DISSERTATION: FOOD INSECURITY AMONG POSTSECONDARY STUDENTS: A POLICY APPRAISAL

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Abstract

Food insecurity among postsecondary students is a trending issue in high income countries such as the United States, Canada, and Australia due to its documented implications for low-income student success. The absence of pertinent research in the U.K. highlights the urgent need for exploration into both the scope of food insecurity, as well as potent policy solutions. The purpose of this paper is to use social exclusion theoretical frameworks to introduce the issue as an emergent social problem among university students and to map the efficacy of various U.S. policy actions for a pre-emptive U.K. context. Using an ex ante appraisal methodology, the paper critically appraised income support, food provision, and meal sharing funds as actionable interventions which were evaluated against criteria of effectiveness, efficiency, and sustainability. Findings indicated that extant funding systems are contributing to a public health crisis on U.S. university campuses, suggesting a similar incidence in the U.K., despite the evident lack of formal investigation. The subsequent qualitative content analysis revealed that effective policy responses featured strong intersectoral working and directly engaged with the underlying causes of poverty in redressing student hunger. Recommendations for further research in the U.K. and revision of tertiary funding systems are discussed.

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Chapter 1: Introduction

1.1 Problem Statement

Higher education (HE) is frequently cited as a model pathway for social class mobility, leading to improved quality of life. Initiatives aimed at widening access to historically underserved demographics have arguably transformed its purpose by rearticulating who belongs in the ‘Ivory tower’ (Archer, 2003). As a result, non-traditional students are accessing HE at unprecedented rates. According to the NCES (2017), low-income students now enrol in U.S. universities at a higher rate than their middle-income peers. This pattern holds similarly for the U.K., where the most economically disadvantaged students represented the largest increases in the 2018 university entry cycle (UCAS, 2018). On the surface, it appears that efforts to make university spaces more inclusive are materialising. However, recent research contends that extant university funding systems have pushed students into survival mode through experiences of food insecurity (FI). Foraging for canned foods in between classes, sleeping under bridges, and engaging in sex work to secure meals are the lived realities of an invisible population of nearly half of undergraduates (Cady, 2014).

Energised by idealised promises of university-delivered high-paying jobs, lower- and middle-income students are willing to make sacrifices for secure economic futures. What has not come to light until very recently is the extent of their sacrifices - years of hunger and homelessness on their journeys to complete their degrees. In the last decade, a compelling international evidence base has risen arguing that FI is a leading cause of discrepancies in graduation rates between rich and poor students. The issue is so grave that it has been labelled a public health crisis in the U.S. (Clark et al., 2018; Raskind et al., 2019; Forman et al., 2018). Disproportionately affecting already vulnerable students, studies estimate that nearly two million U.S. students are at risk of FI whose consequences include academic noncompletion, chronic health disorders, and weaker employment outcomes (Lee et al., 2018; GAO, 2018).

1.2 Purpose and significance of the study

Considering policymakers’ heightened focus on HE equity, it is timely to investigate the scope of FI in the U.S. to serve as a basis for policy formulation in the U.K. My research revealed that despite substantial scholarly attention to food poverty among the general population, there is a striking dearth of student negotiations of deprivation. Only a handful of studies discuss youth experiences with food access problems, but focus mainly on homelessness (Douglas et al., 2018; Mulrenan et al., 2018a; Mulrenan et al., 2018b; Taylor & Costa, 2019)**.** This gap signals an important opportunity to learn from similar contexts to mitigate undetected student hardship through targeted policymaking. Further, to my knowledge, there are no studies exclusively dedicated to evaluating policy responses being used to address the issue, which is essential to catalyse change and action. This paper aimed to address these gaps through an ex ante policy appraisal of interventions for FI university students.

1.3 Methodology and Structure

The purpose of this research is to clarify what is known about FI and utilise U.S. empirical evidence to identify relevant policy actions for the U.K. A clearer understanding of diverse policy options will enable an informed discussion over what effective interventions look like for a U.K. context. My analysis addresses the following research questions:

- What is the context and scope of FI among postsecondary students?
- What policy interventions have been introduced to redress the issue? Can these solutions be successful in U.K. HE contexts?

A systematic search strategy was employed to identify three relevant U.S. policy solutions: income support, food provision, and meal sharing funds. Due to California’s cutting-edge action on the issue, all reviewed policies were from this state. Interventions were assessed using a qualitative content analysis (QCA) technique against three selected criteria (effectiveness, efficiency, and sustainability), which were drawn from a review of policy evaluation literature. Findings established a high prevalence of U.S. student FI, which structural parallels with the U.K. suggest that the issue is festering at comparable rates in the latter. The critical assessment yielded varied degrees of respective appropriateness for U.K. HE contexts. The analysis unearthed that equity-oriented interventions featuring strong intersectoral working were most effective, reflected in retention and attainment gains (CSU, 2018).

1.4 Definition of terms

FI is generally discussed as unreliable access to nutritious food (Dubick et al., 2016). The U.S. Department of Agriculture (USDA) (2018a) has been a forerunner in relevant research internationally and defines it as 'reports of multiple indications of disrupted eating patterns and reduced food intake' (n.p.). There are four main criteria used to assess FI, including availability, access, utilisation, and stability (Napoli, 2011). The USDA's food security scale is a validated instrument commonly used to assess various levels of food security, ranging from high food security to very low food security. I will therefore draw on the following definitions when discussing food poverty among students.

1.4.1 Food secure

Being food secure is understood as having no food access limitations. Accordingly, individuals may fall into one of two categories as defined by USDA (2018a):

1. 'High food security: no reported indications of food-access problems or limitations.' (n.p.)
2. 'Marginal food security: one or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake' (n.p.).

1.4.2 Food insecure

Food insecure individuals report a reduced quality of diet as well as difficulty in accessing safe, nutritious food.

There are two categories that these individuals may fall into (USDA, 2018a):

1. 'Low food security: reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake' (n.p.).
2. 'Very low food security: reports of multiple indications of disrupted eating patterns and reduced food intake' (n.p.).

1.4.3 Low-income

Low-income will refer to individuals or families who lack economic security and consistently have unmet financial need (Francis-Devine et al., 2019; Povich et al., 2014).

For the purposes of this paper, I will treat students who receive financial aid as an indicator of having low-income status.

1.4.4 Material deprivation

Being material deprived means one is unable to attain necessities because of financial barriers (Scottish Government, 2016).

1.4.5 Policy appraisal

Appraisal is a common policy tool used to assess the value and impact of potential policies (HM Treasury, 2018). It is often referred to as economic appraisal or/and evaluation. I will use these terms interchangeably.

1.4.6 Latinx

Latinx is a gender-neutral term for people of Latin descent.

1.5 Structure

Seven sections and a conclusion follow this introduction. The second section will contextualise the relevance of assessing U.S. FI interventions for the U.K. The third section will outline a theoretical framework for understanding student FI. The fourth section will review literature on student material hardship in the U.S and the U.K. The fifth section will describe the methodology. The sixth section will present findings from the policy analysis, followed by the remaining two sections which will feature discussion of the findings and concluding recommendations for future policy and research.

Chapter 2: Context for Comparison

2.1 Establishing equivalence

It is important to clarify the relevance of using U.S. evidence to inform U.K. policy agendas. Comparative education literature highlights the significance of critical reflection when discussing two contexts in any form (Phillips & Ochs, 2004; Schweisfurth, 2019). Although this paper is not a direct comparison, it will appraise FI policy interventions in one context and discuss the appropriateness of applying them to another. It is important to avoid transplanting policies uncritically, as education systems grow organically in their own context. Therefore, in line with comparativist thinking, I acknowledge differences in country context and 'culture' while assessing the interventions (HM Treasury, 2018). I also recognise the dangers of policy borrowing which include misuse, failed implementation, and furthering inappropriate agendas (Schweisfurth, 2013). However, my research reveals parallels in U.S.-U.K. history and economics, student demographics, and HE policy imperatives that justify this paper's comparative angle. In short, there is merit in reviewing U.S. evidence, but drawing these lessons for the U.K. should be done critically and with care.

It is worth noting that HE is highly devolved in the U.K. and therefore policy varies greatly across England, Wales, Scotland, and Northern Ireland (Hodgson et al., 2011; Dougherty & Callender, 2017). This is similar to the U.S., where states wield considerable power over public HE policy, albeit on a different scale (national vs. state). For example, Scotland is distinguished by its tuition-free financing model for Scottish-born students, whereas England, Northern Ireland and Wales impose tuition fees up to £9,250 for domestic students (Welsh Government, 2019; Student Awards Agency Scotland, 2019; Student Finance NI, 2019; U.K. Government, 2019a). This is comparable to U.S. tuition-free state programmes, which contrasts with other state-capped tuition fees.

2.2 Economic & Demographic Equivalence

Both countries share a great deal of economic similarities. For instance, they are both OECD member countries, suggesting that they share congruency in their policies. Also, both nations provide an interesting pairing due to being highly multicultural with long histories of immigration. This heterogeneity allows us to infer risk factors for FI are applicable to U.K. contexts.

‘Varieties in capitalism’ literature offers that the two states share striking economic similarities. Both the U.S. and U.K. are considered drivers of modern international development, which is steeped in a distinctive Anglo-Saxon liberal market economic model (Goergen et al., 2012). Their GDPs of 1.4% for the U.S. and 1.3% for the U.K. are indicative of their economic power (World Economic Forum, 2018). Scholars observe a convergence in the two governance models which prioritise labour flexibility, competition, marketisation, privatisation, and residual welfare, commonly characterised as neoliberal (Majone, 2016; Keat, 2008). Unique to both systems is an ideological marriage between economic growth and social justice, which is thought to be enabled through individual effort (Nock & Coron, 2015). Moreover, both countries have comparable levels of income inequality. Reviewing Gini coefficients can tell us about a country’s income distribution. On a scale from 0 to 100, a lower score indicates more equality, while higher ones indicate greater inequality. According to OECD (2019), the U.S. had a Gini index of 39 and the U.K. had an index of 35 in 2016. Scholars also use Gini indices to determine wealth inequality, which captures more detail about stability over long periods of time. This measure suggests that wealth inequality runs much higher than income inequality (Babones, 2012), with the U.S. Gini of 85 and the U.K. at 73 (World Economic Forum, 2018). Lastly, high levels of FI have been detected in the general population of both countries (FAO, 2018; Environmental Audit Committee, 2019), an indication that economic inequality abounds.

These findings are highly germane to the discussion of student food poverty as low-income status is a reliable predictor of FI (Hagedorn et al., 2019). This is because ‘at the heart of the relationship between income distribution and food demand is Engel's law’ (Cirera & Masset, 2010, p. 2821). The law establishes that low-income households spend higher proportions of their income on food than high-income ones (Noiset & Marktanner, 2013). This contextualises how income and wealth are tied to material deprivation in an era of rising food costs. High income and wealth inequality pose considerable risks to personal stability, evidenced through student outcomes (Hope Center, 2018). Having similar degrees of economic inequality makes the U.S. and U.K. a good comparison.

2.3 HE Policy Imperatives

The relevance of this paper's policy appraisal to the U.K. can be illustrated through trends in HE policy oriented around social justice. Research shows that interrupted study, noncompletion, and poor health are common outcomes of FI university students (Silva et al., 2017). This binds FI to HE policy agendas concerning inequality, public health, HE access and retention, and labour market outcomes. Consequently, the U.S. has focused on student retention, using policy to acknowledge the link between poverty and poor academic outcomes for disadvantaged tertiary students. Resultant tuition-free policies and targeted academic tutoring programmes appeared, addressing scholar-established barriers to participation like high university costs and poor academic preparation (Dougherty & Callender, 2017).

Evidence of growing inequality between rich and poor student outcomes has reignited conversation about retention in the U.K. For instance, data from HESA (2019a) revealed that 6.3% of all U.K. domestic students dropped out before graduating in the 2016-17 academic year, with disadvantaged students dropping out at an 8.8% rate, while at some Higher Education Institutions (HEIs) 21% did not return after their first year. Further, Education Secretary Damian Hinds recently called on universities to prioritise supporting at-risk students throughout the lifecycle of their studies, instead of prioritising filling admissions seats (Dfe, 2019). Dropout can thus be interpreted as an unintended consequence of widening participation policy streams. This has stirred debate about the efficacy of widening access programmes and future directions, mirrored in scholarly journals (Keddie et al., 2019; Riddell, 2016).

The most recent U.K. national strategies for widening HE participation and improving youth labour market outcomes reflect current shifts in attention to equity over equality. According to Connell-Smith & Hubble (2018) and BIS (2014) the government aims to:

- To increase social mobility by supporting equitable access to HE
- To maximise impact and effectiveness by promoting a lifecycle approach to widening participation
- To identify relevant barriers to academic success by investing in research in areas like reducing student dropout

- To efficiently improve outcomes for different student groups by tackling causes of differential attainment
- To make meaningful and sustained improvements in participation rates for disadvantaged students

Retention is imagined to better realise the aims of widening participation. Supporting students throughout the life cycle of their studies is a means of achieving socially just systems (Riddell, 2016). Intensifying interest in improving student continuation has resulted in pertinent policymaking. For example, access agreement policies now require HEIs to provide annual action plans detailing activities, targets, and budgets directed towards improving student retention (Sutton Trust, 2015). Dougherty & Callender (2017) observe that U.K. initiatives are visible through targeted recruitment and outreach, expanded financial aid opportunities, and contextualised admissions. This public commitment to student success is a critical layer of governmental accountability that encourages institutions to better support underrepresented students. Therefore, shifted policy attention to retention signals an opportune moment to consider how FI is implicated in making HE more socially just.

2.4 Summary

U.K. HE policy imperatives around widening participation are highly relevant to discussions of student FI. National productivity and ending generational cycles of disadvantage are explicit goals posited to be realised through HE completion (DfE, 2017b). The gap between rich and poor in both continuation and completion rates has widened in the U.K., thus rationalising Secretary Hinds' concern about equity. Due to FI being newly identified as a cause of university student dropout (GAO, 2018), it is a part of broader student retention discussions, which merit policy responses from institutional stakeholders. Dissecting students' food access is a complex policy issue, one that requires unpacking inequity in its relation to social origin, health, poverty, and employment. The U.K. has a long history of embedding international, evidence-based practices into HE policy, confirming the relevance of this study (Dougherty & Callender, 2017). Both the U.S. and the U.K. share agendas that reflect growing urgency around meaningful mitigation around student material hardship.

Chapter 3: Theoretical Outline

3.1 Social Exclusion

For the purposes of the paper, I will unpack FI as a dimension of social exclusion using the World Health Organization's Social Exclusion Knowledge Network (SEKN) framework. Drawing on Judith Butler's discussion of precarity, I will outline how structural inequality contributes to increased personal vulnerability, resulting in a constrained capacity to develop individual capabilities (Sen, 1997). This process illustrates the multifaceted nature of the experiences of marginalised, low-income students who struggle to meet their basic needs.

The term social exclusion has been intensely debated in academia and policy circles. A common understanding of the term is a process of failing systems that support individual fulfilment (Adam & Potvin, 2016; Commins, 1995). A prominent example is FI. The SEKN paradigm is useful for this paper's analysis because it highlights how structural processes like inequality diminish people's ability to fully participate in life (Popay et al., 2008). Aiming to move beyond a reductionist view of poverty as income deprivation (Khan et al., 2015) the model emphasises social relational processes in the production of social, economic, and material disadvantage. Popay et al. (2008) explains:

> 'Exclusion consists of dynamic, multi-dimensional processes driven by unequal power relationships interacting across four main dimensions – economic, political, social and cultural – and at different levels including individual, household, group, community, country and global levels. It results in a continuum of inclusion/exclusion characterised by unequal access to resources, capabilities and rights which leads to health inequalities' (p.2).

The model (see Figure 1) suggests that social exclusion is dynamic and modifies the experiences of individuals. As such, it implicates exclusion in the production of inequality, particularly health and well-being (Adam & Potvin, 2016) and calls on policymakers to devise interventions that explicitly consider the relationship between individual welfare and structural forces like government austerity (Royce, 2018). In the context of HE, consequences include chronicled student struggles of belonging along lines of class inequality most visible through material deprivation (Crozier & Reay, 2011; Gaines et al., 2014).

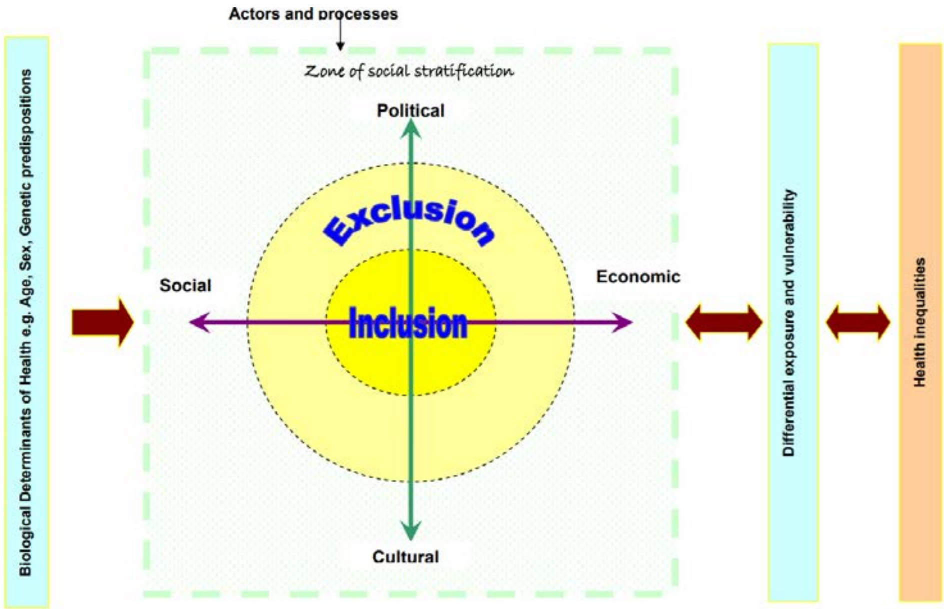

Figure 1: The SEKN Model of Social Exclusion, Popay et al., 2008, p. 38

3.2 Precarity

Judith Butler's conceptualisation of precarity links experiences of social exclusion to heightened states of personal vulnerability. Butler (2009) explains that precarity is a politically-induced condition caused by failing support networks. FI is thus a result of larger exclusionary processes that have been mediated by power dynamics, institutions, and history. For example, economic disadvantage is a consequence of social stratification that places people at larger risk of disease, poverty, and starvation. I argue that this vulnerability is 'a result of [social exclusion limiting] access to rights, resources and capabilities' (Adam & Potvin, 2016, p. 783). Locating FI experiences in precarity reveals a state of limbo that university students find themselves in due to lack of safety nets that more privileged peers enjoy. The result is a type of social exclusion that SEKN describes, which in turn structures their possible field of action (Foucault, 1982).

These theoretical drawings help elucidate the interaction between exclusionary processes and deprivation. Structural elements like HE policy (ie tuition policies) interact strongly with housing laws (ie affordable housing) and globalised food legislation (ie food taxes). Prohibitive costs severely limit students' access to quality university experiences which would allow them to exercise their full academic potential and eventual inclusion in superior labour market opportunities (Adam & Potvin, 2016). Students forced to drop out of studies due to precarity live in a cycle of poverty that causes other forms of deprivation like low-income, homelessness, and poor health (Popay et al., 2006). According to Sen's (1997) capabilities approach, students are consequently being denied freedom to develop their talents and the right to lead fulfilled lives, which education is imagined to enable. By emphasising the relevance of structural drivers of inequality, Butler and the SEKN framework assert the need for emergent policy to engage with the causes of problems, which often feature universal public provision (Popay, 2010).

3.3 Policy Context: Neoliberalism and responsibilisation

Neoliberal-driven HE restructuring in the 1990s has greatly contributed to the development of a modern precariat class (Standing, 2011). Scholars observe that precarity is becoming a defining feature of contemporary youth generations (Antonucci, 2018; Shildrick, 2015), which I contend FI to be one clear indicator of. Compared with past generations, the current youth generation has restricted prospects across social and economic spheres, particularly evident in increased U.K. unemployment rates among recent graduates (MacDonald, 2011). Diminished public investment in HEIs transferred institutional responsibility for hefty tuition costs to students (Williams, 2012; Cahalan, 2013). Consequently, HEIs slashed financial aid opportunities that low-income students depend on, creating a tension between widening access initiatives and 'value for money' government agendas (Cahalan, 2013).

3.3.1 Soaring costs

Students taking on massive debt to cover university costs illustrates the heightened responsibility of individuals championed in neoliberal discourse. Given this, students have grown accustomed to paying roughly $67,028 (£52,954) for a four-year public university undergraduate degree and $172,260 (£136,092) at private universities in the U.S. (NCES, 2019). A scramble to cover these costs has resulted in 44.2 million student borrowers owing $1.46 trillion in student loan debt in the 2018 fiscal year (Federal Reserve Bank of New York, 2019). The U.K.'s own £106 billion outstanding student loan debt, projected to reach £1 trillion within 25 years (Bolton, 2018), reflects the significant financial pressure on the precariat class. Financial difficulties and borrowing loans are regularly cited as risk factors for FI and principal causes of student dropout (Gallegos et al., 2014).

3.3.2 Risk Calculation and Responsibilisation

Scholars argue that HE investment represents a broader acceptance of personal risk and responsibilisation, or individual responsibility for risk. Clark et al.'s (2015) study on high achieving low-income students demonstrates that students manage choices around education through risk calculation. The authors contend that neoliberal discourse has forced students to shift the burden of social risks, like loan debt, from the structural level to individual ones. Marketised education is encouraging students to view credentialism as a pathway towards social mobility. Societal notions of meritocracy fuel this idea that students are responsible for their outcomes, reinforcing Western beliefs and norms emphasising assumptions of individual autonomy (Fasokun et al., 2005).

Neoliberal discourse emphasises the role of the individual in investing in education to reap greater labour market returns, known as the 'graduate premium' (Weisser, 2019; Bathmaker et al., 2013). Based on human capital logic, proponents argue that earning a bachelor's degree entitles graduates to higher wage earnings due to their investment in learning advanced skills (Walker & Zhu, 2013; Daly & Bengali, 2014; Holmes, 2017). Attainment is linked to improved long-term social, financial, and health outcomes (Oreopoulos & Petronijevic, 2013). For example, lifetime financial earnings for Americans with bachelor's degrees in 2012 were estimated to be 114 percent higher than those who did not possess them (Trostel, 2015). Dziechciarz-Duda & Król (2013) also identify greater socialisation, increased independence, and overall well-being as other individual returns. However, these benefits are largely out of reach for low-income students.

Critics thus rebrand the graduate premium as a 'perversion of a promise' (Daniel, 2018, p.95). They interrogate this concept by pointing out the variation of graduate earnings across groups, crippling post-graduation debt, and a saturated graduate market (Tholen & Brown, 2017; Webber, 2016). Empirical data on HE returns is mixed, but Findlay & Hermannsson (2018) maintain the importance of considering the influence of social origin on graduate return rates. Their study shows that HE investments represent a much steeper risk for working class students, as they may not experience the same wage premia as their more affluent peers. The short-term university journey can render huge stress and impact precariat class labour market transition.

3.4 Summary

Literature reveals that students are willing to go to great lengths to complete HE in hopes of gaining a piece of social mobility, despite the explicit risks (Jabbar et al., 2017; Tran et al., 2018). Entering tertiary education adds more pressure to low-income students, making it difficult to complete degrees and meet their basic needs. Youth researchers urge us to consider the higher stakes they are faced with. This includes sharpened competition for jobs, high education costs, a reduced welfare state leading them to be arguably more at risk of downward social mobility (Reay et al., 2013; Shildrick, 2015). Therefore, applying the social exclusion paradigm to the case of youth FI exposes the issue's systemic roots, whose ramifications I will explore in the next chapter.

Chapter 4: Review of Literature

The literature review examined scholarly research on U.S. postsecondary student food poverty. In order to identify articles and reports with the most relevant information, a search was conducted using the keywords ‘university’, ‘college’, and ‘food insecurity’. Hundreds of search results were produced. To narrow the search, I selected studies that discussed in the titles or abstracts one of the following: measuring FI, consequences, policy, and risk factors to be able to discuss the issue comprehensively. Grey literature and articles from 2014 to 2019 were selected for use to ensure that the most up-to-date data were included.

4.1 Food poverty among U.S. postsecondary students

A sizable evidence base has emerged in the last decade documenting food poverty among U.S. university students. Research predominantly reports on four-year student experiences, but Goldrick-Rab et al. (2018) note an increase in studies highlighting FI of two-year/community college (further education) students. This is significant because two-year students make up roughly half of all undergraduates studying in the U.S., yet their voices are largely overlooked (Broton & Goldrick-Rab, 2018). The literature is divided between research measuring the prevalence of FI at individual HEIs, studies focused on correlates associated with FI, and observed effects. More recently scholars report students’ coping strategies, with conclusions featuring suggested solutions. The sheer volume of studies in the last two years make the issue’s gravity difficult to ignore.

4.2 Prevalence of FI

Systematically assessing FI at HEIs is relatively new (Soldavini et al., 2019), but peer-reviewed studies and institutional reports are represented, covering both single institution and cross-national prevalence. Most notably, four U.S. senators commissioned a national report on the issue in 2018 (GAO, 2018). Most estimation studies employ cross-sectional survey methodologies, adapting questions from the USDA food security scale. Questions ask about worries of running out of food, having enough money to purchase food, and altering food consumptions patterns due to financial limits. Sample sizes ranged from *n=67* (Hanna, 2014) to *n=43,000* (Broton & Goldrick-Rab, 2018). The most current studies utilise a mixed-methods approach that feature both questionnaires and interviews to better capture student experiences with hunger (Goldrick-Rab et al., 2018).

Researchers recognise the importance of the issue but are currently debating the strength of assessment methods. For example, Nikolaus et al. (2019) question the reliability of quantitative results, citing the employment of convenience sampling methods. They also argue for better screening and psychometric methods to strengthen the reliability of future FI assessments. In addition, Van Woerden et al. (2019) question how applicable the USDA food security scale is to university students. One other limitation I identify is the low response rates evident in many studies, which prevents policymakers from generalising to wider populations. However, FI is a sensitive subject which can hinder participation.

There is wide variation in FI estimates. Findings revealed that FI occurs at a rate varying from nine percent (Hanna, 2014) to 84 percent (Bruening et al., 2018) with a systematic review calculating a national average of 43% based on data from 58,000 students (Nazmi et al., 2018). Goldrick-Rab et al. (2018) conducted the largest study to date, drawing data from over 43,000 two- and 4-year university students from 66 institutions across 20 states**.** It concluded that 36% of students experienced FI in the last 30 days of the time of the study. Taken together, tertiary FI is approximately three to four times higher than the 11% FI rate of the general U.S. population (USDA, 2018b). Students experience FI at a higher rate than the general population, underscoring the urgent need for policy action (Hagedorn et al., 2019; Dhillon et al., 2019; University of California, 2017).

4.3 Who is at risk?

The issue is experienced across a wide number of regions, institution types, and diverse student populations (Phillips et al., 2018). However, empirical research suggests that FI disproportionately affects historically underserved student populations. Reviewed studies consistently identified being low-income as the leading predictor of FI (GAO, 2018; Weaver & Mai, 2018). For example, a study of Maryland community colleges revealed that students receiving financial aid represented more than half of those experiencing hunger (Maroto et al., 2015), while a rural Oregon university reported three-quarters of surveyed students (Patton-Lopez et al., 2014). Food poverty is not isolated to working class students, however. Middle class students are uniquely affected, as their family incomes are too high to qualify for federal financial aid but are not enough to afford the high tuition sticker prices (Harris, 2019).

Additionally, students of colour have greater odds of experiencing FI. Numerous studies find that historically marginalised students such as Black, Asian, and Latinx students, are overrepresented in university FI assessments (Vasquez et al., 2019; Ilieva et al., 2019; Maroto et al., 2015). For instance, Wood & Harris (2018) found that Black male students were most exposed to acute FI when compared to other ethnic groups and simultaneously experienced other forms of social precarity such as homelessness. Similarly, West's (2017) findings indicated that 75% of four-year Sacramento FI students were Latinx, while Mercado (2017) concluded that 68% of two-year San Francisco FI students were racially-minoritised students, including Blacks, Native Americans, Latinxs, and Filipinos. A cursory glance at history makes clear that these populations have been subjected to higher levels of socioeconomic deprivation than whites (Coleman-Jensen et al., 2017; Gulliver, 2017; McCloskey & Borenstein, 2019). There is an association between ethnicity/race and student hunger.

Lastly, scholarship shows other correlates of student FI:

- First in their families to attend college (first generation) (Davidson & Morrell, 2018; Broton & Goldrick-Rab, 2018)
- Identify as LGBTQ+ (Moon-Johnson, 2014; Kashuba et al., 2017)
- Have dependents (GAO, 2018; Bruening et al., 2017)
- Foster care youth (Goldrick-Rab et al., 2017; Broton & Goldrick-Rab, 2016)
- Lack parental support (Bruening et al., 2018; Morris et al., 2016; Gaines et al., 2014)
- Homeless (Hallett & Freas, 2018; Ambrose, 2016)
- Live alone or off-campus (Maroto et al., 2015; Forman et al., 2018)
- Undocumented (Diamond & Stebleton, 2017; University of California, 2016)

A key finding among many studies was that undergraduates are at a significantly elevated risk of food poverty, suggesting that they may require additional support (Forman et al., 2018; Hagedorn et al., 2019; Dhillon et al., 2019). Also, while FI is higher at two-year institutions, students at 'elite' institutions like Harvard University have reported FI and homelessness at comparable rates (Sternman Rule & Jack, 2018). Even 'top tier' students are not immune. This unravels the image of tertiary students living in privileged, protective bubbles, completely resistant to deficiencies in basic needs (Schlesselman, 2019). This suggests that students at Russell Group universities are experiencing food access problems similarly to those at post-92 institutions.

4.4 Why are so many students going hungry?

Researchers agree that FI is caused by insufficient resources for covering basic needs. Internalising responsibilisation discourse, students take on exorbitant tuition costs, yet also are tasked with absorbing high living costs. According to Weaver et al. (2019), HE net costs have skyrocketed while income levels (adjusted for inflation) and scholarship purchasing power have stagnated. Competing financial obligations are leaving students stretched to meet everyday living expenses. This forces the precariat class to make tough choices, such as between textbooks and meals, which interviews with affected students reveal (Laterman, 2019). Moreover, these students lack a safety net that more privileged students enjoy like family support.

4.5 Consequences

Reducing student hunger to popular culture stereotypes of eating ramen noodles or scouring parties for free pizza is dangerous and limiting. It masks the magnitude of sacrifices students make for their futures (Maynard et al., 2018). Uncertainty about where a next meal will come from can leave deep physical and emotional scars, which often endure long into adulthood (Allison, 2018). FI is debilitating to the point where students are prevented from completing school entirely, raising questions about who HE is for.

4.5.1 Poor Physical Health

FI is marked by irregular diets that often lack adequate nutrition. Students struggling with hunger often rely on processed and fast foods, which are cheap, convenient, and calorie-rich (Payne-Sturges et al., 2018; Bruening et al., 2018). Price-conscious students are wary of using university-catered meals, which on average cost $4,300 per year, or $12 per meal (Garcia Matthewson, 2017). Instead, they opt for food from bodegas and vending machines, two popular choices among FI students in New York (Ilieva et al., 2018). Unhealthy eating habits have negative impacts like low energy, fatigue, and higher stress levels (Maroto et al., 2015). Living in social precarity encourages unhealthy eating, putting students at a stronger risk of chronic illness and lowering their ability to perform to their academic potential. Martinez et al. (2019) examined the health-related outcomes of 8,705 FI college students and concluded that FI was related to higher BMI, sleep deprivation, and fewer daily servings of fruit and vegetables. Other documented long-term effects of FI students include sleep disorders, diabetes, inflammation, and eating disorders like bulimia (Davidson & Morrell, 2018; Poll et al., 2018; Darling et al., 2017).

4.5.2 Mental Health and Well-Being

FI also impacts students' mental health. A study on 1,138 Arizona students highlights how food irregularities were 'associated with nearly two times higher the odds of experiencing high levels of stress and depressed mood' (Bruening et al., 2017, p.8). This could be because students are internalising feelings of failure for living in social precarity. Similarly, interviews with UC Berkeley students (Meza et al., 2018) showed that students shared intense feelings of anxiety, hopelessness, and fear of disappointing family. Poor mental health is shown to hinder academic performance and decision-making (Raskind et al., 2019).

4.5.3 Academic Performance and Retention

Hunger is an empirically documented threat to students' academic success. For instance, Silva et al.'s (2017) study on 390 University of Massachusetts Boston enrolees concluded that FI students had more difficulty attending class, worse in-class concentration, and showed a lower ability to synthesise subject material. Students were even unable to keep up with the demands of their coursework, many switching to less demanding courses due to a lack of energy and illness (Meza et al., 2018; Martinez et al., 2018).

Lower academic performance is a common finding among FI scholars (Philips, et al., 2018; Wooten et al., 2019; Hagedorn & Olfert, 2018). A study on Arizona State University students revealed that FI students had significantly lower grade point averages compared to food secure students and were less likely to re-enrol in the following academic year (Van Woerden et al., 2019). They used logistic regression modelling to predict that the number of students earning higher grades would increase at minimum by14% if these students had been food secure. Also, Wood et al. (2016) found that of 3,647 California community college students, those identified as FI were overwhelmingly concentrated in rudimentary writing, reading, and math classes. These studies underscore how hunger undermines their identities as students forcing them to devote energy to survival instead of self-development (Hallett & Freas, 2018). Consequently, students are up to 15 times more likely to fail classes, resulting in academic probation or dropping out completely (Silva et al., 2017). FI clearly puts students at profound academic risk, impacting degree progression and completion.

4.5.4 Leveraging capital

The additional stress associated with finding money for food distracts students from strategising for their futures. Bathmaker et al. (2013) observe that middle and upper-class students strategically leverage social capital to enhance their graduate employment prospects by participating in CV-padding extracurricular activities. Patton-Lopez et al. (2014) found that FI students were more likely to work while studying to meet basic needs, preventing them from participating in activities like internships. A study of University of Oregon students found that participants avoided extracurricular activities to conserve energy, time, and money (Kashuba, 2017). The immediate need to work outweighs the future importance of enhancing their employability. Failing to draw on various forms of capital (Bourdieu, 1986) significantly lowers these students' ability to compete in the labour market (Trenor et al., 2008).

4.5.5 Social Isolation

Literature also highlights how FI has stigmatising social effects (Henry, 2017). FI students experience higher rates of social isolation. For example, Cliburn Allen & Alleman (2019) observe how the centrality of food in socialising makes class differences more visible, causing some to feel insecure and alone. Students regularly decline social invitations due to worry over spending money, which had notable social costs such as isolation. Meza et al. (2018) even reports student resentment towards food secure peers. Developing meaningful relationships is described as a common challenge among FI students (University of California, 2016; Vasquez et al., 2019).

4.6 Coping mechanisms

To make ends meet, students alter their behaviours. In their narrative review, Lee et al. (2018) highlight mild strategies. Various studies discuss more severe behaviours (see Table 1).

Mild strategies	Severe strategies
Buying cheap, processed foods	Postponing medical/dental treatment
Strict budgeting	Selling sex
Increased part-time work	Adjusting sleep patterns to avoid hunger longer
Switching to vegetarian meals	Forgo required school supplies like computers
Looking for free food at campus events	Stealing money or food
Using food banks	Applying for government assistance
Rationing meals	Gambling
Borrowed money	Skipping meals for days at a time
Sharing meals with roommates	Stopped driving

Table 1: Coping Mechanisms

Students are also engaging in high-risk activities to get by. Dating older people in exchange for covering university costs (Sugar Daddy arrangements), is becoming a popular response (Mixon, 2019). Also worrisome is the increased normalisation of selling sex. A 2018 survey of 3,167 students revealed that 78% struggle to meet basic needs and that 10% resort to selling their bodies for emergency living costs while studying (National Student Money Survey, 2018). A Swansea University (2015) report found that five percent of U.K. university students performed sex work for the direct reason of funding their university studies. This trend is echoed in scholarship (Sagar et al., 2015; Sanders & Hardy, 2012; Roberts et al. 2013).

4.7 Institutional responses

Very little research discusses institutional responses. However, documented HEI supports include:

- Educating staff
- Budgeting and cooking classes
- Counselling
- Food banks
- Meal sharing programmes
- Support in seeking government assistance

Scholars note that these approaches are not enough to combat student hunger and are increasingly calling on HEIs to advocate for policy support from the state (Cady, 2016; McArthur et al., 2018 Broton et al., 2014). The paucity of research on interventions rationalises this paper's contribution to food poverty research and reinforces the urgency in addressing chronic student hunger.

4.8 U.K. Food Poverty

4.8.1 General food poverty

Food poverty among the general population has garnered policy attention in recent years. International initiatives like Sustainable Development Goal 2 crafted global urgency around stunting growing hunger and malnutrition by 2030 (United Nations, 2018). Additionally, spikes in food bank use propelled think tank and MP action (Butler, 2019), resulting in the U.K.'s first national FI assessment which launched in April 2019.

Accumulating evidence suggests that an increasing number of households are struggling to sustain normal shopping and eating patterns (Food Foundation, 2016; Douglas et al., 2015; Environmental Audit Committee, 2019). For example, a 2017 Scottish Government health survey concluded that eight percent of households were 'worried they would run out of food due to lack of money or resources' (Scottish Government, 2018, p. 216). According to a 2018 United Nations report, the U.K. has the highest proportion of food poverty in all of Europe, responsible for one in five of all Europeans experiencing hunger (FAO, 2018). Causes of FI echo U.S. literature implicating rising living costs, declining wages, and government spending cuts for social programmes (UKSSD, 2017). Literature also highlights a growing concern about youth between 18 and 25 seeking out food assistance with concerning frequency (Douglas et al., 2015; Bland, 2018).

4.8.2 Youth Food Poverty

There is substantial literature on child food poverty, but little attention is dedicated to tertiary students. Research dating back to the 1980s documents and problematises food poverty's links to lower diet quality, negative health outcomes and poor cognitive development (Holley & Mason, 2019; Gooseman et al., 2019). Only a handful of studies explore 18 + youth precarity which detail struggles with FI (Byrom & Peart, 2017). For example, Mulrenan et al.'s (2018a;2018b) studies on homeless London students are one of the few studies that directly discusses chronic hunger as a university issue. Findings revealed students' inability to focus on studies, low campus engagement, and poor emotional well-being. Widening participation initiatives and ways HEIs can intervene in a similar study (Mulrenan, 2018). Additionally, there are two articles detailing the cases of estranged postsecondary students in Scotland (Taylor & Costa, 2019; Bland, 2018). The authors unpack the emotional difficulty in maintaining stable housing and access to food without parental support. They conclude weak academic performance and social isolation as key consequences of students' material deprivation.

British popular media interviews showcase students fainting from skipping meals, gambling student loan money, and college administrators providing free breakfasts (Bulcock, 2015; Busby, 2019; Pearce, 2019). Others unearth difficult student choices like paying for bus fare to attend class or eat lunch (Jeffreys, 2018). A 2018 report concludes that student support loans have become more accessible but fail to cover all expenditure costs often leaving students without food and heating (NUS, 2018). Key recommendations included introducing a minimum living income and providing more affordable housing.

4.9 Summary

This literature review indicates important findings. There is strong evidence to suggest that U.S. students experience FI at a higher rate than general population. Related U.K. research and media coverage point to the likelihood of it happening at similar levels. Vulnerable populations like minorities, low-income students, and first-generation students are at higher risk of experiencing hunger. There are serious ramifications for students including weakened academic performance, lower retention, risky behaviour, and poor health, all of which reflect U.K. policy imperatives related to widening participation. A striking finding is the lack of related U.K. empirical research, despite considerable evidence on food poverty nationally. This literature gap indicates a failed commitment to widening participation aims, yet also an opportunity for future action to improve low-income student outcomes. 'Business as usual' is not an option because hunger is a barrier to completing HE, and consequently to social mobility.

Chapter 5: Methodology

This chapter will describe how using a civil service appraisal methodology featuring a QCA analysis is suitable for evaluating policies redressing student food access problems. My research questions are:

1. What is the scope of FI among postsecondary students?
2. What policy interventions have been introduced to redress the issue? Can these solutions be successful in U.K. HE contexts?

5.1 What is ex ante appraisal?

The ex ante appraisal of policies has been a prominent feature of Anglo-Saxon public sector toolkits for the last three decades (Hertin & Jacob, 2008). It is an established methodology that has a long history within civil service, notably within environmental, and more recently, education policy (OECD, 2013). Organisations like the OECD and the EU Commission have proliferated the method by developing practical frameworks. Championed for its support of 'value for money' agenda setting, it aims to equip lawmakers with knowledge on issues to better anticipate the impacts of planned policy. Guiding theory asserts that using evidence to assess the costs, benefits, and risks of policy options better assists decision makers in understanding the overall net value of potential interventions to society (HM Treasury, 2018; Adelle & Weiland, 2012). The procedure involves identifying a policy problem, running through a systematic analysis of different actionable options, and concluding with a final discussion of a preferred option (Hertin & Jacob, 2008; HM Treasury, 2018). Though many appraisal techniques exist, both the U.K. and the U.S. both are considered frontrunners in its development and application (Turnpenny et al., 2014).

5.2 Rationale for Policy Appraisal

Scholars regularly stress that policy development is a complex, even 'messy' process (Hertin et al., 2007; Howlett, 2009). Using public policy tools to facilitate social change involves intense interaction of diverse actors, often opposing deep-seated values and interests, and constrained budgets (Weible & Sebatier, 2017). Consequently, modern policymaking is perceived as biased decision-making ending in unpredictable solutions that do not meet public needs (McFadgen & Huitema, 2018).

In response, policy innovations literature notes trends in strengthening the relationship between knowledge utilisation and decision-making by using appraisal. For example, Castañeda & Guerrero (2019) argue that ideas, argumentation, and discourse should play a larger role in the policy cycle. This is because appraisal is a viable form of political learning that fills the gap between knowledge and decision-making, which challenges institutions to think differently (Graham et al., 2018; Radaelli, 2007). 'One of the main discourses surrounding policy appraisal is that it helps policy to be based on arguments and evidence instead of bargaining and interests' (Turnpenny et al., 2009, p. 644). Appraisal maximises opportunity for developing innovative policy interventions which researchers contend are lacking in social policy (Edler & Fagerberg, 2017). Therefore, it reflects the upstream assessment of forward-thinking, modern policymaking.

Mostafavi et al. (2013) note growing recognition of the limits of ex post evaluation methods that take place after an implemented policy. This approach often fails to capture the complexity of policy working on the ground level and can be costly and time consuming. It is difficult to make changes or foresee all challenges of a project when it is already set in motion. Appraisals, however, persuade decisionmakers to begin the deliberation process earlier, making them rethink 'poorly conceived proposals before too much time is spent on developing them' (DFID, 2009, p. 2). Systematically weighing various options to social problems prior to implementation allows analysts to consider the advantages and disadvantages and predict unintended consequences (HM Treasury, 2018). It is sensible to think through policies before implementing them.

Working with students as a Careers Counselor has helped my research resonate with me, as any of them could suffer from hunger and have nobody to turn to. Therefore, I am interested in finding practical solutions that would help students achieve their best. Reading student accounts of FI are impactful but are often overlooked by those in power to make change due to a preference for quantitative data that provide cause-effect answers to 'What-works?' questions (Donmoyer, 2012). This suggests that solutions must be palatable to policymakers, showing why it is necessary to use bureaucratic tools like appraisal. Choosing a QCA appraisal represents a suitable, real-world approach to advancing policy solutions that may help students like mine in the future.

Appraisal has limitations. It is an estimation strategy and is based on assumptions due to incomplete or hard to gather data (Howlett, 2009). This prevents decision-makers from seeing all possible documented effects prior to introducing an intervention because fewer facts and information are available. However, Samset & Christensen (2017) argue that combined facts and well-founded assumptions are significant at the early stages of decision-making.

5.3 Appraisal Technique: Qualitative Content Analysis

To assess the interventions, a QCA technique will be applied. Common in policy research, this strategy involves analysing secondary data and interpreting its meaning (Elo et al., 2014). My approach will be inductive in nature because I will organise data into categories after discerning patterns among selected interventions (Fischer & Maggetti, 2017). Studies note that the method is useful for sifting through the complex factors that influence policy formulation (DCLG, 2009). I have shown that FI is shaped by various factors including health, education, economics, and politics and will therefore require holistic solutions. As a result, I believe QCA is an appropriate method because it will help me detect patterns in what works in combatting hunger from student, administrator and government perspectives. I chose this technique because it allows me to visualise various policy options using qualitative (non-numerical) data.

5.3.1 Strengths and weaknesses

QCA is well-suited to address the research sub-questions (discussed below) because it entails synthesising data to provide a complete picture of the policies and their potential efficacy. A main feature of QCA is document analysis. Document analysis is recognised as a staple in data triangulation, combining multiple sources of information, which is critical for qualitative research because it strengthens the value and credibility of the research (Bowen, 2009). Bowen (2009) also argues that documents are ‘non-reactive’ data sources, which minimises a researcher’s bias in the process. This desk-based approach is complementary to policy analysis because it grounds researchers in diverse understandings of a policy problem. Limitations of QCA include the inability to establish causality. For example, QCA only describes data, therefore I cannot ascribe the interventions as single causes for changes in outcomes. Additionally, QCA cannot cope with time, as it cannot capture the full context of policy development because I am limited to a secondary data analysis.

5.4 Approach to the appraisal of policies

5.4.1 Conceptualisation

The concept of social exclusion has been a recurrent theme in contemporary European policy discourse and action (Madanipour et al., 2015). Policymakers have recently centred HE in social exclusion debates as both remedy and cause of low resource availability (Weil et al., 2017). The SEKN framework, previously described in chapter three, is a pragmatic, inclusive approach to use social justice as a lens for policy identification and appraisal (Popay et al., 2008). To appraise FI policies, an adapted version of the SEKN model will be used.

Adam and Potvin's (2016) adapted version of the framework is useful for achieving this paper's aims due to its exclusive focus on FI. Their exclusionary mechanisms model modifies the SEKN in two principal ways. The first is their shift of analysis to the individual level, which is rationalised by the idea that the consequences of social exclusion are felt in individual, daily experiences (Adam & Potvin, 2016). This permits researchers to visualise how structural forces mediate people's everyday decisions. The second difference is the incorporation of access and agency in the analysis of exclusion. The model (see Figure 2) also avoids user stigmatisation by focusing on the relationship between various forces, rather than particular groups being excluded (Johnston, 2009). This is key because HE FI researchers overwhelmingly conclude that stigma is a significant barrier to students seeking help (El Zein et al., 2018).

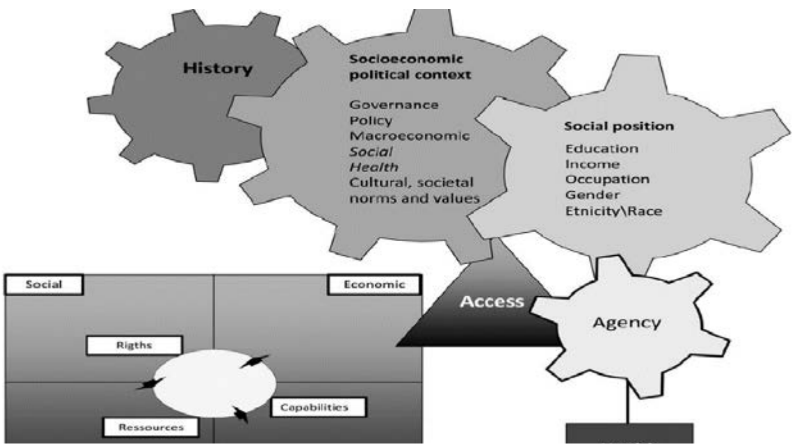

Figure 2 Exclusionary mechanisms framework, Adam & Potvin, 2016, p. 782

The paper's analysis will be guided by the idea that understanding the origins of FI is critical to effective mitigation. I will assess policies under the stance that solutions must acknowledge structural barriers and meet the target populations' needs. The justification of using the framework is based on scholars' conclusion that FI is result of social exclusionary mechanisms (United Nations, 2016). This comprehensive, joined-up approach will introduce options for effectively transforming knowledge on FI and its impacts on student success into effective policy and action (Popay et al., 2008).

5.4.2 Theory of change

Policy development and change is predicated on identifying 'best' solutions through objective examination of possible action (Brown et al., 2018). Coupled with themes from the social exclusion paradigm, my theory of change guiding my assessment is alleviating food access problems to improve low-income student success.

5.4.3 Appraisal Process

The appraisal process will take place in two stages. First, three interventions will be reviewed using two to three reports and policy documents. A high-level analysis discussion will answer the following sub-questions:

1. To what extent do the interventions meet the selected criteria?
2. What is the consensus among leaders in the field?
3. What gaps need to be addressed before implementation?

The second stage will be a focused evidence review of one intervention. Using a California university implementation as a case-study-like example, the low-level analysis will provide an in-depth mapping of the intervention to the criteria. Both stages will involve secondary data analysis through a thorough literature review using government reports, legislative minutes, letters and memoranda, newspaper features, press releases, and academic resources. I will also heavily scrutinise original policy documents to maintain an objective vision of the interventions' purpose and utility, instead of solely relying on reviews of the interventions themselves.

5.4.4 Evaluation criteria

Due to the limited space and time for the research process, three criteria were chosen to assess the interventions. The criteria were selected following a literature review of twenty grey literature and academic resources on policy evaluation methods. The review resulted in salient themes related to appraisal criteria, which included effectiveness, efficiency, relevance, equity, acceptability, added value, and sustainability (Palfrey & Thomas, 2012; OECD, 2013; HM Treasury, 2018). The final criteria were chosen because they clearly aligned with the U.K. Government's HE strategy, as discussed in chapter 2. The selected policies will be evaluated against the following criteria:

1. **Effectiveness** – Can the intervention's objectives be achieved?
2. **Efficiency** - What does the ratio between costs/resources and benefits look like to realise the intended objectives?
3. **Sustainability** – Can the intervention be sustained in the long-term?

These criteria bear the most relevance to this paper's aims of determining the strengths and weaknesses of extant policy responses to HE food poverty. Assessing these principles connect to the social exclusion model and support the identified theory of change.

5.4.5 Policy alternatives

A thorough search of interventions was conducted to identify suitable policies to assess using policy documents and HEI and government reports. Evidence from the search suggests that there are three dominant categories of interventions: food provision, meal sharing funds, and income support. All three are identified as best practice solutions in Brown's (2019) survey of university administrators. Analysed actions in this paper represent a mix of public sector interventions, campus-based interventions, and community-based interventions which involve intersectoral working, principally through public-private partnerships.

To date there is no enacted policy addressing student FI on a federal level, despite lawmaker attempts from 2017-2018. As such, interventions at the state and university level were chosen. Resulting policies spanned geographical breadth, but a pattern emerged. Many different states represented various alternatives, but California prevailed as a leader in its efforts to address student FI. For example, many states have implemented tuition-free legislation, called state college promise programmes, to reduce the burden of college costs. Perna & Leigh's (2019) database reveal that California has 43 of the nation's 350 programmes, the single largest number of such initiatives in a state. Additionally, California's governor recently allocated $246.5 million of the 2019-2020 state budget to specifically address student food and housing insecurity in its HE system (Education Trust-West, 2019). Due to its cutting-edge approach, all assessed interventions will be from California, featuring two state-level and one at the university level.

5.4.6 Search strategy

State-level policies were searched for using keywords on the California Legislative Bill search database. Keywords 'food insecurity' and 'college' were used to find pertinent legislation. The keywords were searched along with the bill session year (e.g. session 2019-2020, 2018-2019, etc.). The long list of options was filtered through meeting the following criteria: have a primary goal of increasing HE attainment (Perna & Leigh, 2018), targeting disadvantaged undergraduate students, and directly addressing college FI. I identified 13 interventions that met these criteria but eliminated ten of these from the review due to overlapping of intervention type and the limited space of this paper.

A university-level policy was selected after reviewing pertinent interventions in academic literature. The same selection criteria used for the state-level were applied. The University of California (UC) and California State University (CSU) system interventions were regularly cited among student food poverty scholars. In addition, California's higher education system is the largest and among the most diverse in the U.S. (PPIC, 2016). This is useful as it enrols approximately two million students from diverse backgrounds. The size and heterogeneity are amenable to generalising findings across the U.S., but also suitable for discussing the U.K.

5.5 Ethical Considerations

This research is a form of secondary data analysis. I am not collecting primary data that involves interacting directly with people. However, I am interpreting recorded, anonymised data about student experiences, policy processes, and institutional responses.

My interpretations may not match the sources' perspectives. I have reflected on my position as a researcher originally from California. While I did not attend university in California or experience FI while studying, I recognise potential bias in using information from my home state. All data sources were freely available on the internet and did not require special permissions or requests for access, which is often an ethical concern for this methodology (Tripathy, 2013).

Chapter 6: Interventions

Growing evidence on the connection between FI and learning outcomes spurred US legislators and universities to action to support students' postsecondary pursuits. Scholars and practitioners have sought to better understand affected students' lived experiences through research (Vasquez et al., 2018). Resulting interventions range from community-level initiatives such as food banks to university curricular changes such as compulsory cooking classes for first year students. This section will provide an overview of the issue in California, detailing its scope and common responses (see Table 2) to student FI guided by the literature review. A brief assessment of trade-offs using the established criteria of efficiency, effectiveness, and sustainability will follow.

Intervention	**Category**	**Implementation Year**	**Implementation Level**
AB 453 - Postsecondary education: student hunger.	Meal Sharing Programmes	2017	State
AB 1930 CalFresh: student eligibility	State Assistance	2014	State
CUFBA	Food banks/pantries	2012	University

Table 2: Policy Intervention Categories

6.1 Prevalence

My first research question sought to establish the prevalence of food insecurity among university students. The policy appraisal echoed similar findings from the literature review. Across nine UC campuses, 42% of approximately 150,000 undergraduates were classified as FI (University of California, 2016). Of these, 20% had low food security, and another 19% showed very low food security. Focus groups revealed that skipping meals on a regular basis was a common coping mechanism. Similarly, a CSU basic needs investigation found that 41% of 24,324 sampled students reported being FI across 23 of its campuses (CSU, 2018). Of those, 20% had low food security and 21% had very low food security. Document analysis confirmed previous research findings of weakened academic performance, dropout, and health problems as outcomes. These findings link to previous research conveying that FI is a substantial concern among university students that has long-term impacts on student well-being and achievement.

6.2 Solutions

6.2.1 AB 453: University Meal Sharing Programmes

6.2.1.1 Intervention description

A common institutional response to FI is establishing meal sharing programmes. These programmes allow students to voluntarily donate unused catered meal plan points to needy students (Swipe Out Hunger, 2019). Donated swipes can be converted into meal vouchers which can be redeemed at university food pantries or dining halls. Assembly Bill (AB) 453 was introduced in 2017 to incentivise California public universities to proactively mitigate campus hunger by implementing meal sharing programmes.

6.2.1.2 Objective

The bill's aim is to financially support California public colleges in becoming 'hunger-free campuses' primarily through meal sharing and donation programmes (Limón, 2017).

6.2.1.3 Implementation

Passed as part of California's Budget Act of 2017, each HEI receives reimbursement funds at the end of each academic year for costs associated with setting up related programmes. As an example, the UC system received $2.5 million dollars in funding, which was divided evenly among its ten campuses ($250,000/campus) (UC, 2019). Universities use funds to set up or expand meal donation projects. To access the benefits, students must apply for additional food assistance by meeting with a campus financial aid counsellor. If approved, students receive points which are loaded electronically onto student ID cards.

6.2.1.4 Assessment

Evaluators have mixed opinions on the efficacy of meal sharing programmes. Proponents point out that they directly meet FI student needs by providing emergency access to food. Also applauded is the leading role HEIs play in reducing student hunger in a non-stigmatising way. Evaluations of UC Berkeley's programme highlighted improved student outcomes like better class attendance, student extracurricular involvement, and reduced anxiety (Swipe Out Hunger, 2019). Scholars describe the initiative as efficient because it redistributes existing resources (meal swipes). The policy is flexible allowing university leaders to structure the programme to fit unique campus needs. The high degree of student leadership and involvement helps sustain the projects.

Scholars argue that meal donations are impactful in the short-term but raise questions about its consistency. Reports find that although tens of thousands of extra meals exist every year, the actual number of allocated meals given to needy students are unpredictable and can fluctuate from year to year. For example, an interviewed UCLA student explained that she only received 11 meals per quarter, which equates to about 22 meals to be stretched over six months (Merz, 2017). Another concern is that universities often cap meal donation numbers. UC Santa Barbara students lobbied the administration to expand the donation cap to ensure more unused meals could be shared, underlining the importance of institutional support. Recommendations urge administrators to evaluate restructuring meal plans to ensure equitable access.

The review also identified commuting as an additional barrier. About 81% of U.K. undergraduates live off-campus during their academic careers (HESA, 2019b), often geographically distant of the university due to high rental costs. This suggests that students would need to commute to the university in order to redeem food swipes. Students and administrators alike flag the high cost of transport as a barrier to meals. Students would spend money in order to eat or only use meals when on campus, which would be roughly three times a week. A common trialled solution is expansion of locations where swipes can be redeemed (University of California, 2019). For these reasons, critics argue that meal sharing fails to solve the problem of FI, and only addresses short-term hunger. Overall the intervention meets students' needs but is unsustainable and suffers from inefficiency.

6.2.2 CUFBA: Food Banks (Food Provision)

6.2.2.1 Intervention description

HEIs have also used state funding to open and/or maintain student food banks. California campus leaders have created partnerships with local grocery stores, community organisations, and farmer's markets to secure donated food for students in need. CUFBA, The College & University Food Bank Alliance, is a national non-profit that collaborates with U.S. HEIs to alleviate student hunger. There are officially 686 partner institutions, most of which hail from California (CUFBA, 2019).

6.2.2.2 Objective

The aim of college food banks is to 'specifically deliver food (that has not been pre-prepared) to students who are experiencing food insecurity' (Hope Center, 2018, p. 3).

6.2.2.3 Implementation

Reports detail a common, albeit difficult pathway in setting up food banks. The steps involve conducting a needs assessment, gaining university support, reaching out to community non-profits for donations, fundraising, and working with student resource centres to increase awareness of the service (CUFBA, 2019). Most are staffed by administrators and students, while others wholly depend on volunteers. According to Hope Center (2018) at most surveyed California university pantries, students can pick out what they want from the donated items, but some only offer pre-bagged items. Also, pantries vary in their operability. For example, UC Berkley's campus pantry is open twice a month, while UC Santa Cruz's pantry is open daily five days per week. Reports note a new text notification system that alerts students when food is available for pickup across different campuses.

6.2.2.4 Assessment

A consensus of HE leaders deem food banks to be an ineffective method of combatting hunger due its limits of long-term impact. 'Offering a campus food pantry is a signal to students that a college cares about their health and well-being and recognizes that struggles with [FI] are common' (Hope Center, 2018, p. 11). However, it is a short-term solution for when students run out of food and fails to address the FI's root causes, which the literature review establishes as insufficient money.

The evidence review reveals large gaps in operation times and availability, which negates the purpose of providing consistent access to food. Scholars point out that student support services like this are highly dependent on funding and staffing structures, both of which are susceptible to changing HE budget priorities (Callender, 2016). Annual changes to the devolved Barnett funding formula in the U.K. attest to this concern, whereby critics cite inconsistencies in quality of student services in different parts of the nation (Keep, 2018). Researchers argue that student food banks represent a 'plaster' approach to systemic inequality (de Schutter, 2019). Lastly, Purdam et al.'s (2015) study on U.K. food bank users argues that beneficiaries associated assistance with shame and embarrassment, which CSU student experiences confirmed in focus groups. CSU (2018) reported students feeling discouraged from repeatedly using food pantries as well as being asked to recognise the interventions as a temporary solution. Overall, food provision meets students' immediate caloric needs, but fail to resolve the long-term problem of food poverty.

6.2.3 AB 1930: State Food Assistance (Income Support)

6.2.3.1 Intervention description

Government food benefits is identified as a leading solution among policymakers and HE practitioners. The Supplemental Nutrition Assistance Program (SNAP) is the largest U.S. social welfare programme that offers a monthly food benefit award to eligible low-income people. Described as an anti-poverty tool, it aims to help those under the poverty line afford an adequate diet in periods of increased need (CBPP, 2019). Despite being a federal programme, states have discretionary power on issues like eligibility requirements. Single person households receive an average of $127 to buy groceries (CBPP, 2019).

CalFresh is California's SNAP state programme. Most college students were largely ineligible for the programme because of strict requirements like working a minimum of 20 hours per week, which is incompatible with full and part-time study. AB 1930 passed in the 2013-2014 session year to minimise hurdles like these so students could access food assistance. Connecting students to CalFresh is argued to relieve the stress that comes from FI and improve the likelihood that disadvantaged students will participate and complete their academic goals (Jackson & Hum, 2014). GAO (2018) concluded that state benefits could prevent over two million students from dropping out of university.

6.2.3.2 Objective

'It is the intent of the Legislature to increase college graduation rates of low-income Californians and to reduce the incidence of economic hardship and hunger among low-income college students' (Skinner, 2014, p. 92). The bill aims to improve college student access to CalFresh benefits by adding postsecondary study as an accepted form of employment or training which qualifies students in need. This exempts students from federal the work rule requirement.

6.2.3.3 Implementation

Following the bill's enactment, 'California's state SNAP agency issued policy letters to its county offices clarifying college student eligibility rules and expanding the list of college programs that qualify a student for an exemption under the employment and training provision' (GAO, 2018, p.31). HEIs designate at least one staff person to oversee the initiative. Staff perform a range of outreach services including drop-in counselling, implementing staff and student education, and application processing (CCC Student Mental Health, 2018). Applications take at least 30 days to process. Approved applicants receive a pre-loaded debit card which is electronically granted every month. Applicants need to reapply on a yearly basis.

6.2.3.4 Assessment

Practitioners recognise these benefits as a significant buffer against student FI, but scholars warn of its limitations. It meets students' basic needs in a reliable, consistent way, unlike food banks or meal sharing. Students can receive hundreds of dollars per month that is isolated to purchasing food only. Another identified strength of this intervention is its flexibility. The debit card can be used in a variety of locations including grocery stores, some restaurants, and local farmer's markets (Crutchfield et al., 2016). For this reason, researchers observe that participation encourages purchasing healthier food options because benefits are maximised on groceries rather than unhealthy foods (Jensen & Wilde, 2010). Policymakers raise concerns over fraud and underutilisation, while practitioners and scholars note rising food costs as key limitations to comprehensive hunger mitigation.

6.2.4 AB 1930: A Closer Look at Implementation in the CSU System

The evidence review suggests that the state-sponsored benefits option to be the most viable for U.K. students. This is because it directly addresses student hunger, can be sustained in the long-term, and is more discreet than the other two options. It is also the closest option that resembles former maintenance grants that have now become loans. For these reasons, I have chosen to explore this option in more detail by using CSU system as an illustrative case study.

6.2.4.1 Context

Following California's legislative commitment to fighting student hunger, the CSU system conduced a basic needs assessment in 2016 yielding a 41% FI rate (CSU, 2018). Findings reinforced the urgency in implementing targeted strategies, resulting in expanding and building programs servicing FI students using Hunger Initiative state funding. Interviews with staff and students led CSU to focus efforts on bumping CalFresh enrolment after passage of AB 1930. Administrators voiced it was the most sustainable, cost-effective solution, while student users spoke to its efficacy in hunger prevention, allowing them to focus on studies rather than part-time work (Crutchfield et al., 2016).

Cal State Chico established CalFresh Outreach (CFO), an on-campus office dedicated to food assistance benefits. CFO hired a faculty point person and 15 student interns who work with dedicated local social service offices to provide application support. The interns are partnered with Student Affairs officers to do outreach work including presentations, campus events like 'CalFresh day' dedicated to enrolment, and regular collaborations with student organisations and the campus food pantry, Hungry Wildcat Pantry.

6.2.4.2 Effectiveness

CSU's evaluation of FI initiatives reveals that CalFresh utilisation made considerable impact on student success. One year after initiation, CSU Chico supported over 2,000 students in application assistance, amounting to $45,000 in additional government aid (CSU Chico, 2017). Students articulated significant gains in academic attainment, citing higher grades which qualified them for progression in their degrees (CSU, 2018). These results are consistent with findings that CalFresh enrolment is associated with improved retention. Balzer Carr & London's (2019) study on UC Santa Cruz concluded that FI students enrolled in CalFresh represented a 94% retention rate, compared to an 87% rate of FI students who did not enrol. The pattern held also for second-year students. Overall, the benefits made students feel supported, more connected to the school, and yielded higher academic attainment (CCC Mental Health, 2017).

CSU administrators voiced that the CalFresh programmes were the most impactful intervention because it directly meets students' needs through direct student engagement. Reviewing this evidence makes the case that U.K. universities would benefit from a food assistance model like CalFresh. By addressing the root causes of hunger and targeted intersectoral partnerships, HEIs can alleviate FI. Students can receive benefits to purchase groceries that fit their needs and have a designated contact for support.

Electronic food assistance is considered an efficient option for U.K. students because the resources already exist via Universal Credit, which is a standard monthly financial allowance. Both part-time and full-time students are eligible if they receive a student loan, have a child, are under 21, or are estranged from their parents (U.K. Government, 2018). Like California, each nation state can adjust eligibility to acknowledge students' needs. However, one concern is that Universal Credit is not limited to just food and the award is deposited into personal bank accounts. If enacted in the U.K., provisions for setting up the infrastructure necessary to create a food-only system could be a large time and monetary investment for both the state and the universities responsible for helping students. However, the benefits associated with the change outweigh the government costs as it is a structured, self-monitoring system that discreetly supports students in meeting their basic needs.

6.2.4.3 Efficiency

Making slight changes to how Universal Credit is carried out can yield significant improvements in U.K. student retention rates and academic achievement, principal goals articulated in the widening participation strategy. Executing a policy change like this would require making relationships between HEIs and government more explicit. Thus, intersectoral working is key to effecting change at the policy level.

Having a consistent form of income for food ensures that benefits are being used properly, affirms institutional commitment to student well-being, and is feasible to implement. 'As research in the U.K. and elsewhere has repeatedly shown, upfront fees and fee hikes negatively affect student participation, unless accompanied by equivalent increases in student support' (MacGregor, 2018, n.p.). Maintenance loans are the current solution to this problem but are shown to increase financial burdens on the precariat class. Crawford & Jin (2014) concluded that student loan provision also bears long-term costs to the government because most loans are given at a subsidised rate and only about 29% of loans are fully repaid. Providing income support could save both students and government money in the long-run.

By having similar student services structures to the U.S. already in place, U.K. HEIs can build upon existing resources to raise awareness and enrol students in need. Designating one staff person to oversee applications is viable. Additionally, hiring student volunteers enhances its sustainability and increases the likelihood of the service to be utilised. The U.K. government should focus on setting up the necessary infrastructure to make this policy possible. This includes, but is not limited to, setting up an electronic platform for receiving, managing, and using benefits, expanding eligibility requirements for equitable access, and setting specific parameters for what can be purchased (food and drink only). Should Universal Credit changes be enacted, HEIs should establish designated points of contact to oversee outreach and enrolment. Practitioners suggest including eligibility information to low-income offer holders as part of their admission notifications (Allison, 2018). ‘Although implementing a long-term food assistance program will be costly, it is more likely to yield stronger results than investing in numerous temporary programs’ (Merz, 2017, n.p.). The investment will be repaid manifold in student retention and graduation rates (Balzer Carr & London, 2019).

6.2.4.4 Sustainability

Academics and practitioners alike acknowledge that long-term solutions to FI will be the most effective and yield the highest returns for student success. By addressing the root causes of food poverty, income support is a promising sustainable strategy. These benefits can be sustained in the long-term, as Universal Credit is an established system that aims to provide resources for low-income households.

6.2.4.5 Unintended Consequences

An emergent theme from the evidence review was that electronic food benefits are underutilised. This can be explained through perceived barriers to utilisation including social stigma, poor institutional outreach and resourcing, and application confusion.

Recommendations stressed the importance of HEI policy to feature student voice in the development of on-campus services, strong institutional support at various levels, and clear policy guidelines and expectations for universities to share with students in need.

Policymakers argue that recipients can become dependent on the benefits. Due to the need to re-apply yearly, students could find themselves ineligible from one year to the next. Students may find themselves in the same precarious situation of having inadequate access to food if benefits are disrupted or terminated. This reinforces the importance of having university support staff available for students. A last concern about income support is fraud. My research reveals a 1.5% national illicit sale rate, but no documented cases of fraud taking place with college SNAP benefits due to identification requirements (Aussenberg, 2018).

6.3 Summary of Findings

California provided a rich case study for mapping potential actions to quell student hunger. There are four key themes that emerge from this study. First, there is a high prevalence of FI among tertiary students that have long-standing academic, personal, and employment outcomes. Second, the study revealed a taxonomy of common policy responses that include food provision, meal sharing, and income support. Third, all interventions could be successful in a U.K. context, but vary in terms of efficiency, sustainability, and effectiveness. Success is contingent on strategic intersectoral working between government agencies and universities and the level of institutional investment in research and outreach. Fourth, developing long-term interdisciplinary solutions provided more sustainable outcomes for students like retention. This was evident with the electronic food benefits, suggesting that income support might be the preferred way forward for U.K. policy consideration.

Chapter 7: Discussion

There is a clear consensus that chronic food access problems compromise university student success. Using U.S. evidence, this paper explored FI as a student issue and weighed common policy responses against three criteria (effectiveness, efficiency, and sustainability) with the aim of unpacking best practices for a preemptive U.K. context. Findings yielded a core taxonomy of interventions: a) food provision b) meal funds and c) income support. The options indicate a mix of state and university action, which suggests that various stakeholders are critical to the policy development process. Furthermore, students experienced a range of positive academic and personal outcomes as a result of the interventions including increased attainment, retention, and connectedness to the school community. Despite these gains, a pattern of scholarly caution weighed over small-scale successes due to concerns over sustainability.

7.1 FI is an urgent problem

Exorbitant cost of tuition and related expenses leaves vulnerable students without means of affording daily basic needs leading them to desperate coping mechanisms (Goldrick-Rab et al., 2018). The economic, cultural, and educational parallels between the U.S. and U.K. suggest that the pervasive issue is also occurring in the U.K. Research concerning greater low-income student enrolment, increased noncompletion rates, high outstanding loan debt, and unprecedented food bank use are all signs that this problem is occurring (Mulrenan et al., 2018a). A striking finding is that such little empirical research has investigated the issue in the U.K. despite this evidence.

7.2 Implications: Why Student FI Matters

This issue's significance extends beyond a trivial collection of hungry student stories (Cady, 2014). It is a quiet, insidious epidemic that harms millions of students' chances of graduating. FI is a noncompletion issue and raises questions about who benefits from existing funding systems. Not having enough money to eat has forced students to choose less rigorous courses, drop out of studies completely, and even develop chronic health problems. The gross oversight of student FI in the U.K., and effectively retention, reduces widening participation efforts to performative rhetoric. Although such policies have increased the number of nontraditional students, the policies fail to account for continued support services throughout the life cycle of their studies. At a time when the knowledge economy is demanding more critical thinkers, particularly in STEM, the U.K. cannot afford to lose talented students because they cannot afford to eat. FI affects not only who participates in HE, but also contributes to the type of labour landscape the nation will produce. As such, universities and the government need to acknowledge, investigate, and put in relevant support services to alleviate the damages inflicted on the precariat class.

Lastly, FI is a social justice issue. ‘Tertiary students’ own growing material hardships appear to constitute an unacknowledged injustice’ (Gair & Baglow, 2018, p. 207). Social justice in HE contexts advocates for equitable participation in accordance with students’ needs. Yet, this paper shows that HE is not being experienced equitably due to different class intersections with university funding systems. This is a shortcoming of widening participation efforts that immediate merit revision. By not addressing this problem, universities will perpetuate systemic barriers to students’ success.

7.3 Lessons for Addressing FI as Social Exclusion

I argue that conceptualising solutions under an anti-poverty agenda will help institutions make cost-effective, sustainable decisions. At its core, FI is about poverty and the U.K. government and HEIs should work together to mitigate its damaging effects that will be felt in future social mobility trends (Gallegos et al., 2014).

7.3.1 Inadequate funding systems

The research shows that existing university funding systems are failing to support its neediest students. Students’ purchasing power against rising tuition and living costs is waning and need more support to complete their degrees beyond burdensome loans. Critics of U.K. student maintenance loans argue that most of the burden, and long-term disadvantage, falls to poorer households who rely on loans to meet upfront costs like food. Forms of support that do not need to be paid back are the key to non-traditional student success (GAO, 2018). By reducing the amount of debt that students take on, income support augments the precariat class’s ability to excel academically and be workforce ready. Therefore, funding systems need to be reviewed to make HE a reasonable possibility for all students.

7.3.2 Short-terms impacts are not enough

Consistent with existing evidence on general food poverty, solutions to tertiary student FI appear largely reactive in nature. The analysis revealed patterns of uneven operation times and unpredictable donation amounts, which threatens stable eating. I concur with existing scholars that food provision and sharing are ‘charitable, short-term [responses] to an epidemic of poverty confronting undergraduates, an epidemic created by the new economics of college’ (Hope Center, 2018, p. 2). The findings indicate that greater attention to long-term mitigation will be more effective, cost-efficient, and sustainable. Policies should prioritise FI prevention rather than emergency provision. Funding systems need to be revised considering this evidence of student suffering. Interventions like income support may best aid students experiencing food access problems. Therefore, short-term food relief is helpful, but limit the scope of impact that policymakers intend to create (Palfrey & Thomas, 2012).

7.4 Limitations

The limited space and time horizon of this paper prevented me from exploring all relevant options for the U.K. Literature shows that there are a wide range of interventions being used at universities across the US, but I was not able to describe them given the word limit. Assessing more interventions could widen debate on what is feasible for U.K. students. Additionally, the nascent nature of student FI means that there is limited data to draw on. Similarly, the policies and interventions were recently implemented and therefore there is very limited evaluation or reviews of such policies. Literature acknowledges that policy appraisals are often limited by evidence and time frame (Howlett, 2009). Also, although the U.S. and U.K. share many HE system congruencies, the different financial payment structures made it difficult to rationalise interventions from one context to another. The U.K. has also undergone several major changes to tuition and funding policies, which makes it difficult to consider sustainability. Lastly, this study is focused on one state’s responses to FI. While California is a leading policy advocate on this issue, there are many other states who have worked on developing solutions. If I were to redo this study, I would include more evaluation criteria like equity to the assessment. I would also add qualitative interviews concerning the impacts of the policies to enhance the analysis.

7.5 Recommendations

Further FI research and possible actions are needed. One question that arose during the evidence review is, ‘Why are there free school lunch programmes available for primary and secondary school students, but not for tertiary students?’ Provisions like subsidised transport, housing, and food are not extended to university level students (Broton & Goldrick-Rab, 2018). The transition to HE is a highly challenging window for vulnerable students (Bruening et al., 2016). Extending free school meals policy could be a sustainable answer to noncompletion for U.K. (and U.S.) policymakers to pursue (Broton & Goldrick-Rab, 2018).

I recommend that HEIs review how funding systems are failing vulnerable students and consider reinstating maintenance grants. In 2016, Parliament voted for loans to replace grants. The same students at most risk of experiencing FI have been most hurt by this change (Connell-Smith & Hubble, 2018). My analysis concludes that these students need additional buffers while completing their degrees. Maintenance grants attack the root causes of poverty, a key theme for intervention in this paper.

More research is needed on student retention and its connection to material hardship, as most literature is confined to widening access. I recommend that universities take initiative to conduct basic needs assessments of their students. This will provide clarity on the extent of FI for individual U.K. HEIs. Understanding the realities of how low-income students juggle their responsibilities is a social justice imperative and will help policymakers realise their articulated HE aims. Future studies should focus on FI measurement and examining implications such as ‘delayed graduation, discontinuous enrolment, and attenuation of academic goals’ (Payne-Sturges et al., 2018, p. 352). Most importantly, more research on discussing policy solutions like this one is critical to future work on the issue.

Chapter 8: Conclusion

A principal objective of this study was to shed light on the urgent nature of FI among tertiary students by proposing solutions that match U.K. policy imperatives. This paper located student experiences of social precarity and exclusion in neoliberal discourse of responsibilisation (Clark et al., 2015), which was found to contribute to an inequity of HE experiences and outcomes.

Applying the principles of comparative education scholarship, the present analysis was an opportunity to understand what can be learned about tertiary FI from one context in order to mitigate an undetected crisis in another. Based on a QCA analysis of U.S. interventions, it can be concluded that prevalent chronic food access problems greatly impair low-income student success. Additionally, the analysis revealed that long-term policy solutions tackling the root causes of hunger emerged as a critical ingredient in effective mitigation of student hunger. The findings of this original study indicate that very little is written about student FI in the U.K., suggesting that widening participation efforts fall short of their social justice aims, rendering them to increasing participation at best (Osborne, 2003). This research illustrates that current HE funding systems are failing the precariat class and merit urgent policy responses from both HEIs and the state.

Using a policy appraisal approach was valuable in generating insights about what is known about student food poverty. This approach was rationalised because of its standard usage in civil service arenas and its palatability for policymakers. As a forward-looking exercise, it helped me define FI as an emergent social problem through assessment of alternative policy options (HM Treasury, 2018). Thinking through the costs and benefits of a policy before the implementation stage, where most evaluations or assessments occur, was pragmatic and mirror the goals of contemporary social policymaking. The methodology's inductive element was conducive to answering my research questions about the problem's magnitude as well as identifying best practices.

One key finding of the paper is that irregular food access is a prevalent problem among tertiary students that compromises student success. The empirical evidence makes the case that student hunger is pervasive, cutting across all institution types and geographical areas, but inordinately affects socioeconomically vulnerable students (GAO, 2018).

Structural likeness between the U.S. and U.K strongly suggests that the issue is festering invisibly at comparable rates in the latter, which is substantiated by popular media reports and minimal scholarship. FI remains wholly under the radar of U.K. education lawmakers, a second key finding. This is puzzling, considering research documenting it as having highest levels of food poverty in Europe (FAO, 2018). This paper makes clear that by not acknowledging student negotiations of material deprivation, the U.K. lags behind other nations in using policy to redress the link between poverty and HE outcomes.

The analysis unveiled a third finding, which was a taxonomy of common policy solutions that include food provision, meal sharing, and income support. Interventions featured both university-level and state-level involvement, suggesting that intersectoral working needs to be considered when devising solutions. A final finding was that most interventions are reactionary in nature, proving short-term hunger relief to students. While these responses have merit, evidence suggested that long-term orientation solutions like income support are more impactful for students confirmed by reported gains in retention and attainment (Balzer Carr & London, 2019). This affirms previous research on social exclusion policy that finds structural interventions to be more effective (Adam & Potvin, 2016; Popay et al., 2008).

The study offers plenty of food for thought concerning the role of widening participation initiatives in advancing social justice agendas in HE. The analysis unearthed how existing university student funding systems are failing to keep pace with soaring living costs and how students are suffering as a result (Broton & Goldrick-Rab, 2018; Connell-Smith & Hubble, 2018). Internalising neoliberal discourse of responsibilisation, students are being forced to regularly starve themselves in hopes of better employment opportunities after graduation, which often never materialise equally for already disadvantaged groups (Findlay & Hermannsson, 2018). A tension thus exists between social justice and meritocratic principles supporting HE policy via inadequate funding systems. Diversification policy ambitions are being tempered by structural forces like poverty, which is manifesting through high rates of student FI (Sosu et al., 2018). Thus, there is an ethical risk with such policies aimed at increasing graduate status among historically underrepresented students without accounting for the additional hurdles of university study that include access to food. There is an urgent need for reconsideration of the connection between philosophical goals of education and widening participation.

FI is a salient equity issue that has broad implications for institutions most visible in discrepancies in academic performance, retention, and graduation rates between high and low-income students. This paper affirms that the issue's consequences could have far-reaching effects on the U.K.'s labour market and social cohesion. Based on these conclusions, policymakers and practitioners should immediately consider commissioning pertinent research. The evident lack of examination of this problem is preventing identification of policy solutions and action (Maynard et al., 2018). Thus, I recommend that HEIs measure the prevalence of FI both cross-nationally and at individual institutions to understand the extent of the issue in the U.K. It is important also for future research to build on this paper's contributions of discussing practical policy action to mitigate student hunger, as this represents a large gap in the literature.

This research contributes considerable knowledge about low-income HE students. It is among the first to discuss the issue of postsecondary student food poverty for a U.K. audience. It has built on previous research identifying FI as a significant yet overlooked barrier to student completion. However, only a handful of U.K. studies discuss precariat class negotiations of material hardship while studying, which are largely focused on housing insecurity. Also, to my knowledge, no other related studies explicitly weigh policy options to answer the infamous 'what works?' policymaker question. This paper's critical analysis of the issue's causes, consequences, and solutions has yielded important policy implications for U.K. institutions such as the need to focus greater attention on retention and reinstating forms of income support. The research demonstrates that helping vulnerable students meet their basic needs using equity-oriented strategies can help them graduate on par with more privileged peers. Taking up the issue will help resolve the current ethical risk associated with extant widening participation efforts that fail to answer for students' unspoken needs like food. Getting non-traditional students to Ivory Tower gates is no longer an assurance of equity and meals should not be an additional obstacle.

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