility of interviews stating that they can be structured, semi-structured or unstructured to align with the purpose of the project and the overall research question. Bryman (2016) notes that although individual interviews dominate qualitative research, focus groups, a form of group interview, has grown in use in social

research and can be more supportive of participants expressing any their thoughts, opinions and experiences in relation to the topic than individual interviews. This can be due to individual interviews being too researcher controlled. Focus groups can provide an opportunity for the researcher to observe how the participants collectively make sense of a topic or experience and construct meanings around it (Bryman, 2016).

My research used two qualitative data collection methods: semi-structured focus group collaborative discussions and semi-structured individual interviews. As mentioned in the previous section, focus group discussions were conducted first followed by individual interviews. This sequencing enabled an initial exploration of shared experiences through group interaction, which was then extended through individual interviews that allowed for deeper, more reflective engagement with participants' personal perspectives. Both interview methods were semi-structured and based on open questions in an attempt to gather information with minimal researcher influence. These collection methods aimed to gain as true a picture as possible of the lived experience of participants with minimal bias. I selected a semi-structured approach to data collection over the other methods outlined by Creswell (2017) as I hoped that this would provide consistency in approach and the opportunity for participants to express themselves more independently and freely due to fewer confines than a more structured approach. I also hoped that this interactive process would allow for spontaneous prompts in response to conversations that may help to gain a deep understanding of participants' experiences. Cleaver et al. (2014) note that structured interviews or questionnaires can be more restrictive than semi-structured interviews. Based on this I believe this could impact on the participants' freedom to fully express their experiences. This was particularly important to consider given the exploratory nature of the study and its interest in professional identity, ethical judgement and perceived responsibility. It was therefore necessary to strike a balance, recognising that the richness of naturally occurring data in semi-structured interviews could be constrained by the rigidity of structured formats or, conversely, lack sufficient focus in unstructured approaches. Limitations will be discussed in a later section.

Data Collection: Focus Groups

Focus group discussions were used to explore shared understandings and collective sense-making among student teachers. This decision was taken based on Bryman (2014) work that identifies some common distinctions between focus groups and group interviews. The first being that group interviews are used to gather a large amount of data by interviewing several participants at the same time in order to save time and other resources such as money. Group interviews are usually widely focused whereas focus groups are usually more specific in focus of a particular topic. Bryman (2016) notes that a focus group usually allows for the researcher to observe the participants discussing a particular topic as a group, rather more individually within a group interview. A focus group researcher will be interested in such things as how people respond to each other's views and build up a view out of the interaction that takes place within the group rather than focusing mainly on what is said from group interviews (Bryman, 2016). This form of data collection is based on what Gibbs (2012) describes as participant group interaction rather than individual interviews conducted in a group setting. Denzin and Lincoln (2018) explain the significance of dialogue and active participation in the research. They state that democratic and dialogical data collection methods can allow for all voices to be heard. Semi-structured interviews in the form of a focus group can engage participants in peer dialogue based on the research topic themes. This approach may be a more lucrative data collection method than group or individual interviews due to gaining insights into shared understandings of the topic (Morgan and Kreuger, 1993). Carter (2018) states that focus groups help to move beyond the thoughts and actions of individual participants in isolation. Using focus group discussions to prioritise interaction and the co-construction of meaning through dialogue aligns with the study's capabilities-informed emphasis on participants' social connections and contexts.

However, Carter (2018) does note that a challenge with facilitating a focus group is ensuring that there is not a dominant voice within the group. From considering the concerns of Cater (2018) the focus groups for this project took place in person, on campus and were organised as a collaborative activity that utilised the carousel activity approach. A carousel activity uses rotating roles through techniques such as 'think-pair-share', 'power of the pen' and 'piggy-backing' (Carroll, 2018:147) to facilitate an equal space for all voices. The collaborative approach to the focus group was selected to help facilitate a collective response rather than one

dominant voice. Morgan and Kreuger (1993) note that an approach that facilitates this type of group interaction approach can be a lucrative data collection method. I felt that a group collaboration approach to the data collection was a supportive measure to encourage responses as the collaborative nature of the focus group provides an opportunity to share experiences and build on thinking. This can generate a productive, diverse reflective discussion. This diversity can enrich the data gathered due to a range of insights and viewpoints on the topic under consideration.

I hosted three focus groups with students in their final year of study in the MEduc programme: two for MEduc 4 and one for MEduc 5 students. Each focus group session lasted for a maximum of one hour with the first group containing nine participants, second group containing five participants and the other group containing three participants. During the first focus group session the nine participants worked in three groups of three to discuss and collaborate on a group written response on one research question per group and then they carouselled around the other questions within the one-hour time frame. As each subgroup moved between the research questions, they had the opportunity to agree with or build on (piggy-back) the responses recorded by previous groups. The ‘power of pen' (Carroll, 2018) allowed for different participants to take the lead on recording the responses. At the end of the session each subgroup was able to return to the research question to review and add any further thoughts and experiences. The second and third focus groups session followed a similar structure in terms of working through each question independently as a group with little researcher intervention, however, as there was only one group there was no opportunity for piggy-backing on other subgroup responses, however, they were able to make use of the ‘power of pen’ strategy that allowed for different participants to take the lead on recording the responses. At the end of the session the group was able to return to all the research questions to review, edit and add any further thoughts and experiences.

Data Collection: Individual Interviews

In addition to focus group discussions, individual semi-structured interviews were conducted, in a similar manner, to explore issues emerging from the focus groups in greater depth. Like focus groups, individual interviews are dialogical in nature, providing participants with a space to articulate experiences, uncertainties, and reflections through active discussion (Denzin &

Lincoln, 2018). This method allows participants' voices to be heard more directly, while also recognising that the quality of data can depend on participants' verbal confidence and ability to articulate their thoughts.

Six interviews were conducted online via Zoom and lasted up to forty-five minutes. Semi-structured interview questions were informed by the focus group findings and shared with participants in advance. Providing the questions beforehand offered participants time to reflect and organise their thoughts, supporting more considered and detailed responses within the interview timeframe.

Overall, the individual interviews complemented the focus groups by enabling deeper exploration of emerging themes by providing more specific examples of experience or knowledge. Guided by the Capabilities Approach, the interviews focused not only on student teachers' knowledge or action in relation to the topic, but also on the opportunities, freedoms and constraints shaping their professional learning, supporting insight into the meaningful choices participants made within their educational contexts.

Interviews Recording and Transcribing

With participants' consent, all six individual interviews took place online and were recorded via the Zoom recording function. Immediately after recording, all recorded data were downloaded and deleted from the University Zoom storage cloud, with only the audio and transcription files retained within the University's secure OneDrive storage space. The transcripts were generated via Zoom and subsequently read in full and checked against the original audio recordings to ensure accuracy and that transcriptions were as close to verbatim as possible. This process ensured fidelity to participants' accounts and enhanced the rigour of the data preparation stage.

Maintaining a high level of verbatim detail was particularly important for the purposes of reflexive thematic analysis, as it preserves not only the content of what participants said but also the ways in which they articulated their experiences. This supported a close and systematic engagement with the data during the initial stages of coding, ensuring that early interpretations remained grounded in participants' expressed accounts (Braun and Clarke,

2006). Preserving this level of detail also enabled a more nuanced engagement with the data across the analytic process, allowing attention to meaning, emphasis and context. It reflects a reflexive awareness of my role as the researcher in representing participants' voices, ensuring that subsequent coding and theme development remained closely connected to the richness and complexity of the original accounts. This approach reflects an interest not only in the content of participants' accounts, but also in how experiences are articulated and framed (Bryman, 2016).

Data Analysis Method

The data produced from the focus group written responses and the individual interview transcripts were analysed using an interpretative approach informed by Braun and Clarke's (2019) reflexive thematic analysis framework, originally developed in their 2006 framework. This six-phase guide provides a structured yet flexible approach for analysing qualitative data in order to generate meaning from participants lived experiences, while explicitly recognising the active role of the researcher in constructing, rather than discovering, themes. In contrast to approaches that seek to summarise or quantify patterns, reflexive thematic analysis supports an interpretive engagement with data. It involves moving from familiarisation through coding to the development and refinement of themes as a way of interpreting the data before forming conclusions.

Consistent with this framework, I worked through phases one to five of the analysis first using the focus group data. The emergent themes from this initial phase then informed the development of focus areas explored in the subsequent individual interviews. I then repeated phases one to five with the individual interview transcripts. This iterative sequencing enabled an ongoing interaction between datasets, supporting the refinement and deepening of analytic insight rather than treating each dataset as entirely discrete. As a novice researcher, I found Braun and Clarke's (2019) six-phase thematic analysis framework particularly valuable in moving beyond surface-level summarisation and supporting a structured yet interpretive engagement with the data. For clarity, the analytic process is presented below according to Braun and Clarke's phases rather than separated by dataset, in order to avoid unnecessary repetition and to foreground the coherence of the analytic approach across both methods.

Familiarisation and Initial Coding

The first phase provided an opportunity to familiarise myself with the data collected. This mainly involved repeated reading of the focus group written responses and the individual interview transcripts. This process enabled immersion in the dataset and the identification of initial points of analytic interest. In phase two, I began generating initial codes. Focus group responses were photocopied and interview transcripts printed to facilitate detailed manual coding, that began with highlighted any words or phrases that appeared significant in relation to the research questions. I worked on one dataset at a time and returned to each written response and transcript on three separate occasions to familiarise myself with the data and ensure that I had identified any words and phrases that appeared significant. At this stage, analysis primarily engaged with the semantic content of the data, focusing on surface-level meaning and explicitly expressed participant accounts.

During the initial stages of coding, I engaged primarily with what Braun and Clarke (2006) refer to as the semantic content of the data, to highlight recurring or significant features in the participants' accounts. This process supported a systematic and rigorous engagement with the dataset, ensuring that initial coding remained closely aligned with participants' accounts before progressing to deeper levels of analysis. In this sense, the early phase of coding reflected aspects of a manifest approach to analysis, which focuses on the explicit, surface-level content of the data, prioritising factually observable data and maintaining a direct relationship between what was expressed by participants in relation to the analysis generated, while minimising researcher interpretation (Cash & Snider, 2014: 443).

Theme Development: From Semantic to Latent Interpretation

Phase three involved the development of initial themes. At this stage, the analysis developed into a more explicitly latent, interpretivist process as the attention shifted from what participants explicitly said to what their accounts might signify in relation to the research focus. Latent analysis is concerned with interpreting underlying theoretical constructs through observable features of the data, with meaning developed through researcher judgement and attention to implied significance rather than surface description alone (Cash & Snider, 2014).

At this stage, I colour-coded segments of data that appeared similar and conceptually related and began constructing analytic notes to capture my interpretive insights. This included interpreting how participants' experiences reflected broader issues of opportunity, constraints and agency, informed by the Capabilities Approach. In doing so, the analysis moved beyond description to engage with the relational, institutional and structural conditions shaping participants' experiences of food and nutrition education. This progression from semantic manifest coding to latent interpretation is consistent with reflexive thematic analysis as outlined by Braun and Clarke (2006; 2019), who emphasise that themes are actively generated rather than discovered within the data. My analysis involved recognising patterns of significance and constructing meaning through sustained engagement with the dataset, informed by theoretical sensitivity and reflexive interpretation.

Reviewing, Defining and Refining Themes

In phase four, over a period of several weeks, I returned to the dataset to review the initial thematic structure. This involved re-examining coded data extracts to ensure coherence within and between themes and to refine boundaries where necessary. Consistent with the reflexive nature of thematic analysis described by Braun and Clarke (2019), this process required sustained critical engagement with the data rather than a linear progression through discrete stages. Braun and Clarke (2019: 591) emphasise that reflexive thematic analysis is both rigorous and systematic, while requiring theoretical knowingness and transparency on the part of the researcher.

Phase five then involved defining and naming themes, undertaken across multiple analytic sessions. This required iterative consideration of what each theme represented in relation to the research questions and conceptual framework, as well as how the themes collectively contributed to an interpretive account of participants' experiences. The use of focus group data to inform initial analytic direction supported the development of concepts that shaped the focus of subsequent individual interview questions. However, rather than functioning as fixed categories, these themes were treated as provisional and open to refinement throughout the analytic process. This reflects the iterative and reflexive nature of thematic analysis, in

which data collection and analysis are interwoven rather than strictly linear (Braun & Clarke, 2019).

Importantly, theme development is inherently interpretive and shaped by the researcher's positionality, theoretical framing and analytic judgement. In this study, my positioning as a teacher educator and programme leader, alongside the guiding influence of the Capabilities Approach, shaped how meaning was constructed. The Capabilities Approach informed early sensitivity to concepts such as agency, opportunity and constraint, these ideas were more fully developed during the later stages of analysis in phase six. As such, themes are presented not as objective or neutral representations of reality, but as situated interpretations co-constructed through engagement with the data, the conceptual framework and my reflexive awareness of my institutional role.

Producing the Analytic Narrative

Phase six, the final phase, involved the production of the analytic narrative. In this stage, themes were woven together combining examples from the data with interpretation and theoretical insight to create a coherent interpretive account of the findings. The focus group and individual interview analyses were written up separately to preserve the integrity of each dataset and to allow for comparison across contexts. Braun and Clarke (2019) emphasise that reflexive thematic analysis is not a mechanistic reporting of themes but an interpretive act in which the researcher actively constructs meaning through engagement with theory, context and reflexive awareness.

In my approach, themes were not treated as fixed entities but as analytic constructions shaped through engagement with data, theory and my reflexivity. The Capabilities Approach functioned as a sensitising conceptual lens rather than a prescriptive coding framework and continued to inform my interpretations throughout this phase. In particular how participants' accounts reflected opportunities, constraints and forms of agency within their professional formation and it guided attention towards questions of what participants were able to be and do within food and nutrition education and how institutional, relational and curricular conditions shaped these possibilities. This allowed the analysis to move beyond surface descriptions of student teachers' experiences towards a deeper examination of the conditions

that enable or restrict their capacity to support health promoting behaviours in educational contexts. This interpretive coherence reflects the pedagogical model proposed by Berman and Smyth (2015), in which alignment across ontology, epistemology and methodology supports rigorous doctoral inquiry. In this study, that alignment has been operationalised through a Capabilities-informed interpretivist approach, where philosophical commitments to relational understandings of human experience are enacted through reflexive thematic analysis and theory-informed interpretation. This aligns with Sen's emphasis on real freedoms and opportunities, and Nussbaum's distinction between functionings (what individuals do) and capabilities (what they are able to do meaningfully within context). Analytically, this enabled a shift away from individualised or deficit-oriented interpretations towards a more relational understanding of professional learning, situating student teachers' experiences within broader structural and institutional conditions.

Reflexivity and Positionality in Analysis

Throughout the analytic process, reflexivity was central. As a teacher educator and programme leader on the MEduc programme, I occupied an insider positionality within the institutional context of my research. This required ongoing critical reflection on how my assumptions, experiences and professional role shaped interpretation. Engagement with the Capabilities Approach supported this reflexive stance by foregrounding questions of justice, agency and structural constraint. This helped to resist interpretations that might locate responsibility for perceived limitations solely within individual student teachers, instead directing analytical attention towards the institutional, curricular and relational conditions shaping professional learning. In doing so, the analysis sought to highlight how initial teacher education contexts enable and constrain the development of student teachers' capacity to engage with food and nutrition education in ethically informed and contextually responsive ways.

Ethical Considerations and Some Limitations

Ethically, this research is considered low risk due to participants being over the age of 18, competent to give consent and have autonomy over their participation. However, cognisant of the fact that no research process can ever be considered totally risk-free the project was approved by the University of Glasgow's (UofG) College of Social Sciences ethics

committee. Research integrity and data management training were completed to support me in conducting ethical research based on my DPIA and agreed data management plan for the research study.

Carter (2018) states that focus groups help to move beyond the thoughts and actions of individuals in isolation. While focus groups support collective reflection and the co-construction of meaning, they may also inhibit disclosure for some participants or be dominated by one or two voices within the group. To address this, a structured collaborative format was used by incorporating a carousel activity with rotating roles such as 'think-pair-share,' 'power of the pen,' and 'piggy-backing' (Carroll, 2018), to promote equitable participation and reduce the risk of one dominant voice influencing the discussion. The focus groups were conducted on the University of Glasgow campus as this is a familiar environment for both researcher and participants and so helping to create a comfortable setting for group discussions.

It is also important to acknowledge that the findings of this study are situated within a specific institutional and time specific context. The research focuses on Initial Teacher Education students within a single university in Scotland and reflecting the perspectives and experiences of one cohort within a particular geographical and policy environment. These students' studies were impacted by the Covid-19 pandemic. As such, the findings cannot be assumed to be representative of ITE provision nationally or internationally and do not claim statistical generalisability. Further limitations of the research will be identified and discussed in chapter eleven as part of the overall discussion chapter.

Conclusion

This chapter has outlined the capabilities-informed, interpretivist qualitative approach used to explore ITE students' knowledge of food and nutrition education and their perceived role in promoting pupils' health. Data was collected through collaborative focus group discussions and individual interviews and analysed using reflexive thematic analysis that was guided by a Capabilities Approach lens to consider both participants' actions and the opportunities and constraints shaping them. Ethical considerations, researcher reflexivity and context-specific limitations were acknowledged to ensure the findings reflect participants' voices responsibly.

It should also be noted that the focus group data were collected in written form as part of a carousel activity and were therefore relatively concise in nature. As a result, the themes generated from this dataset are presented in a similarly succinct form within the findings chapter. However, these themes are developed more fully and interpreted in greater depth through integration with the individual interview data in the discussion chapter, where a more comprehensive synthesis of both datasets is undertaken. These methodological decisions provide the foundation for the following chapter that presents the themes and insights emerging from the data to provide the research findings.

Chapter 9: Findings

Introduction

This chapter presents the thematic findings from a qualitative study exploring the lived realities, perceptions and professional reflections of twenty-three student primary teachers regarding food and nutrition education within the context of initial teacher education. The data was collected in two phases, three focus groups comprising a total of seventeen participants followed by six individual semi-structured interviews. The focus groups were conducted first to gather broad perspectives and generate rich discussion as well as to inform and refine the interview questions used in the second phase. This phased approach allowed for deeper exploration of emerging ideas and themes, enabling the researcher to probe more nuanced understandings and individual reflections during the interviews.

The insights shared by participants shed light on the complex interplay between teachers' roles, curriculum demands, institutional supports and wider sociocultural influences that shape how food and nutrition are understood and delivered in school settings. Participants appeared to speak openly about their own educational backgrounds, confidence levels and perceived responsibilities, revealing a landscape marked by both enthusiasm and uncertainty. Thematic analysis of the data from the focus groups led to the development of four initial codes that developed into four key themes that then supported the formation of questions for the individual interviews. The data from the induvial interviews led to five key themes each reflecting a different dimension of the student teachers' evolving beliefs and professional identities in relation to food and nutrition education.

This chapter, therefore, offers a detailed account of how future educators interpret their role in promoting nutritional knowledge and habits, the extent to which their initial teacher education programme has prepared them for this task and how they envision their capacity to contribute to child development and human flourishing through food education. Importantly, it highlights gaps in existing education practices and provision and identifies areas where deeper, more reflective and better-supported pedagogical engagement is required.

Focus Group Findings

This section presents findings from the focus group carousel discussions with student teachers regarding their understanding of food and nutrition education and their perceived roles in supporting learners' capabilities in health promoting behaviours. Following these discussions, I used Braun and Clarke's (2006, 2019) reflexive thematic analysis framework to thematically analyse the data generated. From this process I identified four key themes:

1. Foundations of Food and Health Knowledge
2. Role and Responsibilities
3. Whole School Approaches
4. Access, Equity and Empowerment

These themes reflect the personal knowledge, educational experiences, professional roles and structural factors that shape how student teachers perceive their responsibilities in promoting health and wellbeing among learners.

Theme 1: Foundations of Food and Health Knowledge

All participants expressed a clear link between food and nutrition education and health and wellbeing. Participants stated the significance of knowledge in supporting health and wellbeing, in particular knowledge of food groups and a balanced, healthy diet- including meals and snacks. Many participants could list several resources that can be used to help develop this knowledge such as the 'Eatwell guide, traffic light systems on food labels, NHS food scanning app, food miles and Farm to Fork resource' (Focus Group 1, 2023). However, there was no discussion in any of the groups that demonstrated any critical engagement with these resources. The student teachers simply accepted these as credible resources. There was no evidence of consideration of the limitations of these resources to ensure that these resources provide reliable and accurate information to support a strong foundation of food and health knowledge.

Most of the participants shared their experiences of food and nutrition educations from their time in school as learners. Some remember being taught about 'balanced diets and good

habits' (Focus Group 2, 2023) others remember 'in primary school doing food groups and key vocabulary' and 'limited health week input in primary and secondary school' (Focus Group 1, 2023). Some participants also shared being made aware of eating disorders such as anorexia and obesity as a pupil but did not elaborate on if this was through formal education or from their own experience or of that of others. All focus group participants were able to recount on experiential learning such as preparing food or tasting sessions 'food tasting, making smoothies …made food' (Home Group 3, 2023). This was either as part of a whole school health week experience or during secondary school home economic sessions. All focus groups expressed the value of these hands-on practical sessions for bringing theory to life in a classroom setting.

Within their experiences as student teachers in Initial Teacher Education (ITE), participants reflected on how their exposure to food and nutrition education was shaped by the courses and placements they encountered. In the Education and Society course they were introduced to the link between hunger and attainment. This provided a foundational understanding of the broader social and educational implications of nutrition. Those who chose the Health and Wellbeing elective reported exploring aspects of food and nutrition education in more depth, whereas participants who had not taken this elective described receiving very limited input to develop their own knowledge. Despite these variations, some students gained practical experience during placements, either through teaching or observing lessons. For example, participants in Focus Group 2 (2023) highlighted involvement in initiatives such as 'a healthy lifestyle project and an extra-curricular club promoting healthy eating'. This demonstrates opportunities for experiential learning beyond the formal curriculum.

Theme 2: Roles and Responsibilities

A holistic view of health emerged from the focus groups, encompassing not only diet and exercise but also mental health, emotional wellbeing and personal care. All participants acknowledged their responsibility for teaching health and wellbeing, with focus group 2 (2024) stating that 'health and wellbeing underpin the majority of learning outcomes' and focus group 3 (2024) noting that health promotion is 'part of education so should be positive'. They recognised food and nutrition as part of the health and wellbeing curriculum and therefore their role in teaching aspects of this, 'very important role to educate pupils on food

and health promotion' (Focus Group 1, 2024). There was also recognition from all groups that the role in supporting pupils' capabilities in adopting health promoting behaviours stretches beyond food and nutrition education. Focus group 1 (2024) noted that 'we can link this to other aspects of personal care (H&W) such as toothbrushing' and focus group 3 (2024) acknowledged 'health through food and other areas of health and wellbeing- PE, toothbrushing, handwashing and relationships' as significant. Focus group 2 (2024) also noted the importance of 'educating young people in regard to sexual health and relationships'.

In addition to the health and wellbeing curriculum all groups demonstrated an awareness of their role as positive role models. There was recognition that both a teacher's visible choices, for example what they eat or promote in class and implicit messaging such as attitudes toward body image and life choices impact learners. Focus group 2 (2024) stated they viewed their role as 'widening pupils experiences of different foods and actively from a range of cultures', this extended by focus group 1 (2024) who noted 'an awareness of dietary requirements is important due to allergies (sharing food is not recommended), religious beliefs and personal choices'. This group also demonstrated an awareness of 'positive language regarding chocolate, and sugary foods. Do not want to contribute to eating disorders'.

Theme 3: Whole School Approach

While focus groups 2 and 3 centred a lot of their discussion around individual experiences or lessons when considering how pupils can be supported in adopting health promoting behaviours there was also acknowledgement for relationships extending beyond the classroom through 'wider whole school goals' (Focus group 2. 2024). A whole school approach to support and extend classroom lessons was considered good practice by all groups.

The focus groups revealed two main ways that a whole school approach can be demonstrated. Firstly, focus group 3 (2024) noted 'healthy school meals and encouraging healthy snacks'. Focus groups 1 and 3 noted that this could be supported through in school food tasting and experimentation, especially with fruit that can be extended to smoothie making. Focus group

3 (2024) noted that these types of activities can be achieved beyond school meals through ‘health weeks and days’.

Focus group 1 (2024) stated the need for continuity and consistency in a whole school approach, so going beyond one-off health weeks and health days as an additional whole school approach. Focus groups 1 and 2 advocated for a whole school approach that encompasses families, communities and external agencies. One example from focus group 1 was a ‘health and wellbeing group’ to consider pupil ideas in this area in a similar way to hearing pupil voice through a school pupil council or eco group. Focus group 2 (2024) also mentioned ‘clubs’ in terms of supporting pupils in adopting health promoting behaviours but did not provide specific examples of clubs here. However, they did note the importance of building relationships and communication with parents and guardians to support health promoting behaviours for learners.

Theme 4: Access, Equity and Empowerment

The issue of empowerment and access was apparent from the focus group data. All three focus groups identified from their personal and professional experience that there was not equal knowledge of or access to healthy food for all learners. Participants acknowledged socio-economic and knowledge disparities that influence children's food choices and opportunities for health promotion. Focus group 3 (2024) noting that pupils need to be supported in accessing food. Focus group 2 (2024) noted that ‘practitioners have a responsibility to promote skills for life’ with focus group 1 (2024) being aware that learners ‘might not get knowledge at home due to lack of parents’ understanding’ and so the role of a teacher can also be ‘clarifying misinformation from parents’ and from ‘social media adverts on food supplements so it is important to give the correct information’.

All focus groups saw themselves as both educators and advocates noting whole school approaches and individual health lessons as ways to support learner self-awareness and food choices to empower them with health promoting behaviours. Focus group 2 (2024) noted the significance of lessons that promote ‘self-awareness of what they are eating and drinking and exercise’ while focus group 1 (2024) recognised the significance of providing a ‘choice of food by letting children know they can ask for chocolate and not only healthy things’.

Shaping Individual Interview Themes

Interpreting the focus group data into the four themes served as the foundation for the development of the individual interview questions. Insights gathered from the group carousels helped me to identify areas that I wanted to explore more deeply. The group data highlighted:

- Limited discussion or notes on capabilities and so this led to asking an interview question to further explore their knowledge and perception of human flourishing and capabilities.
- The significance of nutrition knowledge and so this prompted a desire to explore the depth of nutritional knowledge further within the individual interviews and so shaped questions to gain more insight into formal education versus self-directed learning and the critical exploration of resources used.
- Tensions between aspirational and actual education and role modelling this led to interview questions about their perceived role in food and nutrition education as well as overall health promotion and any possible opportunities or challenges.
- Barriers to equitable access, especially the emotional and mental dimensions of food and nutrition education. This led to shaping interview questions about language use, inclusivity and support for a diverse mix of learners.

As such, the individual interviews were designed to explore the lived experiences and individual agency of student teachers within these areas in the hope that this would help me to develop a more nuanced understanding of how beliefs and practices vary between individual student teachers and how initial teacher education may influence these.

Individual Interview Findings

This section presents the findings from the individual interviews with six student teachers regarding their understanding of food and nutrition education and their perceived roles in supporting learners' capabilities in health promoting behaviours. Following these interviews, I used Braun and Clarke's (2006, 2019) reflexive thematic analysis framework to thematically analyse the data generated. From this process four themes emerged following

the areas that I wanted to explore in more depth from the focus group data. The four areas are:

- Human Flourishing as Holistic Development
- Teachers as role models
- Schools as Equalisers
- Teacher Preparedness

Theme 1: Human Flourishing as Holistic Development

The participants consistently described human flourishing as the process where children can achieve their full potential. There was recognition by most participants that human flourishing as a multi-faceted concept encompassing physical, emotional and cognitive wellbeing. They highlighted nutrition as a foundational element of this development. One participant captured this vividly through metaphor, describing flourishing as 'a plant or a flower growing... that's like a child... a sort of ecosystem.' (Participant 3, 2024). This analogy, echoing Maslow's hierarchy of needs (1943) where nutrition forms part of the base required for self-actualisation, was a recurring conceptual anchor that helped to frame the participant's viewpoints particularly the foundational requirement of nutrition, shelter and care as part of child development and human flourishing. All participants acknowledged the roles of schools in proving interventions to support and promote health, 'getting (children) out of that survival mode and allowing them to progress.' (Participant 2, 2024).

The potential for schools to provide early intervention to shape lifelong healthy behaviours was also noted by Participant 5 (2025): 'If you're getting a child young enough… we could definitely make an impact,' highlighting the value of building foundational habits early in life. This sentiment was echoed by Participant 4 (2024), who emphasised the importance of 'building early habits for children so that they can eat healthy, eat well from a young age'. However, Participant 6 (2024) noted their experience of inconsistency in enactment: 'It's heavily focused on younger years… but in senior years it's almost neglected'.

The reflections on flourishing and a school's role in early intervention led discussions on certain mitigating actions to combat food insecurity and its effects. School-provided meals and snacks were not seen as acts of charity, but as vital forms of social justice. Both

Participant 1 and Participant 6 acknowledged the impact of food insecurity. Participant 1 described the reality many children face: ‘It’s cheaper to buy a bag of crisps than it is fruit’ (Participant 1, 2025) while Participant 6, (2025) stated their belief in that schools have a duty to help children to ‘achieve their full potential,’. In practice this means ensuring no child is held back by basic unmet needs ‘if a child's hungry in your class, they're not going to learn’ (Participant 4, 2024). The participants perceived food insecurity not only as a physical deprivation but as an emotional, social and cognitive deficit that Participant 5 (2025) described as placing children ‘on a back foot’. Participant 6, (2025) noted that ‘giving children food during school time… gives them hope’ but also expressed concerns related to practice:

> I do have a fear of instead of motivating children to eat better, making them feel shameful about their diets, because there's only so much that children can do. A lot of it is down to their parents, and what their parents are purchasing, and then their parents are also restricted with things such as poverty, so I would hate to ever make a child feel guilty over what they eat, or even make the parents feel guilty over what they're feeding their children

These reflections highlight the aspirational but fragile nature of a schools’ capacity to support human flourishing as efforts to address food insecurity must be carefully balanced with the risk of reinforcing shame or guilt in contexts shaped by poverty or other influences on parental choice. This concern was further extended by Participant 2 (2024) who situated food and nutrition education within wider societal and economic pressures by highlighted the tension between promoting healthy lifestyles and the structural realities faced by families, noting that:

> we need to start changing mindsets with our children, in order to stop obesity being this major issue… all over the media diet pills… weight loss injections … is now becoming the cure for obesity, and that has to change because the NHS is struggling… thinking of diet and exercise, people are going to turn to the easy route and I think … for this to change, we've got to start talking about it …. And this is where you start educating … it is a difficult topic when you look at the price of foods… gym memberships… the price of staying healthy in comparison to being unhealthy… you're thinking can everyone afford this? But I think it's still an important subject to allow our children and young people to think about it and for schools to work within and also outside the community ... with other organisations…

These reflections demonstrate the participants’ view of human flourishing as contingent upon both individual development and wider social conditions. Despite recognising significant

constraints related to access and affordability, participants viewed school food and nutrition education as a key opportunity for early intervention to promote health promoting behaviours especially when supported through whole school and community-based approaches through whole school and community-informed approaches.

Theme 2: Teachers as Role Models

A powerful and often unintended consequence of teacher behaviour emerged through discussions on modelling. Participants acknowledged their significant influence on pupils' food related attitudes and behaviours. They described how their food choices, casual comments and even body language can influence learner attitudes toward nutrition. Participant 3 (2024) noted:

> … they're in the line waiting for break time and you maybe speak to them about what you have for your lunch or maybe you make a passing comment like I don't eat fruit or I don't eat vegetables or I don't like green things. I think that's going to stick with a child because they look at you as a big, all-encompassing person and if they hear you say that passing comment that's really going to stay with them. As teachers, we need to watch what we're saying to children because they do pick up and little things like I think I told my class in a passing comment that my birthday was the day after Halloween and the number of them that actually remembered it and I hadn't said it again. They just remembered it was.

Several recounted instances where students mirrored their eating habits. Participant 6, 2025) shared 'she came in with the exact same snack as me' this same participant also gave a different but similar example from beyond the classroom, when teaching in a summer camp experience, 'children would be looking to me and what I was eating' (Participant 6, 2025). This illustrates the extent to which children absorb behavioural cues. Participant 1 (2024) recounted a personal memory that illustrates a lifelong habit formed at age five due to a comment from her teacher: 'My teacher told me not to put salt on my food… and I still don't'.

The participants acknowledged the ethical responsibility embedded in their daily routines. 'We need to watch what we're saying to children,' one advised. 'They do pick up on little things.' (Participant 5, 2025). Influence was described as subtle but lasting, particularly when teachers are well liked by learners. The implications here were not just about modelling ideal

diets but about avoiding harm, particularly inadvertently glorifying unhealthy habits or food shaming. The participants have identified their teacher role as not merely didactic but relational as it is grounded in trust and respect and everyday interactions that shape lifelong behaviours. While most appeared confident in their role as health educators, some participants recognised the delicate balance between support and shame. 'I fear making them feel shameful' participant 6 (2025) admitted, explaining her hesitancy to critique unhealthy lunchbox contents. Another noted, 'It's difficult to tell a child 'you shouldn't be eating that'... it's more down to the family' (Participant 1, 2024). This suggests that while teachers feel responsible, they also acknowledge their limited control over home environments and the risk of overstepping. There was also recognition of the limits of their influence: 'A lot of it is down to their parents' (Participant 6, 2025). This was reiterated by participant 5 (2025):

> I think that we as educators, definitely need to put it in because it's not always getting done at home. … I wouldn't say it's all on us, but it's massive on us and I think that the like introducing fruit baskets and the way that we talk about the school meals, the way that they are balanced. The fact that the children can have a starter or a dessert with their main meal, but they need to have a main meal and they need to have a certain amount of fruit and then you have a certain amount of vegetables and then dairy…

Theme 3: Schools as Equalisers

As noted in theme 1 all participants described nutrition as essential for effective learning with Participant 6 (2024) stating: 'It's the foundation of all of education'. This reinforces the idea that children cannot meaningfully engage in learning when their basic nutritional needs are unmet. Participants linked adequate nutrition with improved concentration, behaviour and emotional regulation. The participants noted that without addressing food insecurity efforts to support learning were undermined. Schools were recognised by all participants as places that can help in mitigating the impact of socioeconomic disadvantage.

Some participants alluded to the home-school divide as both a practical and moral tension. Participant 4 (2024) stated: 'There'll be plenty of families who aren't talking about it at home… but you need to know'. This demonstrates a belief that nutrition education should be a universal entitlement with Participant 5 acknowledging the challenge this can have 'if families... have not got a lot of knowledge on it… that is going to be a challenge for us (teachers) to undo'.

Participant 2 (2024) recalled the brief focus on overall health that included physical education (PE) and classroom lesson in the lead-up to sports day but advocated for a broader, sustained involvement in promoting overall health: ‘There needs to be promotion throughout the whole school… and celebrating it as a school and showcasing it’. Cross-curricular integration of food and nutrition has emerged as a strength in supporting health education irrespective of learners experiences out with school. Participants noted that teaching about nutrition through other subjects, such as history, maths, or literacy supported deeper and more engaging learning. As Participant 1 (2024) described, embedding nutrition learning through activities like ‘fruit in a book’ or exploring vitamins within literacy tasks helps make learning more contextualised and accessible. Participant 3 (2024) noted that cooking lessons bring educational and emotional benefits, explaining how children ‘feel proud of the fact that they made a piece of food’ and that cooking can promote teamwork, mental health and the application of maths in real life: ‘You can't get much more maths in real life than if you're cooking’.

Building on the data from the focus group in terms of whole school approaches to health promoting behaviours, school initiatives such as school gardening and growing activities, breakfast clubs and community partnerships were seen as promising. Participant 2 (2024) discussed initiatives like breakfast clubs supported by organisations and noted that while schools benefit from community support, maintaining these relationships often falls to already time-pressed teachers:

> Kellogg's … they're really promoting breakfast clubs,… local supermarkets, a lot of them want to help …. but it's a lot of work … trying to keep in touch with them and that's time consuming, lot of work and that is a major hurdle.

While resource-intensive, this type of initiative can improve children's access to food and nutrition education while building stronger school-community ties. Other initiatives were also discussed, ‘a (placement) school I was in has a garden and they grew their own food... it’s definitely going in the right direction’ (Participant 5, 2025). Participant 3 (2024) described a helpful initiative they experienced during a school placement:

> TopNosh, it's run by this lady, called Louisa and she goes round different schools in Glasgow and runs these like cooking sessions… She brings her own utensils. She brings all of the food … and she tailored it to age groups and the children would all go

> away with a recipe card as well. It's funded in our school. However, I'm not sure if they're going to get her back in because as much as she's fabulous, it's also very, very expensive.

Although identified as a valuable educational experience, this also demonstrates the inconsistency of these types of initiatives. They are unevenly actioned interventions across local authorities and schools as not all schools offer these types of interventions, and they do not embed these learning and teaching practices long term. It also demonstrates the limitations to some of these initiatives as these efforts were often limited by policy or resources. This is evidence in the experience with TopNosh 'they're (school) just not sure if the PEF (pupil equity fund) can be put to that long term' (Participant 3, 2024). These types of limitations were also evidenced by participant 2 (2024) when discussing their experience of a nurture room, 'we had to give them biscuits… we weren't allowed to have a toaster'. This demonstrates how institutional rules undermined attempts to offer more nourishing options in nurture rooms. Participant 2 (2024) also noted the difference in emotional comfort offered by hot food:

> I said that is that is our basic needs like toast is warm toast. There's something comforting about eating toast, I think anyway. And I love a cup of tea and toast. And I said we could do this with young people, but we weren't allowed to have a toaster. And this is a challenge that folk don't realise.

There was also recognition here of the social and life skills involved in preparing their own food:

> The (secondary) children should be able to make their own tea and toast, giving them a life skill and then eating this round a table which we know also is a social thing that many children and young people don't eat as a family because there's not enough time. And so they're eating meals in front of telly. There's not that social aspect of talking about your day and they're missing these social cues as children.

Food initiatives were also critiqued for being performative rather than purposeful. Participant 4 (2024) recalled:

> When I was in school we did like healthy eating week, I remember we got a print off of a plate and you would have like protein and then vegetables and you would sort all the foods out and that was kind of like a week dedicated to it. So that was quite good and I enjoyed that but then also it was just a week and then it was kind of never talked about again, which I don't think is helpful, especially for children.

Initiatives such as breakfast clubs, while appreciated, sometimes provided minimal sustenance and lacked educational value. Participant 2 (2024) described their experience of a breakfast club as ‘box-ticking’ due to the lack of nutritious food on offer. However, they did appreciate the positive steps that schools are trying to make in supporting the overall development of learners through food and nutrition opportunities:

> …schools are starting to identify this with breakfast clubs and free school lunches for primary one to five. They're identifying it by having parents come in and doing cooking classes with them because not many parents know how to cook because we now live in such a fast-paced environment and … so we live on ping dinners.

This reflects a broader concern with systemic inconsistency and the fragility of good intentions without structured support.

Theme 4: Teacher Preparedness

Within the individual interviews all participants demonstrated a commitment to delivering food and nutrition education with some participants feeling relatively prepared to do so. With participant 6 (2025) using the phrase ‘you are never the finished product’ to acknowledge the need for ongoing professional learning. Two participants felt the initial teacher preparation programme prepared them adequately for this with Participant 1 (2024) noting:

> … did one lecture on it … but it’s one of those things that isn't really a changing topic like…vegetables aren't going to turn round and change names or a big thing like that. I just think it's something that sticks with you. And we did quite a lot of it in school. I honestly would feel fine about teaching it like I don't think it's like an intimidating topic.

Participant 6 (2025) stated ‘I feel relatively prepared from the experience I've had on placement as well as the input I've had from university’. However, Participant 6 also noted:

> there's only so many hours on the day. There's only so many years we can study so as much as it would be beneficial to receive more input (within ITE). I think that the input we have received has been very helpful and the lecturers that have delivered the content they can with the time that they've been given and they've done so very well, in my opinion.

Participant 2 (2024) demonstrated a similar perspective in that although they have not had a lot of formal sessions within the ITE programme, especially as they did not do the health and wellbeing elective, they felt confident to teach food and nutrition based on other experiences:

> I think we've discussed it a bit in CE (curriculum enquiry), I didn't do the elective on the health and wellbeing and so therefore they might know a lot more than me. I've been fortunate with my experiences. So, before I came to uni, I was working as a support assistant and did a lot of stuff with the home economics department ... I don't think that necessarily everybody would be as comfortable as I am given what I've already experienced.

This was echoed by participant 5 (2025) who stated:

> I do find I do feel relatively confident. And again, I think that comes from my own experience. I've spoke to 2 of my friends recently about this and they do not have a clue where to start. I think that's lacking in teacher education. I think I know what I know because I know it and it's because I'm passionate about it.

Participant 4 (2025) although did not feel as confident to teach as the previously mentioned participants, they did also express a similar viewpoint in terms of limited formal education within the ITE programme and so they will rely more on their personal interest and life experience to inform the teaching and learning experiences they provide as an educator:

> I would describe it (knowledge) if I'm being totally honest as quite limited … I know that in health and wellbeing, in the curriculum enquiry classes it does focus on it. But again, that's only like 1 hour for a semester, or 2 hours for a semester. But yeah, I think just from like personal interest. I do have a wee bit of knowledge about food and nutrition just from my own life, but in terms of being taught it specifically for being a teacher. I wouldn't say I know an awful lot about it and yes, I would probably have to do research to make sure I was doing it justice when I was teaching it.

Participant 3 (2024) demonstrated a similar view to participant 4 in terms of feeling fairly confident to teaching about food and nutrition with limited formal sessions within the ITE programme but based on own personal preference and experience.

> Personally I feel OK (prepared to teach food and nutrition education). It doesn't scare me as such, but I think that's also because I love cooking. I think it would be a different story for people who just don't enjoy cooking. I love cooking, so I would be happy to lead a food lesson… and would happily share that love of cooking with children.

Participant 3 continued and highlighted the lack of resource (adult support, kitchen facilities) as a barrier to food and nutrition education and the level of confidence and preparedness.

> Taking 32 children, 8 year olds on my own if I've not got any support for learning, working with me, that does daunt me a little bit. Taking them all in there and the risk of a child getting injured and being around ovens. But, I think it's mostly because it's difficult when you're doing your teacher training, you can't really in the Saint Andrews building do a sort of thing that we did in my staff meeting where it's like you're making a stuffed pepper like you just can't really. It's all about resources is what I'd say. And I'm lucky in my school that we do have a cooking kitchen.

Challenges encountered in delivering consistent, inclusive and impactful FNE were expressed by several participants. A central concern is curriculum overload. Most of the participants expressed some concern in the pressures that teachers face to fit multiple priorities into a crowded curriculum, as highlighted by Participant 4 (2024) ‘Schools are already quite stretched’. Participant 5 (2025) similarly noted that ‘we need more space and time… if we’re going to do it right.’. Participant 1 although recognised the fortunate position of one school, they pointed out that many schools no longer have spaces or staff for practical food education: ‘A lot of schools don’t have that layer anymore’. Even when the interest exists, limited equipment and financial constraints often prevent hands-on cooking lessons from taking place.

The individual interviews also identified other barriers to hands-on cooking experiences that influenced the feeling of preparedness. Both Participants 1 and 3 described experiences with students who had severe allergies that influenced their own teaching confidence that in turn restricted inclusive practical cooking experiences. Participant 3 (2025), despite having participated in school CPD with practical cooking experiences, noted a lack of knowledge of allergies that then led to a lack of confidence based on feelings of safety:

> I personally have not ever taught a cooking lesson with my children is because I have a child in my class who needs a who has an EpiPen, and I am just terrified that I'm going to need to use it.

Participant 1 (2024) recalled their nursery placement experience:

> He couldn’t be around anything.. he was allergic to just everything, absolutely everything.. we used to do so much… cooking… he couldn't even touch … he couldn’t get involved with any of that (cooking)… it was just too dangerous

The same participant also highlighted the exclusion experienced due to allergies is the same for other dietary needs based on religious and cultural choices and expressed an openness to learn about the barriers that learners may face with practical cooking lessons ‘I feel happy enough to learn about it’ (Participant 1, 2024). They stated that while children from halal-observant families ‘still can say the same points’ schools need to ensure that food education is inclusive of different dietary practices without singling out or excluding pupils based on their backgrounds. Participant 5 acknowledged these same points stating:

> I don't have any confidence with any allergies or anything at all like that … that is absolutely massive…. getting into it as a probationer, which is actually a bit daunting, that I don't know how any of that works. I don't know anybody with any allergies in my family. And I've never dealt with halal.

This participant shared a placement experience that demonstrated a lack of communication in contributing to these challenges and the impact that this can have on student teacher confidence:

> In my 4th year placement a new girl started and I was in charge of the class… I took her to the board and asked her what she wanted for a lunch and she said a burger now it didn't even occur to me like I didn't even know that she was Muslim and I know it sounds ridiculous. Noone told me. Before it got to the office the teacher came in and asked how the new girl was getting on and I said she chose a burger for lunch and the teacher was really nippy with me. The teacher said she was Halal and was really short with me. How am I supposed to know who's Muslim without being told… I felt so bad. I made a Ramadan lesson the following week and I tried to teach myself a bit about it because I was a bit affronted.

Participant 2 (2024) echoed these feelings but added that even with knowledge of allergies or religious and cultural choices catering to a range of dietary requirements within a classroom can be challenging:

> I want to do healthy eating, want to bring in fruit...but can’t have Kiwi … coconut… strawberries … we can't work with pork, can't work with beef …. there's all these things … I can totally understand where the teacher think… they can all just draw…. It is a huge obstacle and a huge issue and it's not easy to navigate at all, and I'm not even entirely sure how to navigate it… you don't just want to teach it, you want to be able to give them the actual, like, tangible parts of it… they don't want to sit and read and write all about it.

These examples demonstrate that limitations within ITE can affect a student teachers' sense of preparedness, particularly for practical, inclusive lessons. Participants highlighted that their knowledge and confidence were often developed through self-directed learning and engagement with external resources, such as digital tools and professional websites. Both participant 1 and 2 noted that they would use the Healthy Schools Scotland website to source resources to support their teaching. Participant 3 stated they would use the NHS website while participant 4 would access material from Education Scotland website as well as materials that had been uploaded by tutors within the ITE programme via Virtual Learning Environment (VLE) Moodle. They also admitted they would do a Google search for additional materials to supplement their teaching. Participant 5 (2025) was similar here 'BBC bite size, NHS Scotland and all that…and you've got stuff that are just at your fingertips... They're easy to access'. Participant 6 (2025) was the only participant who did not list specific websites:

There's a lot on the Internet, especially now, as I feel as if it may be more difficult 10 years ago, whereas now there's a lot on food and nutrition and there's apps as well as sites. There's video clips, short films.

This demonstrates a level of confidence in using the Internet to source teaching and learning materials.

Reflective Summary

These findings have been presented to give a thematic account of student primary teachers' perceptions, experiences and levels of preparedness in relation to food and nutrition education within initial teacher education. Drawing on the data from the focus groups and individual interviews this chapter has highlighted the complex and diverse experiences that shape student teachers' knowledge and perspectives of FNE and their roles in promoting health, wellbeing and human flourishing.

Across both phases of data collection, the participants demonstrated a strong commitment to supporting children's health and wellbeing and recognised food and nutrition as foundational to learning, development and social justice. The focus group findings illustrated some understandings of food education as a collective responsibility that can be embedded within wider whole school approaches and shaped by issues of access, equity and empowerment.

These group discussions revealed both enthusiasm for experiential learning and a reliance on accepted health resources with limited critical engagement with the validity, reliability or credibility of those materials.

The individual interviews provided deeper insight into how these shared perspectives were experienced at a personal and professional level. Although participants demonstrated a fairly limited knowledge of theoretical understanding of capabilities or human flourishing they did articulate a holistic conceptualisation of human flourishing, acknowledged the ethical dimensions of their role as models of health related behaviours and viewed schools as key equalisers in addressing food insecurity and health inequalities. However, the findings also revealed tensions between aspiration and enactment, particularly in relation to structural constraints, curriculum overload and access to resources. Teacher preparedness emerged as a particularly salient prominent theme, cutting across all others. While some participants felt relatively confident in delivering FNE, this confidence was frequently attributed to personal interests, placement experiences or prior work rather than to consistent or comprehensive input within ITE. Barriers such as limited time within the curriculum, lack of facilities, safety concerns related to allergies and a lack of knowledge about or how to respond to religious, social or cultural dietary requirements were shown to influence perceptions of preparedness. In response, participants described a reliance on self-directed learning and digital resources to compensate for perceived gaps in formal provision.

The findings demonstrate how student teachers' approaches to food and nutrition education are shaped through the interaction of personal agency, institutional constraints and broader socio-educational influences. While this chapter has focused on presenting participants' lived experiences and voices, the following discussion chapter will critically examine these findings in relation to existing literature, policy frameworks and theoretical perspectives. In doing so, it will explore the implications of these findings for initial teacher education, teacher preparedness and the role of schools in promoting equitable, inclusive and meaningful food and nutrition education.

Chapter 10: Discussion

This chapter presents a discussion of the thematic findings from both focus groups and individual interviews, drawing together insights from the two phases of the study and situating them within the broader literature on food, nutrition and health education as well as teacher education. Underpinned by the Capabilities Approach, the discussion explores how Initial Teacher Education (ITE) students understand food and nutrition education (FNE) and how they perceive their role in supporting pupils' health promoting behaviours. as the focus group findings were designed to provide a foundation of information that would inform areas to be explored in greater depth during the individual interviews. This iterative approach supports a richer and more nuanced interpretation of ITE students' knowledge, perceptions and experiences.

Drawing from both the focus group discussions and the individual interviews to synthesise these finding this discussion is structured around four overarching themes of:

- Foundations of Knowledge: Food, Health and Human Flourishing
- Teachers as Role Models: Shaping Responsibilities
- Schools as Equalisers? Access, Equity and Food and Nutrition Education
- Preparedness and Confidence

These themes are used to examine the extent to which student teachers' knowledge, professional responsibility and preparedness align with or diverge from a capabilities oriented understanding of education by connecting to relevant empirical and theoretical literature throughout. In doing so, the chapter considers the implications for ITE, highlights the contribution of the study in addressing gaps in research on student teachers' role in food and nutrition education and in promoting health and wellbeing. It also reflects critically on the study's limitations. While the findings offer valuable insights, they are bounded by the context of a single Scottish university, the self-reported nature of the data and the relatively small sample size, which may limit the generalisability of the results and should be considered when interpreting the outcomes.

Foundations of Knowledge: Food, Health and Human Flourishing

Across the findings participants demonstrated limited explicit theoretical knowledge of or sustained engagement with the Capabilities Approach, particularly in relation to Nussbaum's central capabilities and the ethical responsibility of education to support human flourishing. This was evident across both the focus group discussions and the individual interviews, despite participants being explicitly asked how pupils might be supported in adopting health promoting behaviours and what role teachers play in supporting pupils' capabilities in this area. While participants spoke confidently about the importance of food and nutrition education (FNE), holistic health and wellbeing and their professional responsibility as educators, these discussions were rarely framed through a capabilities-oriented theoretical lens. This could be said to be typical of the trends from literature, as there is little empirical research that explicitly focuses on teacher's or student teachers' knowledge or application of capabilities or human flourishing.

Within the focus group discussions, participants consistently positioned FNE as a key component of health and wellbeing education. They articulated clear links between food, health and learning and demonstrated awareness of commonly used nutrition resources such as the Eatwell Guide and traffic light food labelling. Participants also emphasised practical approaches to FNE, including food tasting, cooking activities and smoothie-making, which they viewed as effective ways to bring learning to life. These practices align implicitly with Nussbaum's capabilities related to bodily health, senses, imagination and thought, and practical reason as they support pupils' understanding and engagement with food choices. However, these activities were typically justified in pragmatic or experiential terms rather than as intentional strategies to expand pupils' real opportunities to flourish. There was little evidence of critical engagement with the limitations of the nutrition resources listed or consideration of how socio-economic, cultural or structural factors might constrain pupils' ability to act on the knowledge provided. This is consistent with the findings from literature globally that noted that often teaching practices focus on knowledge transmission or individual actions but not on practices that support or promote positive dietary behaviour change as part of overall health promoting behaviours (Contento et al., 1992; Lytle, 1994; Joffe & Mindell, 2004; Daniel & Gustafsson, 2010; Hart, 2016; Love, 2020; Broken Plate Report, 2023; Ares et al., 2024).

Similarly, participants discussed whole school approaches to health promotion, including healthy school meals, extracurricular clubs and engagement with families, as examples of good practice within FNE. These discussions reflected an implicit recognition of the importance of enabling environments, resonating with Nussbaum's emphasis on control over one's environment and affiliation. Yet, once again, these practices were framed as organisational or curricular expectations rather than as part of a broader ethical commitment to supporting pupils' capabilities and human flourishing. The focus group data therefore suggested that while student teachers held values and practices that align with capabilities-oriented principles these were not consciously understood or articulated as such.

The absence of explicit engagement with capabilities theory in the focus groups informed the design of the individual interviews, which probed participants' theoretical knowledge in more depth. The interview data confirmed that although several participants recalled receiving formal input on Nussbaum and the Capabilities Approach during their ITE programme this exposure was typically described as brief, abstract or confined to specific lectures or readings rather than embedded across the curriculum. Some interviewees recognised terms such as capabilities or human flourishing yet struggled to articulate how these concepts might shape pedagogical decisions or professional responsibilities, particularly in relation to FNE. References to capabilities were largely absent from discussions of food, nutrition and health education, even when participants were explicitly prompted. This suggests that while the theory had been introduced conceptually, it had not been meaningfully integrated into students' practice-based understanding or used as a lens through which to interpret their role in supporting pupils' health promoting behaviours.

Instead, interview participants had a tendency to draw on familiar frames of reference when discussing FNE, such as personal values, common-sense understandings of wellbeing, curriculum guidance or placement experiences. Several acknowledged that while the Capabilities Approach had been discussed in theory, they did not feel confident applying it in practical contexts. This disconnect reflects a gap between theoretical exposure and professional enactment, where capabilities are understood as an abstract educational ideal rather than as a guiding framework for planning, teaching and reflecting on health related learning. This finding mirrors wider concerns in the literature that teacher education often struggles to support students in translating abstract theory into pedagogical practice (Korthagen, 2003).

Despite this limited explicit theoretical engagement the interviews revealed that participants conceptualised human flourishing in ways that resonate well with the Capabilities Approach, particularly through the discussions of FNE and food insecurity. Participants consistently described flourishing as enabling children to achieve their full potential across physical, emotional and cognitive domains, with nutrition identified as a foundational requirement. One participant likened flourishing to 'a plant or a flower growing… a sort of ecosystem' (Participant 3, 2024), capturing the interconnected nature of development and echoing Nussbaum's holistic conception of capabilities. Schools were viewed as key sites of intervention, particularly in addressing hunger and enabling learning, with comments such as 'getting [children] out of that survival mode and allowing them to progress' (Participant 2, 2024) highlighting the centrality of food to educational participation.

Participants' reflections on food insecurity further demonstrated an implicit capabilities perspective. They recognised that unequal access to nutritious food constrains not only physical health but also emotional wellbeing, concentration and social participation. Observations such as 'it's cheaper to buy a bag of crisps than it is fruit' (Participant 1, 2025) and descriptions of children being placed 'on a back foot' (Participant 5, 2025) align with Nussbaum's concern for social justice and the conditions necessary for individuals to realise valued functionings.

These findings resonate with longstanding critiques within the FNE literature. Research by Contento et al. (1992), Lytle (1994) and Norton et al. (1997) highlights how nutrition education has often been fragmented and inconsistently embedded in schools, with teachers' own preparation playing a significant role in shaping their teaching practice. More recent studies (Perera et al., 2015; Love et al., 2020; Prade et al., 2022) similarly emphasise that limited curricular time and insufficient teacher preparation contribute to basic engagement with nutrition knowledge. The present findings suggest that this pattern persists within ITE, where student teachers may have surface level knowledge of FNE resources but lack the depth, confidence and theoretical grounding required to meaningfully enact FNE in ways that expand pupils' capabilities.

Teachers as Role Models: Shaping Responsibilities

A central finding across both phases of data collection was participants' strong recognition of the teacher's role as extending beyond the transmission of health knowledge to encompass modelling health promoting behaviours. Across the focus groups and interviews, participants consistently articulated an awareness that their everyday actions, comments and visible choices shape pupils' attitudes towards food, health and wellbeing. This aligns closely with Bandura's (1977) Social Learning Theory, which emphasises that learning occurs not only through instruction but through observation of trusted and admired role models. Participants' narratives, particularly those recounting pupils mirroring their food choices or recalling passing comments years later, vividly illustrate the subtle but enduring nature of this influence. Importantly, these findings resonate with wider literature that positions teachers as key agents in shaping pupils' health related capabilities. Cotton et al. (2020) argue that teachers function not only as curriculum deliverers but as mediators of values, norms and practices related to health within school environments. The present findings support this claim, as participants demonstrated acute awareness that even implicit messages such as attitudes towards certain foods, body image or cultural dietary practices can have significant pedagogical consequences.

A particularly interesting point of comparison with the existing literature concerns teachers' use of food rewards. Research shows that confectionary-based foods are frequently used within classrooms as rewards, incentives or during celebrations (Caparosa et al., 2014; Daniels et al., 2025). Such practices can work against the aims of whole-school nutrition and health-promoting policies and demonstrate how teachers' everyday decisions and actions shape learners' food environments in addition to the planned curriculum. Daniels et al. (2025) further illustrate that the persistence of confectionery-based rewards stems not simply from a lack of nutritional understanding but from the everyday pressures that teachers navigate such as resource constraints, expectations about what pupils will respond to and established habits within social cultures. Against this backdrop, it is notable that the student teachers in this study did not reference food based rewards at any point. Their discussions centred on the need to promote healthy eating by placing an emphasis on using positive language around foods and avoiding binary classifications of 'good' and 'bad' foods, this reflects the concerns raised by Welch et al. (2012) who caution that moralised or prescriptive food messaging can lead to guilt and anxiety that can ultimately constrain rather than support children's agency.

However, the absence of any acknowledgement of reward practices within this study suggests that the participants may have a limited awareness of the small, everyday classroom behaviours that can unintentionally contradict or dilute the healthy eating or health promotion messages they aim to communicate. This finding mirrors Hamilton et al. (2021), who demonstrate that less experienced teachers are more likely to engage in unhealthy modelling behaviours, including the use of unhealthy, confectionary based foods as rewards, even when such practices conflict with formal health education. This contrast between the wider evidence and the perspectives of the student teachers reinforces the argument that teacher education must address not only knowledge about healthy eating but also the relational, ethical and structural dimensions of food practices within classrooms. Unless these implicit routines are made explicit, there is a risk that newly qualified teachers may inadvertently reproduce unhealthy norms despite holding positive intentions regarding pupils' wellbeing.

From a capabilities perspective, these findings are particularly significant. Gombert et al. (2017) conceptualise food related practices as shaped by the interaction between individual agency and wider social and material conditions that shape what choices are possible. The participants' reflections demonstrate an intuitive grasp of this dynamic. While they viewed modelling as an important professional responsibility, they were also acutely aware of the limits of their influence, particularly in relation to home environments, socio-economic inequalities, cultural practices and parental choice. The participants statements such as 'a lot of it is down to their parents' and concerns about affordability mirror Venkatapuram's (2007; 2011) argument that must be understood in relation to enabling conditions rather than as an individual behaviour. This tension was most apparent when participants considered the ethical dimensions of modelling. Several expressed unease about unintentionally shaming pupils or their families when discussing food practices, especially in contexts shaped by poverty or food insecurity. These concerns align with Lee et al. (2020), who caution that framing food choices through moralised or fear based narratives can reinforce stigma, guilt or anxiety especially when children often have limited control over their food choices. Alongside this, the findings provide support for Hart and Page's (2016) point that capability oriented FNE should extend beyond compliance with normative dietary messages and instead support children's developing capacity to make reflective and contextually meaningful food choices. Participants' emphasis on broadening pupils' food experiences, respecting cultural

and religious dietary diversity and avoiding simplistic health messages reflects an implicit alignment with broader understandings of food literacy (Ares et al., 2024).

However, although participants often leaned towards inclusive and reflective practices, as the interviews revealed, these practices were rarely articulated through an explicit theoretical lens. Participants recognised what felt ethically and pedagogically appropriate but lacked the conceptual language to frame these actions as capability-expanding practices. The literature suggests that this gap is not unusual. Research identifies variability in teachers' confidence and preparedness to enact FNE in nuanced and contextually responsive ways (Cotton et al., 2020; Buttigieg Fiteni & Mimirinis, 2025). Albuquerque et al. (2013) further note that without strong theoretical grounding, teachers may default to reductionist framings of food and health, even when their intentions are inclusive. While participants in this study appeared to resist overtly biomedical or moralising approaches, their unquestioned, non-critical use of teaching resources, personal opinions (for example on salt) and their uncertainty and expressed fears does indicate the fragility of this positioning in the absence of more structured professional support.

Viewed through Korthagen's (2003) model of teacher development, these findings highlight that participants' engagement with modelling in FNE is shaped not only by knowledge but also by deeper layers of professional identity, belief and ethical purpose. Their accounts suggest that modelling is understood as an embodied expression of care and responsibility rather than a technical pedagogical strategy. However, without opportunities in ITE to critically examine assumptions about food, health, responsibility and agency this role remains susceptible to inconsistency and self-doubt. The findings and literature together suggest that teachers' role modelling practices hold significant potential to either strengthen or constrain pupils' health related capabilities. When grounded in reflective, ethically informed and socially aware pedagogies, modelling can support learners to develop informed, confident and context-sensitive relationships with food. Conversely, when unsupported by theoretical grounding and institutional coherence, these practices risk reinforcing inequities or inadvertently creating anxiety, despite teachers' best intentions. This positions ITE as a crucial site for intervention, where future teachers can be supported to enhance their own capabilities and further develop their understand of modelling not simply as personal behaviour but as a capability-shaping professional practice embedded within wider social and structural contexts.

Schools as Equalisers? Access, Equity and Food and Nutrition Education

The findings from the focus groups and individual interviews position schools as critical sites for addressing inequities in access to food, nutrition knowledge and health promoting opportunities. Analysed through the lens of the Capabilities Approach, these inequities are understood not merely as differences in knowledge or behaviour, but as differences in learners' real opportunities (capabilities) to achieve adequate nutrition, wellbeing and participation in learning. Across both data sets, participants framed food and nutrition education (FNE) as a matter of equity and empowerment rather than solely curricular coverage, echoing the Capabilities Approach's emphasis on what individuals are actually able to be and do (Nussbaum, 2011) within their social contexts.

Participants consistently identified that learners do not enter school with equal access to nutritious food or accurate nutrition knowledge. Socioeconomic disadvantage, parental knowledge gaps and exposure to misinformation mainly from social media and high-profile public health messages were described as shaping children's food choices and opportunities for health. Participants' observations echo wider public debates amplified by celebrity interventions during and following the COVID-19 pandemic such as Marcus Rashford's free school meal campaign (as described in chapter six) which brought attention to child hunger and wellbeing while also highlighting the uneven conditions under which families are expected to act on health advice. Viewed through a Capabilities lens these factors shape whether children are actually able to put nutrition knowledge they develop into practice in their everyday lives. This reflects wider research showing that food practices are influenced by social and structural conditions rather than being the result of individual choice alone (Daniel and Gustafsson, 2010; Hart, 2016). The interview data provided more insight and reinforced this with participants describing nutrition as foundational to learning and emphasising that children cannot meaningfully engage in education when basic nutritional needs are unmet. Analysed through a Capabilities Approach this reflects the interdependence of capabilities as inadequate nourishment can limit a child's capabilities for concentration, emotional regulation and ultimately learning and so thereby limiting their educational freedoms. This interpretation supports earlier findings by Contento et al. (1992), Lytle (1994) and Shepherd et al. (2006) while also resonating with Lombe et al.'s (2016) evidence that

nutrition knowledge alone does little to reduce health risks when individuals face food insecurity.

All participants viewed schools as mitigators of disadvantage by providing examples such as breakfast clubs, cooking sessions, school gardening projects and nurture room provision to demonstrate the practical ways of addressing inequalities in food access and nutrition knowledge. These examples align with Health Promoting School (HPS) frameworks which emphasise whole school, inclusive approaches to supporting pupils' health, wellbeing and learning through both curricular and wider school practices (Bowker et al., 1999; Lee et al., 2020).Within these initiatives participants positioned themselves not only as educators but also as advocates and emphasised their responsibility to promote "skills for life" (Focus Group 2, 2024). This adds an additional layer to a school's role in expanding learners' capabilities. These findings resonate with Chaudhary et al. (2020) who emphasise that multicomponent school-based initiatives are more effective than isolated lessons and with Ares et al. (2024) and Renwick et al. (2021) who highlight the experiential and emotional benefits of cooking and other practical activities in developing children's food related capabilities. A Capabilities Approach deepens this interpretation by highlighting that schools are not simply knowledge providers but environments that can expand or restrict children's substantive freedoms to access food, develop healthy routines and participate fully in learning. The examples given by participants illustrate the attempts schools make to expand learners' capabilities but also reveal how these efforts are shaped by structural constraints.

Participants also endorsed cross-curricular approaches to food and nutrition education (FNE) describing its integration across subjects such as literacy and mathematics alongside practical activities including cooking. These approaches align with international literature suggesting that integrated models can enhance pupil engagement and support more contextualised understanding of food and health (Follong et al., 2021; Esdaile et al., 2024). Interpreted through a Capabilities Approach such practices can be understood as supporting multiple, interconnected capabilities related to learning, health, social participation and self-efficacy rather than positioning nutrition as a standalone topic. However, consistent with earlier research (Norton et al., 1997; Love et al., 2020; Perera et al., 2015) and reflected in participants' accounts, particularly within the individual interviews, these approaches were often dependent on individual teacher initiative rather than being embedded within sustained or systematic school provision. The findings indicated that participants who actively engaged

with FNE opportunities often did so because of a personal interest in food or cooking. They also expressed an awareness that other student teachers possessed limited knowledge, skills or confidence in this area and raising uncertainty about how or whether these individuals would be able to teach food and nutrition education effectively in future practice. Some participants also reflected on their own limited confidence and minimal experience of FNE during school placements. Therefore, cross-curricular approaches may provide some opportunities for food and nutrition education but fall short of expanding learners' longer term capabilities as they do not consistently provide sustained opportunities to develop skills, habits or supportive learning environments. From a Capabilities perspective this highlights how institutional arrangements can operate as a capability constraint when provision lacks consistency, coherence and reach.

Across both the focus groups and individual interviews, participants positioned teachers as key mediators between the structural conditions shaping children's food experiences and learners' developing agency. Rather than assuming that knowledge alone leads to behaviour change, participants recognised that children often encounter food information they cannot act upon independently due to household resources, parental influence and wider socioeconomic constraints. In this context, teachers were understood as playing a critical role in supporting children to interpret food messages, develop critical awareness and navigate competing health narratives, even where immediate food choices remain constrained.
This interpretation extends earlier research identifying teacher education and teacher confidence as important determinants of the quality and scope of food and nutrition education (Norton et al., 1997; Kealey et al., 2000). Participants described engaging learners in activities such as discussing food groups, meal planning, tasting sessions and practical food preparation with the intention of supporting children to develop the capacity to make informed choices over time. However, they also acknowledged a gap between these intentions and observable long term outcomes. While participants expressed strong belief in the transformative potential of food education, no participant was able to provide clear examples of sustained changes in pupils' food behaviours, frequently attributing this to the dominant influence of family practices and home environments.

Importantly, as noted earlier in the chapter, participants consistently rejected overly prescriptive or moralising approaches to food education. Several emphasised that children should be able to choose chocolate as well as healthier options, reflecting a conscious effort

to avoid judgement, fear-based messaging or simplistic distinctions between good and bad foods. This stance aligns with Lee et al.'s (2020) caution against nutrition education approaches that rely on moral pressure or fear, which risk stigmatising learners and obscuring the realities of constrained choice. From a Capabilities perspective, this reflects an ethical commitment to respecting children's dignity and agency by recognising that food choices are shaped by circumstances beyond individual control and that education should expand understanding rather than impose blame. Participants' framing of food and nutrition as foundational to learning and wellbeing also resonates with broader public health and policy narratives. This includes the work of high profile figures such as Jamie Oliver and Joe Wicks, alongside the World Health Organisation's Health promoting Schools framework. These narratives position schools as active contributors to children's health and wellbeing rather than neutral sites of knowledge transmission. However, within the data of this study, discussions of food remained largely grounded in a health and wellbeing discourse, with limited engagement with scientific, nutritional or food systems perspectives. References to food groups and balanced diets were mainly surface level with inconsistencies in terminology and little discussion of components such as fibre, hydration or wider nutritional concepts, especially in relation to good or bad foods. This finding echoes Hamilton et al.'s (2018) identification of fragmented nutrition knowledge among pre-service teachers and aligns with Rossiter et al.'s (2021) argument that teachers' understandings of food and nutrition are often shaped by personal experience rather than sustained professional learning. Viewed through a Capabilities lens this suggests that teachers' capacity to act as effective mediators of learners' agency is itself shaped by the opportunities and constraints within ITE. Without deeper conceptual and pedagogical grounding food and nutrition education risks remaining focused on short term awareness rather than supporting learners to develop the critical capabilities required for long term health promoting behaviours.

Notably, across both the focus groups and individual interviews, participants did not explicitly refer to school meals provision as part of food and nutrition education. Only one focus group listed healthy school meals as a means of supporting health promoting behaviours. This absence suggests that school lunches were largely perceived as separate from teaching and learning and detached from participants' professional role in health promotion. Only one participant referenced school meals directly within the individual interviews. Participant 5 (2024) reflected on a critical incident during a placement in which they became aware of a learner's specific dietary needs after a week of being unaware and

therefore unable to fully support appropriate food choices. This limited engagement with school meals across the data highlights a potential disconnect between everyday food provision within schools and how food and nutrition education is conceptualised by student teachers and potentially within ITE more broadly.

Participants in the individual interviews were able to articulate greater depth in relation to the structural constraints that limit schools' capacity to act as equalising spaces. They identified several interrelated factors, including the temporary or inconsistent nature of interventions, resource limitations and policy restrictions, which collectively constrain schools' ability to respond to pupils' food and nutrition needs in sustained ways. An illustrative example included the short term nature of initiatives such as healthy eating weeks (Participant 4, 2024), which were viewed as well-intentioned but insufficient for embedding meaningful learning. This aligns with Contento et al.'s (1992) and Lytle's (1994) conclusions regarding the limited effectiveness of brief interventions. Participant 2 (2024) drew attention to regulatory restrictions that limited the capacity of nurture rooms to provide experiences intended to support children's emotional and practical needs. They described being unable to offer simple food such as toast due to safety regulations and noted a concern of restricting children's access to warm, comforting food and reducing opportunities to develop everyday life skills within a supportive school environment. Within the wider accounts, participants demonstrated awareness that many children do not routinely experience shared meals or food preparation at home. In this context school-based constraints were understood as intersecting with broader socioeconomic and cultural pressures including time scarcity, insecure employment and changing family practices all of which can be considered to shape children's everyday food experiences and place increased expectations on schools to compensate for these inequalities. This echoes earlier research highlighting the shifting role of schools in responding to inequalities in children's food experiences (Turner et al., 2006; Kelly et al., 2006). Viewed through a Capabilities lens, these observations shift attention away from normative assumptions about what families should provide towards what children are realistically able to experience given structural constraints on time, resources and support.

Participant 3 (2024) further highlighted how the temporary and uneven nature of externally funded initiatives can limit schools' capacity to address inequalities in food and nutrition education through their discussion of the TopNosh programme. The programme was described as tailored cooking sessions accompanied by recipe cards for pupils in one

placement school in Glasgow and was viewed as highly valued by both learners and teachers. However, the participant also emphasised its resource intensive nature noting that ‘she brings her own utensils, she brings all of the food… as much as she is fabulous, it is also very, very expensive (Participant 3, 2024). As a result, the programme was described as temporary and inconsistently available. Although TopNosh was perceived as beneficial for building teacher confidence and supporting practical cooking activities its reliance on Pupil Equity Funding (PEF) rendered its continuation uncertain and dependent on annual funding decisions. Within the one year funding period cost and scheduling restrictions meant that not all pupils were able to participate and as PEF allocation is a local, headteacher based, decision, similar opportunities were not available across schools nationally. This example illustrates how reliance on short term, privately delivered interventions can result in uneven learning opportunities rather than sustained and equitable provision. It reflects wider patterns identified by Prade et al. (2022) and Pérez-Rodrigo and Aranceta (2003) where effective practice remains inconsistently provided. From a Capabilities perspective this leads to uneven capability development as pupils’ opportunities to develop food related knowledge, skills and confidence depend on school-level access to funding and partnerships rather than entitlement.

Despite these constraints, participants frequently emphasised the value of whole school and community approaches, particularly those involving parental engagement, as mechanisms for supporting capability development. Across both focus group discussions and individual interviews food was consistently framed as a social and relational practice, with emphasis placed on shared eating, collaborative cooking and the development of life skills. From a Capabilities perspective these practices support not only nutritional outcomes, but also broader capabilities related to affiliation, dignity and participation. This interpretation aligns with Hart (2016) and Rutland and Turner (2020) who emphasise the social and emotional value of food education and illustrates how policies designed to ensure safety can inadvertently constrain children’s substantive freedoms for nourishment, social connection and wellbeing (Daniel and Gustafsson, 2010). While schools are considered as key sites for mitigating food related inequalities the findings illustrate the persistent tension between aspiration and constraint in their capacity to act as equalisers.

Preparedness and Confidence

Across both phases of data collection, student teachers' preparedness to deliver food and nutrition education (FNE) emerged as uneven, situational and closely tied to personal experience rather than formal preparation within ITE. This finding aligns with the wider research where teacher concerns about knowledge, confidence and professional preparedness in relation to FNE recur consistently (Cotton et al., 2020; Buttigieg Fiteni & Mimirinis, 2025). While most participants in this study initially expressed a sense of confidence, particularly within the focus groups, this confidence appeared to be grounded less in pedagogical or theoretical competence and more in everyday familiarity with food as a life skill. Participants frequently described food and nutrition as knowledge they 'use every day' framing teaching in this area as relatively accessible and non-threatening in comparison to other curricular topics. This perceived preparedness was most evident when discussions centred on general health messages, food groups or familiar classroom activities such as tasting sessions and basic food preparation.

However, as conversations progressed, particularly within the individual interviews, participants' confidence appeared to lessen when the questions probed into areas related to the complexities of inclusive practice. Issues relating to allergies, religious and cultural dietary requirements, eating disorders and socioeconomic constraints prompted some hesitation and uncertainty. Through these discussions preparedness was revealed not to be a secure skill but as contingent on context, prior exposure and perceived risk. This finding suggests that while surface level familiarity may support initial engagement with FNE, it does not necessarily equip student teachers to navigate its ethical, cultural and practical dimensions. This again appears to mirror existing literature which indicates that while student teachers often recognise the importance of FNE, when navigating diversity and risk, many report feeling underprepared to teach it effectively (Peralta et al., 2016; Coccia et al., 2020).

Preparedness therefore emerged as closely linked to personal biography echoing findings that teachers' personal health beliefs, dietary practices and self-efficacy influence their intended pedagogical approaches (Coccia et al., 2020). Some participants attributed their confidence to prior experiences, for example in family cooking, hospitality work or personal interest in food (Participant 2, 2024). While others acknowledged relying on intuition rather than structured training (Participant 4, 2025). In contrast, participants with less personal exposure

described greater apprehension in teaching FNE. Limited formal input on FNE within ITE, alongside competing curriculum pressures and restricted placement opportunities, were identified as barriers to developing confidence. Participant 5's (2025) reflection that 'we need more space and time… if we're going to do it right' could be said to capture the systemic nature of these constraints and highlights the difficulty of translating values and intentions into sustained practice. This reflects broader literature evidence that limited time, low curricular priority and restricted access to reliable nutrition-related information significantly constrain teachers' engagement with FNE (Perikkou, 2015; Love et al., 2020).

Practical and institutional barriers further shaped perceptions of preparedness. Participants described challenges related to health and safety regulations, lack of kitchen facilities and concerns about managing dietary restrictions inclusively. These constraints required not only technical knowledge but ethical judgement, relational sensitivity and adaptability. Here participants expressed anxiety about excluding learners unintentionally or placing children at risk, this implies that preparedness in FNE extends beyond content knowledge to encompass professional responsibility and care. From a Capabilities perspective this reflects the role of conversion factors where institutional arrangements and material conditions shape whether teachers can convert knowledge into meaningful educational practice. This continues to resonate with the work of Perikkou (2015) who states that teacher preparedness develops gradually and is influenced by experience, self-efficacy and contextual support, positioning ITE as an important starting point rather than a complete preparation for professional practice.

Despite these limitations, participants demonstrated agency in attempting to address gaps in their preparation. Many described engaging in self-directed learning, drawing on digital resources and websites such as NHS guidance, Healthy Schools Scotland and BBC Bitesize to support lesson planning and implementation. This behaviour could be said to reflect Nussbaum's (2011) emphasis on practical reasoning and adaptive capability, suggesting that student teachers are actively constructing their professional capacities in the absence of systematic provision. However, engagement with these resources was largely instrumental and uncritical with little evidence of interrogation of underlying assumptions, contradictions in public health messaging or the socio-political dimensions of food education. As a result, preparedness remained focused on delivering acceptable content rather than developing confidence in navigating complexity.

These findings suggest that preparedness for FNE within ITE is characterised by variability rather than entitlement. While some student teachers feel capable of delivering basic food education, this confidence is easily destabilised when faced with diversity, ethical uncertainty or structural constraint. From a Capabilities perspective this indicates that preparedness itself is a capability shaped by institutional opportunity. Without sustained, explicit and critically informed engagement with FNE within ITE, student teachers' capacity to support pupils' food related capabilities remains uneven, fragile and dependent on individual resilience rather than collective professional support.

Limitations of the Study

As with all qualitative, small-scale research this study has several limitations that should be acknowledged when interpreting its findings. These limitations relate to the scope of the study, the nature of the sample and the methodological choices made, all of which reflect deliberate design decisions aligned with the exploratory aims of the research rather than methodological weakness.

First, the study involved a relatively small sample of student teachers drawn from a single Scottish Initial Teacher Education institution. Twenty-three participants took part altogether, with seventeen participating in the focus group discussions and six engaging in individual interviews. Creswell (2017) notes that there is no fixed sample size for qualitative research. Instead, the appropriate number of participants depends on the research design. When exploring participants' lived experiences, Creswell (2017) suggests that a sample size of approximately three to ten individuals is generally considered suitable. So, within my own context twenty-three participants across three focus groups and six individual interviews is suitable for this specific study. While this sample size allowed for rich, in-depth exploration of participants' perspectives and professional reasoning, it limits the breadth of experiences captured and the extent to which findings can be generalised across different ITE programmes or policy contexts. ITE can vary considerably across institutions and student teachers' experiences of food and nutrition education may differ. However, the aim of the study was not for statistical representativeness but for conceptual and analytical insight. By situating the findings within existing literature and a Capabilities framework the study offers interpretations that may be transferable to similar contexts.

Second, the depth of data varied across methods and participants. While the individual interviews enabled more reflective and analytically rich engagement, some focus group discussions were characterised by brief or surface level responses. This was most likely due to the nature of the collaborative carousel activity to facilitate participant rather than researcher voice and to provide peer support and prompting. While this approach was effective in this area, it did produce short bullet-pointed written responses rather than a full transcript for analysis. Also, certain areas, including critical engagement with nutrition-related resources or theoretical understandings of health and wellbeing were not always explored in depth.

Third, the study relies on self-reported data, drawing on participants' reflections on their knowledge, confidence and preparedness. It does not include the perspectives of pupils, mentors or other school-based staff, as this would have gone beyond what the research questions was seeking. As with all self-report methods, these accounts are subject to bias and may not fully align with observed classroom practice. Participants' descriptions of confidence or readiness may reflect perceived expectations or professional norms rather than enacted pedagogy. Efforts were made to mitigate this through the collaborative approach to the focus group discussions that avoided researcher voice as well as the use of individual interviews that allowed for more reflective and critical engagement through the use of open questioning with helped to identify uncertainty or ethical tension that may have been less visible in the focus group discussions. However, the absence of observational data should be considered and acknowledged as a limitation.

A further limitation relates to the framing of the research questions and interview prompts. Concepts such as human flourishing and capabilities are theoretically rich but abstract and while they provided a valuable lens for analysis, they may have shaped the nature of participants' responses. In some instances, this resulted in findings that were more descriptive than analytically developed and reflects the limits of what can reasonably be expected within short interview timings. While a Capabilities Approach provided a robust and ethically grounded framework for analysis, it also shaped the focus of the study towards issues of agency, opportunity and constraint. Other theoretical lenses may have focused on different aspects of food and nutrition education, such as policy enactment, discourse analysis or

behavioural change. The findings should therefore be understood as one interpretive account rather than an exhaustive explanation of food and nutrition education within ITE.

Finally, the researcher's positionality must also be acknowledged. As a teacher educator and programme leader my professional role inevitably shaped the research process including the framing of questions, interpretation of data and interaction with participants. While this insider role offered contextual understanding and facilitated rapport, but it may also have influenced how participants articulated their views. This limitation was addressed through explicit reflexivity and transparency regarding my Personal Practical Theory. Nonetheless, it remains an important consideration when interpreting the findings.

Together, these limitations suggest caution in extending the findings beyond the studied cohort. However, the themes identified resonate well with existing research on food and nutrition education, teacher preparedness and health education within ITE. As such, the study offers a credible and ethically informed contribution to understanding how food and nutrition education is experienced, interpreted and constrained in ITE while also identifying productive directions for future research.

Conclusion

This discussion chapter has brought together insights from the focus group discussions and individual interviews through four themes of foundations of knowledge, teachers' roles and responsibilities, schools as sites of equity, and preparedness and confidence to examine how food and nutrition education is understood and perceived by primary based student teachers. These themes help to illustrate the ways in which student teachers conceptualise food as integral to children's learning and wellbeing, while also grappling with the ethical, professional and contextual responsibilities associated with teaching in this area. The analysis highlights that while participants generally recognised the importance of food and nutrition education their capacity to engage with it in practice was shaped by a range of interrelated factors, including personal experience, perceived responsibility, institutional constraints and uneven preparation within ITE. Schools were frequently positioned as potential equalisers, yet this role was understood as conditional and constrained by wider socioeconomic factors and policy limitations. Similarly, teachers were viewed as influential role models and

mediators of children's developing agency but their confidence and preparedness to fulfil this role varied considerably.

Rather than presenting a fixed account of food and nutrition education in ITE, this chapter draws attention to the ways in which it is negotiated and shaped by context. The findings suggest that student teachers' engagement with food and nutrition education is influenced not only by their individual beliefs and intentions but also by the opportunities and limitations embedded within educational structures and professional learning environments. In this way, the discussion contributes to a more nuanced understanding of how food and nutrition education is positioned within primary ITE and how aspirations for equity, wellbeing and learner agency are negotiated in practice. This positioning echoes the ongoing influence of Health Promoting Schools approaches, while also reflecting wider and continuing global concerns relating to children's health and wellbeing.

The final chapter brings these strands together by synthesising the key findings in relation to the research question and considering their implications for initial teacher education, policy and future research, as well as the overall significance of the study.

Chapter 11: Conclusion

Re-visiting the Research Purpose and Question

This research set out to explore how student teachers in one Scottish Initial Teacher Education (ITE) institution understand food and nutrition education (FNE) and how they perceive their role in supporting pupils to develop health promoting behaviours. The overarching research question asked:

What do Initial Teacher Education (ITE) students know about food and nutrition education, and how do they perceive their role in supporting pupils to develop health promoting behaviours?

Rather than seeking definitive answers or proposing a single model of effective practice the study explored student teachers' lived experiences and professional reasoning. It examined how knowledge, values, professional identity and structural conditions intersect to shape how food and nutrition education is understood and enacted during initial teacher preparation. Guided by a Capabilities Approach the research moves beyond questions of curriculum coverage or individual behaviour change to consider how educational conditions expand or constrain both teachers' and learners' real opportunities to engage meaningfully with food, health and wellbeing.

This section addresses the research question by first considering what student teachers know about food and nutrition education and then examines how they understand their professional role in supporting pupils' capabilities.

Student Teachers' Knowledge of Food and Nutrition Education

The findings indicate that student teachers hold a broad but uneven understanding of food and nutrition education. Across the data, participants demonstrated a strong normative commitment to the importance of food in supporting children's learning, wellbeing and development. Food was frequently positioned as foundational to concentration, behaviour and readiness to learn, reflecting alignment with whole school approaches to health and wellbeing and public health narratives emphasising the significance of early intervention. However,

student teachers' knowledge was often characterised by generalised health messages rather than depth or conceptual coherence. Discussions tended to focus on balanced diets and food groups with limited engagement with nutritional science, food systems, sustainability or socio-cultural dimensions of food. This pattern reflects findings in existing literature that pre-service teachers' nutrition knowledge is often fragmented and framed primarily through health promotion rather than as a multidimensional curricular area (Cotton et al., 2020).

Interestingly, confidence in knowledge was frequently grounded in personal experience rather than formal pedagogical preparation. Teaching food and nutrition was commonly described as intuitive or familiar particularly when compared with assessment-driven subjects. Yet this confidence was provisional. When participants considered inclusive practice, risk management or ethical responsibility (such as allergies, eating disorders, cultural and religious dietary needs or food poverty) uncertainty was divulged. This suggests that student teachers' knowledge of FNE, while affectively strong, is insufficiently supported by structured opportunities within ITE to integrate scientific, socio-cultural and ethical dimensions of food education. From a Capabilities perspective, this uneven knowledge base can be understood as shaped by institutional conversion factors, including curriculum prioritisation, time allocation and access to guided learning opportunities (Love et al., 2020). Without sustained and explicit engagement within ITE, knowledge of food and nutrition education remains dependent on biography and individual confidence rather than shared professional entitlement.

Student Teachers' Perceptions of Their Role in Supporting Pupils' Capabilities

In relation to their professional role, student teachers demonstrated a nuanced and ethically informed understanding of the limits of education in shaping food related behaviour. Participants consistently rejected simplistic assumptions that providing information leads directly to behaviour change. Instead, they recognised that children's food choices are shaped by family practices, economic constraints and wider socio-cultural influences beyond the school. Within this context, student teachers commonly positioned themselves as mediators rather than enforcers of health messages. Their role was understood as providing opportunities for children to develop knowledge and make informed choices through practical activities such as meal design, tasting sessions, cooking and gardening clubs. At the same time, participants' accounts revealed tensions between ethical intentions and conceptual

limitations. While many resisted moralising or fear-based approaches and explicitly sought to avoid stigmatising children's food choices, their reasoning often relied on simplified or binary understandings of healthy and unhealthy foods. This suggests that while student teachers are ethically attuned to issues of agency and constrained choice, their capacity to enact this role confidently is shaped by the depth of their underlying knowledge and the support available within ITE and school contexts.

Participants also viewed schools as sites of both possibility and constraint. Schools were described as uniquely positioned to support equity, early intervention and holistic development particularly where home food experiences are shaped by time scarcity or economic insecurity. However, these possibilities were understood as conditional. Reliance on short term initiatives, external providers and individual staff commitment limited the sustainability and equity of provision. In line with literature the findings show that schools can expand pupils' capabilities under certain conditions but may also reproduce inequality when structural support is fragmented or inconsistent (Prade et al., 2022; Pérez-Rodrigo and Aranceta, 2003).

In answering the research question the findings show that student teachers' engagement with food and nutrition education is characterised by strong aspiration but constrained by uneven knowledge, limited formal preparation and structural pressures within ITE and schools. Student teachers value food education, recognise its ethical significance and seek to support pupils' agency and wellbeing. However, their capacity to do so consistently depends on the conditions under which professional learning takes place. By applying a Capabilities Approach, this study has reframed food and nutrition education in primary ITE as more than a question of curriculum content or teacher confidence. Instead, it highlights how professional knowledge, ethical responsibility and pedagogical action are shaped by opportunities, constraints and institutional priorities.

Contributions to Knowledge, Policy and Initial Teacher Education

This study makes several interrelated contributions to the fields of initial teacher education, food and nutrition education and health promotion. While it set out to explore student teachers' perceptions of food and nutrition education, the findings raise wider questions about how ITE programmes conceptualise, prioritise and support this area of professional learning.

By focusing on student teachers' perspectives and situating their accounts within a Capabilities conceptual framework the research deepens understanding of how food and nutrition education is experienced, interpreted and constrained within primary ITE and helps to explain why aspirations for equity, wellbeing and learner agency are not always realised in practice.

A central theoretical contribution of this research lies in its application of a Capabilities Approach to the study of food and nutrition education within ITE. While existing research has consistently identified gaps in teacher knowledge, confidence and preparedness such findings are often interpreted through deficit oriented lenses that emphasise individual shortcomings. By contrast this study reframes preparedness, confidence and pedagogical action as capabilities that are shaped by a complex interaction of personal, institutional and structural conversion factors. Through this lens, student teachers' uneven engagement with FNE is understood not simply as a lack of motivation or competence but as the outcome of inconsistent opportunities within ITE programmes, placement contexts and wider educational policy environments. The findings demonstrate how time pressures, curriculum prioritisation, regulatory requirements and access to resources influence whether student teachers can convert values and intentions into meaningful practice. It also highlights the ethical dimensions of food and nutrition education. Participants' resistance to moral or fear-based messaging reflects an implicit commitment to protecting children's dignity and agency particularly in contexts of constrained choice. By interpreting these practices as capability supporting rather than compliance focused this study contributes a more ethically grounded understanding of what effective and just food education can look like within diverse and unequal settings. This theoretical framing extends the field by shifting attention from what teachers should do to what they are realistically enabled to do and also by recognising that learner outcomes are inseparable from the conditions under which teaching occurs.

Empirically, this research contributes qualitative insight into how student teachers make sense of food and nutrition education during their initial preparation. While much of the existing literature relies usually relies on surveys or knowledge assessments to explore teacher knowledge and understanding of curriculum content knowledge, this study used participants' narratives through reflections and professional reasoning. In doing so, it captures the tensions, uncertainties and ethical negotiations that can influence the teaching and learning of food and nutrition in classrooms.

Building on earlier findings that student teachers demonstrate a commitment to food and nutrition education this study shows how variations in subject knowledge, exposure to socio-cultural dimensions of food and uncertainty around inclusive practice contribute to uneven levels of preparedness. This contrast presents a more nuanced picture of student teachers as neither unprepared nor fully equipped but as professionals in the formative years of their careers, navigating competing expectations within conditions of partial and inconsistent support. This reframing extends existing discussions of teacher modelling and professional responsibility by highlighting food and nutrition education as a practice that requires balancing scientific and biomedical knowledge with relational and ethical considerations. In this way, teaching about food is shaped not only by what teachers know, but by their awareness of constrained choice and their efforts to support learner agency rather than enforce individual compliance.

At a policy and practice level, the findings reinforce the need for sustained, coherent and inclusive approaches to food and nutrition education within schools. While participants recognised the potential of schools to act as sites of equity and early intervention their accounts also revealed how reliance on short term initiatives, external providers and individual goodwill can result in fragmented and inequitable learning opportunities. This study therefore supports calls for more systematic and well-resourced approaches to food and nutrition education that move beyond isolated events or temporary funding streams.

The findings also suggest that greater priority should be afforded to food and nutrition education as a contributor to pupils' holistic development, rather than positioning it as secondary to assessment-driven curricular subjects. When food education is marginalised within attainment-focused frameworks, its wider contributions to wellbeing, relational learning, life skills and learner agency risk being overlooked. Embedding food and nutrition education more securely within policy and practice would signal its value not only for health outcomes but for supporting children's broader capabilities to participate, learn and flourish within and beyond school.

This study also contributes to wider debates on equity and social justice by highlighting the expected role of schools as equaliser in educational and health outcomes. Rather than presenting education as a universal remedy for health inequalities the findings show how

food and nutrition education is shaped by socio-economic conditions, policy priorities and institutional constraints. Even where intentions are strong, inequities may persist when provision is uneven or dependent on short term initiatives. Viewed through a Capabilities lens equity is therefore understood not as uniform provision but as responsiveness to learners' differing circumstances and opportunities. This perspective focuses attention on the ethical responsibility of schools and policymakers to address the real conditions that enable or limit meaningful participation in food, health and wellbeing practices by reinforcing the need for approaches that support capability development rather than symbolic or minimal compliance.

Implications for Initial Teacher Education and Programme Redesign

For ITE this study highlights the need to move beyond treating food and nutrition education as implicit, peripheral or assumed knowledge within primary teacher preparation. While participants brought valuable personal experience, enthusiasm and affective commitment to food, health and wellbeing the findings suggest that these resources alone are insufficient for navigating the ethical, cultural and practical complexities of FNE in contemporary school contexts. Without structured support student teachers' confidence and practice remain uneven and heavily dependent on personal biography rather than collective professional entitlement. The findings therefore point to the importance of sustained, evidence informed engagement with food and nutrition education within ITE. Such engagement should integrate theoretical understanding with experiential learning, enabling student teachers to connect scientific and biomedical nutrition knowledge, sociocultural perspectives on food and pedagogical practice. Opportunities for critical reflection are particularly significant, as they support student teachers to interrogate assumptions about health, responsibility and choice and to consider how inequality, constrained choice and family circumstances shape both teaching and learning. Explicit professional dialogue around food and nutrition education, alongside supported opportunities to engage with health promoting practices where appropriate, may help reduce reliance on intuition or ad hoc approaches. Importantly, such experiences can make visible the relational and contextual dimensions of FNE, supporting student teachers to navigate risk, inclusion and ethical responsibility with greater confidence and coherence. In this way, FNE can be positioned not simply as health promotion content but as an ethically informed educational practice.

Within ITE programme design, the findings suggest that ITE programmes should create space to critically examine the role of schools in addressing inequality. Moving away from idealised narratives of schools as automatic equalisers towards a more realistic understanding of schools as conditional equalisers allows student teachers to engage more honestly with the structural constraints that shape practice with more continued and progressive reflection on their own identity and values in this area. Embedding aspects of food and nutrition education within broader discussions of human flourishing, social justice and wellbeing could better align ITE with contemporary Scottish policy priorities, including GIRFEC and the Scottish Attainment Challenge, while also responding to persistent public health concerns. In doing so, ITE may be in a stronger position to support the development of teachers' capabilities to enact ethical, inclusive and context sensitive food and nutrition education as well as promote human flourishing more generally within their practice.

Contribution to Knowledge and Significance of the Study

This study contributes to research on food and nutrition education (FNE) within initial teacher education by placing student teachers' perspectives at the centre of the research and interpreting these through a Capabilities Approach. While existing literature has documented persistent challenges in teacher confidence, subject knowledge and the curriculum positioning of FNE, this research moves beyond identifying these as deficits in individual teachers. Instead, it demonstrates how teachers' knowledge, confidence and capacity to act are produced through the interaction between individual dispositions and the educational, institutional and structural conditions in which they learn and work. The significance of this contribution lies in shifting the question from whether teachers are sufficiently prepared to teach FNE towards asking whether ITE and school environments provide the conditions through which teachers can develop and exercise the capabilities required to do so meaningfully.

A key contribution of this study is therefore its reframing of preparedness as a capability rather than a fixed professional attribute. Preparedness cannot be secured through isolated curriculum inputs, optional provision or an assumption that personal experience provides sufficient knowledge to teach food and nutrition effectively. It must be cultivated through sustained opportunities for professional learning, critical reflection and engagement with the scientific, social, cultural, ethical and structural dimensions of food. This reframing aligns

with long-standing traditions that conceptualise teaching as an enquiry oriented profession, where professional judgement is developed through reflection, experience and ethical deliberation rather than the acquisition of fixed competencies (Dewey, 1933; Schön, 1983; Stenhouse, 1975). This has implications beyond ITE. If teachers' capabilities are shaped by the conditions in which they work, then the capacity of schools to support pupils' food-related capabilities must also be understood in relation to the structures and opportunities that schools provide. The school day, opportunities to eat, the food environment and access to experiences such as growing, preparing and sharing food are not neutral organisational features; they shape the opportunities pupils have to engage with food in meaningful ways. A capabilities perspective therefore requires a broader conception of FNE in which food is not simply a topic to be taught but part of the lived experience of school.

This raises a more fundamental question about the organisation of schooling itself. If we are serious about supporting children to develop meaningful capabilities in relation to food, then there is a need to open up professional conversations about whether existing school structures provide sufficient space for this to happen. Timetabling, curriculum hierarchies, attainment pressures, the separation of learning from everyday life and the limited time available for practical and experiential activities can all constrain opportunities for children to engage meaningfully with food. FNE cannot be strengthened simply by adding more content to an already crowded curriculum. It requires consideration of whether the organisation of the school day and the wider culture of schooling enable children to grow, prepare, cook, share and eat food, and to understand where food comes from and how it connects to health, culture, community and sustainability. Such experiences should not be regarded as peripheral enrichment but as potentially significant forms of learning through which pupils can develop practical knowledge, agency and relationships with food. This means creating space for a more critical discussion about what schools are for, how time and learning are organised, and whether current structures enable or constrain the development of the capabilities that education claims to value.

This also challenges the assumption that schools can automatically act as equalisers of health and educational inequalities. The findings suggest instead that schools are conditional equalisers as they have significant potential to expand pupils' opportunities, but this potential depends on the structures, resources, relationships and practices through which school life is organised. Providing a lesson about healthy eating, for example, does not necessarily create

the capability to engage meaningfully with food if pupils have limited opportunities to experience, prepare, grow, share or make choices about food within their everyday school environment. Equally, teachers cannot be expected to compensate for structural inequalities through individual pedagogical effort alone. This distinction is important because it locates responsibility for capability development across the wider educational environment rather than solely with individual teachers or pupils. It also extends understandings of FNE by positioning the school itself as an environment that can either expand or constrain opportunities for healthy, equitable and meaningful engagement with food.

A further contribution of this research lies in highlighting the significance of partnership working between ITE institutions and schools. Preparing teachers to support meaningful FNE cannot be regarded as the sole responsibility of the university or of individual schools. Instead, it requires a more joined-up approach to teacher preparation and professional development across the continuum of ITE and early career practice. Stronger partnerships could create opportunities for ITE providers and schools to share knowledge, identify effective practice, critique the sources of food and nutrition knowledge, consider the barriers created by existing structures and collectively explore how FNE might be better designed, embedded and sustained. This research provides an opportunity to initiate such professional conversations by bringing together questions of teacher preparation, school organisation and pupils' opportunities to engage meaningfully with food. In particular, the good practice evident in some early years settings offer a potentially valuable starting point for these discussions. The ways in which early years environments organise time, routines, relationships and practical experiences around food may provide useful examples for considering how similar opportunities could be more deliberately designed and embedded across ITE programmes and school practice, while recognising that approaches would need to be adapted to different educational contexts. Partnership working therefore becomes more than a mechanism for placement or professional support; it can provide a space for ITE institutions and schools to critically examine existing practice and collectively develop more coherent approaches to FNE.

The theoretical contribution of the study lies in demonstrating the value of the Capabilities Approach as a framework for understanding these relationships. Rather than treating knowledge acquisition and behaviour change as straightforward processes, the research highlights the importance of the conditions that enable individuals to convert knowledge,

values and intentions into meaningful action. For teachers, this means having the professional opportunities, resources and institutional support to enact ethical and inclusive approaches to FNE. For pupils, it means having genuine opportunities to develop knowledge, agency and practical engagement with food within the everyday life of school. The research therefore extends the application of a Capabilities Approach within teacher education by connecting teacher capability with learner capability and by demonstrating that the two are shaped by the same wider educational conditions. Empirically, the study contributes qualitative insight into how student teachers reason about FNE, professional responsibility and health-promoting practice during their initial preparation. The combination of focus groups and individual interviews provides insight into both shared understandings and more reflective, personal accounts. While the focus groups revealed areas of confidence, consensus and shared professional assumptions, the individual interviews created space for participants to articulate uncertainty, ethical tensions and the contextual constraints that were less visible within group discussion. This demonstrates the value of examining teacher preparedness not simply through measures of knowledge or confidence, but through the ways in which emerging professionals make sense of their responsibilities and the opportunities available to them.

Taken together, these contributions position FNE as more than a question of curriculum coverage or teacher competence. The research demonstrates that meaningful food and nutrition education depends upon the relationship between knowledge, professional capability and the environments in which teaching and learning take place. It therefore provides a basis for rethinking both ITE and school practice and for strengthening the relationship between the two. ITE needs to create sustained opportunities for teachers to develop the capabilities required to engage critically and ethically with food, while schools need to be willing to question whether their existing structures, routines and priorities provide sufficient opportunities for pupils to experience and participate in food-related practices. Developing stronger partnerships between ITE institutions and schools could support this process by creating a shared professional space in which these questions can be explored, good practice identified and more coherent approaches to FNE developed. The wider significance of the study is consequently its argument that improving FNE is not simply about teaching children more about healthy food. It requires us to ask more fundamental questions about how schooling is organised, how teachers are prepared and developed, and how ITE institutions and schools can work together to create space for educational experiences in which food can be learned about, experienced and practised as part of everyday school life. In this sense, the

research calls for a shift from teaching about food towards creating the conditions in which children can meaningfully engage with food, supported by a more connected and collaborative approach to teacher education and school practice.

Implications for My Professional Practice as a Teacher Educator and Researcher

This study has prompted significant reflection on my own professional practice as both a teacher educator and a practitioner-researcher. While the research initially set out to explore student teachers' perceptions of food and nutrition education with an emphasis on how ITE influences school-based practice, the findings have shifted my focus towards the role of teacher education itself in shaping what is possible in classrooms. In particular, the study has sharpened my understanding of how ITE can either enable or constrain the development of both student teachers' capabilities and those of their future learners.

As a teacher educator, this research has reinforced the importance of making food and nutrition education explicit rather than assumed. It has encouraged me to reconsider how space is created within ITE programmes for critical engagement with health, wellbeing and inequality as well as how experiential and reflective opportunities are more effectively and progressively scaffolded throughout the programme. I am now more attentive to the need to support student teachers not only in acquiring knowledge but in developing the ethical reasoning, professional confidence and reflexivity required to navigate complex and unequal food contexts in schools.

This study has also strengthened my conviction that ITE programmes must not only teach the Capabilities Approach as a conceptual framework but actively embody it within their own pedagogical practices, structures and cultures. If student teachers are to nurture learners' agency, dignity and wellbeing, then these same values need to be enacted consistently within ITE itself. This requires teacher educators to design learning experiences that reflect the relational, dialogic and compassion-centred commitments that underpin capability enhancing practice. In other words, a Capabilities Approach should shape how we teach as much as what we teach. For this reason, the forthcoming MEduc programme redesign will take a Capabilities Approach as a foundational organising principle, guiding not only curricular choices but also the development of the knowledge, skills and dispositions that we expect

future teachers to cultivate. Central to this redesign is a commitment to reshaping teacher educators' own practices so that we model the forms of pedagogical relationality, critical reflection and ethical responsiveness that we aim for our students to develop. A genuinely capability enhancing programme requires teacher educators to attend to the quality of their interactions with student teachers, to create learning environments where student voices are heard and valued and to support dispositions such as empathy, humility, reflexivity and respect for learners' diverse circumstances. This shift demands more than incremental adjustments, it involves re-imagining the MEduc as a coherent learning ecosystem in which modelling, relational pedagogy and compassionate professionalism are woven through each course, placement experience and assessment. Adopting such an approach ensures that the programme does not merely advocate for capability expanding education in schools but enacts it within ITE by demonstrating how teachers can cultivate environments that genuinely expand learners' freedoms and opportunities.

In my role as MEduc Programme Leader, I have a particular responsibility to lead this transformation during the General Teaching Council for Scotland (GTCS) reaccreditation process. This moment presents an opportunity to embed capability enhancing principles in a systematic and intentional way across the programme, ensuring alignment between values, pedagogical practices and institutional structures. By redesigning the programme to foreground relational and compassionate orientations, alongside robust theoretical grounding and critical professional enquiry, I believe, we can support future teachers to understand modelling not as a matter of personal behaviour alone, but as a professional and ethical practice with profound implications for learners' capabilities. Ultimately, a programme that models and enacts a Capabilities Approach sends a clear and powerful message, that teaching is fundamentally relational, that learning is shaped by the freedoms and constraints within educational environments and that educators have both the responsibility and the opportunity to contribute to flourishing and justice through their everyday actions. The MEduc redesign therefore represents not simply a curricular update but a commitment to cultivating a generation of teachers who understand their work as capability shaping, ethically grounded and deeply connected to the lived realities of the children and young people they serve.
As a researcher, adopting a Capabilities Approach has widened my analytical lens far beyond questions of curriculum delivery or behavioural outcomes. It has encouraged me to attend more closely to issues of opportunity, constraint and justice, and to consider how these shape both teacher learning and classroom food practices. This perspective has influenced the kinds

of research questions I ask, the way I interpret teacher narratives and the sensitivity with which I approach the relational, emotional and contextual dimensions of professional practice.

Engaging with student teachers' accounts through this lens has deepened my understanding of professional learning as an embodied and situated process, one in which teachers' agency is shaped by institutional cultures, structural conditions and the quality of the relationships that surround them. A Capabilities Approach has therefore not only framed my analysis but also reshaped my sense of responsibility as a researcher and teacher educator. It has strengthened my commitment to practitioner-focused research that informs programme redesign, supports capability enhancing pedagogies and remains attentive to the lived realities, uncertainties and aspirations of student teachers. This position reinforces the importance of aligning research, pedagogy and programme leadership. By using a Capabilities Approach as both an analytical framework and an ethical stance, I am better positioned to contribute to the development of an ITE environment that models relational, compassionate and just forms of practice. In this way, research becomes not only an instrument for understanding teacher learning but a means of enacting the very values it seeks to promote. These shifts position my future practice at the crossroads of research, curriculum development and professional learning. As a teacher educator on a teaching and scholarship contract this study reinforces the importance of sustained and meaningful engagement with scholarship as a means of enhancing practice, informing programme design and contributing to wider professional conversations. In line with Darling-Hammond's (2017) argument that meaningful educational change depends on the integration of research, practice and professional learning in the service of equity and learner development, the findings provide a clear rationale for advocating more coherent, ethically grounded and capability oriented approaches to food and nutrition education within ITE. This research will continue to shape my teaching, leadership and scholarly activity, particularly through the dissemination of insights from this research with colleagues to support collective reflection on how food and nutrition education is positioned within ITE and how programmes might more effectively develop both student teachers' and learners' capabilities.

Chapter 12: Appendices

Appendix 1: MEduc Programme Structure with Overarching Course Themes

Year 1 (Level 1/ SCQF 7) **120 credits**	Education in Practice 1	Curriculum Enquiry 1	Options/ Fundamentals of Education 1	Theology in Ed/ WTP	School Experience
Year 2 (Level 2/ SCQF 8) **120 credits**	Education in Practice 2	Curriculum Enquiry 2	Education & Society 2	Theology in Ed/ What If	School Experience
Year 3 (Level 3/ SCQF 9) **120 credits**	Education in Practice 3	Curriculum Enquiry 3	Education & Society 3	Educational Electives 3	School Experience
Year 4 (Level 4 / SCQF 10) **120 credits**	Education in Practice 4	Curriculum Enquiry 4	Education & Society 4	Educational Electives 4	School Experience
Year 5 (Level 5 / SCQF 11) **120 credits**		PEDM	Education & Society 5		
	Dissertation 60 credits				

Appendix 2: Literature Search Strategy

My research question:	What do Initial Teacher Education (ITE) students know about food and nutrition education, and how do they perceive their role in supporting pupils to develop health promoting behaviours?
EBSCOhost used to search Education Databases	ERIC, the British Education Index, the Education Research Index, the Australian Education Index, Teacher Reference Centre, ProQuest Academic, Child Development and Adolescent Studies, Education Source Ultimate and SAGE Research Methods.

Concept	Example search terms	Search strategy
Food and nutrition education	"food education" OR "nutrition education" OR "food and nutrition education" OR "food literacy"	Related terms combined with OR to broaden retrieval.
Health-promoting behaviours	"health promot*" OR "healthy behav*" OR "health promoting school*" OR "health promoting behaviour"	Truncation used to capture variations in terminology.
Teacher education	"teacher education" OR "teacher training" OR "initial teacher education" OR "pre-service teacher*" OR "student teacher*" OR "teacher preparedness" OR "higher education" OR "university"	Terms combined to capture different terminology used across teacher education literature.
Education / school context	"school*" OR "educat*" OR "primary school*" OR "primary" OR "elementary" OR "classroom*"	Truncation used to capture variations such as *school*, *schools*, *schooling*, *education*, *educational* and *educator*.
Capabilities Approach	"capability approach" OR "capabilities approach" OR "capabilit*" OR "human flourishing" OR "capabilities"	Used to identify literature explicitly engaging with capability-oriented perspectives and related concepts.
Combined searches	("food and nutrition education" OR "food education" OR "nutrition education") AND ("health promot*" OR "health behav*") AND ("teacher education" OR "initial teacher education") AND ("school*" OR "educat*") ("food and nutrition education" OR "food education" OR "nutrition education") AND ("health promot*" OR "health behav*") AND ("school*" OR "educat*") ("food and nutrition education" OR "food education" OR "nutrition education") AND ("health promot*" OR "health behav*") AND ("teacher education" OR "initial teacher education") ("food and nutrition education" OR "food education" OR "nutrition education") AND	Boolean AND and OR used to identify specific literature related to main concepts while capturing helpful synonyms or alternative spellings for each concept. Capability-related terms were incorporated to searches to narrow scope as searching progressed.

	("health promot*" OR "health behav*") AND ("teacher education" OR "initial teacher education") AND ("school*" OR "educat*") AND ("capabilit*" OR "capabilities approach")	

Screening and Analysis

Stage	Process
Identification	Literature identified through education-focused databases, Google Scholar and then from backward/forward citation searching.
Inclusion Criteria	English-language only, peer-reviewed literature published within the previous ten years. Studies where the full text available.
Exclusion Criteria	Medical research related to food and nutrition, medical interventions, disease treatment or adults without a school or teacher education focus. Studies focused exclusively on physical activity or higher education students where there is no connection to teacher education or educational practice
Initial screening	Titles and abstracts screened for relevance to food and nutrition education, health-promoting behaviours, teacher education and/or the Capability Approach based on inclusion and exclusion criteria.
Further Screening	Titles and abstracts screened for relevance to primary education. Inclusion criteria widened so that earlier literature from outwith 10 years was considered particularly where it represented seminal or foundational work so widened search to within 30 years when searching for health promoting schools. This also formed part of the backward/forward citation searching. Literature based on adults, consumer behaviour, food production or public health interventions with no clear connection to schools, teachers, learners or educational practice were also excluded.
Key areas of analysis	Teacher preparedness; the role of schools and teachers in health promotion; food and nutrition education and the relative absence of capability-oriented frameworks.

Appendix 3: Copy of Approval form from Glasgow University College of Social Science Ethics Committee

University of Glasgow
College of Social Sciences

28 November 2022

Dear Evelyn McLaren

College of Social Sciences Research Ethics Committee

Project Title: What are Initial Teacher Education (ITE) students' understanding of food and nutrition education and their role in supporting pupils' capabilities in adopting health promoting behaviours?

Application No:

The College Research Ethics Committee has reviewed your application and has agreed that there is no objection on ethical grounds to the proposed study. It is happy therefore to approve the project, subject to the following conditions:

- Start date of ethical approval: 29/11/2022
- Project end date: 31/12/2025
- Any outstanding permissions needed from third parties in order to recruit research participants or to access facilities or venues for research purposes must be obtained in writing and submitted to the CoSS Research Ethics Administrator before research commences: socsci-ethics@glasgow.ac.uk
- The research should be carried out only on the sites, and/or with the groups and using the methods defined in the application.
- The data should be held securely for a period of ten years after the completion of the research project, or for longer if specified by the research funder or sponsor, in accordance with the University's Code of Good Practice in Research: (https://www.gla.ac.uk/media/media_490311_en.pdf)
- Any proposed changes in the protocol should be submitted for reassessment as an amendment to the original application. The **Request for Amendments to an Approved Application** form should be used: https://www.gla.ac.uk/colleges/socialsciences/students/ethics/forms/staffandpostgraduateresearchstudents/

Yours sincerely,

[redacted]

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