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Embracing Complexity of Place for Place-Informed Education: International Insights from Periphery, Coastal and Rural Contexts

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Abstract

This paper aims to navigate the complexity inherent in the concept of place by defining and highlighting the role of place-informed education across different international contexts: the periphery in Northern Israel, coastal areas of England, and rural Montana in the United States. Using a thematic analytic framework, we conducted a cross-context comparison of three case studies in order to identify each locale's unique definitions and meanings of place, producing a portrait of the similarities and differences among the three international contexts. Following the 'Simplicity–Accuracy Paradox' and recognizing the 'cost of over-simplification', we explored complexity as a basis for action, which enables the creation of a process in which the strengths and limitations of the place both have an important role to play in any intervention or action to mitigate and/or enhance the consequences of distance from urban centers. The proposed strategies presented in the paper are based on embracing the complexity of place for place-informed education, and include context-responsive policy design, targeted workforce strategies, international learning exchanges, and policy and classification reform. These processes may serve as a guide for action among educators, policymakers and researchers, supporting a mindset of place-informed education where complexity is embraced and where challenges of place may also offer solutions.

Keywords: rural education; place-informed education; coastal schools; educational equity; teacher recruitment; international comparison; periphery

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1. Introduction

In today's increasingly interconnected world, individuals and institutions alike find themselves inundated with unprecedented volumes of information across multiple domains (Eppler & Mengis, 2004). This information overload creates significant cognitive and emotional challenges as we attempt to make sense of complex social, economic, and educational phenomena. The human tendency to seek patterns and simplify complexity has been well-documented across the cognitive science literature, with researchers noting our natural inclination toward mental shortcuts or heuristics that help streamline our understanding of complex systems (Gigerenzer & Gaissmaier, 2011). These cognitive frameworks serve an important evolutionary purpose, allowing us to process information efficiently and make

decisions in environments characterized by uncertainty and overwhelming stimuli (Todd & Gigerenzer, 2012).

Following the tendencies to make information simpler, it is worth discussing the Simplicity–Accuracy Paradox (Tversky & Kahneman, 1974). While heuristics provide valuable mechanisms for managing complexity, they introduce a fundamental tension between simplicity and accuracy that manifests across various fields of inquiry. As Tversky and Kahneman (1974) established in their pioneering work on cognitive biases, humans frequently sacrifice accuracy for the cognitive comfort of simplicity. This trade-off becomes particularly problematic in educational research and policy development, where nuanced understanding of contexts is essential for the development of effective interventions (Berliner, 2002). When stakeholders' priorities favor reductionist frameworks that offer clear but oversimplified narratives, they inadvertently engage in "context-stripping" (Roberts & Green, 2013), which is argued to be the process of removing the distinctive characteristics that give meaning to social phenomena. The consequences of such simplification extend beyond theoretical concerns, as policies developed without attention to contextual complexity often fail to achieve their intended outcomes (Braun et al., 2011).

Research in implementation science has consistently demonstrated that contextual factors significantly influence the success of educational innovations (Fixsen et al., 2005), yet these factors are frequently overlooked in the development of standardized approaches. The significant cost of oversimplification can be reflected in the tendency of systematically excluding critical details, both positive and negative, that fundamentally shape the people, places, and processes within educational ecosystems (Gruenewald, 2003). These omissions are not merely academic concerns but have substantive implications for practice. Educational interventions designed around incomplete narratives typically demonstrate limited effectiveness, as they fail to account for the distinctive characteristics of the contexts in which they are implemented.

We propose that 'place-informed education' (PIE) is an approach to teaching and learning that intentionally grounds curriculum, pedagogy, and research in the social, cultural, historical, economic, and ecological contexts of a specific place. PIE recognizes place as a dynamic source of knowledge and uses local assets, challenges, and relationships to make teaching, learning, and policy relevant and connected to community life. Thus, PIE is a cross-cutting educational framework that operationalizes the idea that place is critical in how we teach, lead, and study education. As a pedagogical approach, PIE centers students' lived realities and leverages place as a source of knowledge and meaning; as a leadership and systems orientation, PIE ensures policies are responsive to place rather than applied generically; and as a research orientation, PIE rejects context-free generalizations and situates knowledge production within lived community realities. Educational leaders who embrace PIE are equipped to integrate the complexities of their local community to improve and strengthen educational designs, experiences, and decision-making.

The tension between simplicity and accuracy becomes particularly acute when considered through a PIE lens, where terms such as periphery (e.g., Northern Israel), coastal (e.g., specific regions of the UK) and rural (e.g., Montana, US) are used to refer to communities which demonstrate remarkable diversity in their historical development, economic foundations, social structures, and cultural practices (Grinshtain, 2023; Ovenden-Hope & Passy, 2019; Schafft & Jackson, 2010). The case studies of the three places were selected based on their variation and diversity, with emphasis on global location, country size, political and governmental structure, and especially the differing terminology used to describe places considered geographically isolated and remote. Thus, the notion of complexity which constitutes a central component in this review is fundamentally reflected in the distinct characteristics of each case. Identifying differences and similarities among the cases

that are, from the outset, grounded in different definitions and structures strengthens the argument regarding complexity. It also enables consideration of additional places, regions, or countries as further case studies, with particular attention to the central thesis concerning a continuum ranging from simplicity to complexity and to education that is responsive to the place wherein it is activated. Thus, the variability within these contexts fundamentally challenges any attempt to develop a singular definition or approach. Embracing complexity means considering multiple variables simultaneously within education for each community, with a willingness to hold all these elements together for place-informed education.

Corbett (2016) notes when considering rurality, "The rural is not one thing but many, with each iteration of rurality presenting distinct opportunities and challenges for educational research and practice" (p. 278). Attempts to homogenize understanding of rurality (or any concepts in education bound by place, including coastal and peripheral) represent not merely an intellectual shortcoming but potentially harmful oversimplification that undermines effective educational practice. Contemporary scholarship increasingly recognizes that place, i.e., the geographic, historical, economic, and cultural dimensions of where education occurs, fundamentally shapes educational processes and outcomes (Greenwood, 2009) and effective educators around the world should embrace its complexity.

2. Purpose, Scope and Structure

This paper examines the critical role of place in education, with particular attention to the diverse expressions and experiences across three distinct place-based contexts: education in the Israeli periphery, coastal schools in England, and rural schools and communities in Montana, United States. Through a discussion of three different, yet related, international contexts, we explore how geographic, socioeconomic, and cultural dimensions interact to create unique educational landscapes that resist simple categorization. Our paper challenges the reductionist tendencies that have dominated educational discourse and advocates for a more nuanced understanding of place-informed education that acknowledges both commonalities, strengths, and differences across educationally isolated contexts (Howley et al., 2014; Ovenden-Hope & Passy, 2019). By illuminating the value and complexity of place-informed education in these regions, we aim to contribute to a more sophisticated conceptual framework that can generate more responsive, less urban-normative and more effective educational policies and practices.

The following sections present our methodological approach, findings from each context, and implications for research, policy, and practice. Using a thematic approach as an analytic framework to guide cross-case comparison, we demonstrate that embracing complexity, rather than seeking refuge in simplicity, offers the most promising path toward educational approaches that honor the distinctive character of communities in periphery, coastal and rural locations while more fully addressing their educational goals (Biddle & Azano, 2016).

3. Defining the Construct of 'Rurality': Complexity and Context

Over the years, scholars have struggled to construct a definition of rurality that adequately captures the complex, multi-faceted demographics, geographies, cultures and economies that comprise periphery, coastal and rural places across the globe. Various definitions have been developed that reflect a local or national context or align with a need or task at hand. For example, in an effort to facilitate comparison of conditions within and across countries, provide meaningful statistical comparisons, and inform rural development policy design, implementation, and outcomes, the United Nations proposed a definition of rural as "a continuum that characterizes settlements based on population size and density" which can be applied to geographical parcels of equal size around the

world (FAO-UN, 2018, p. 25). While this type of definition may have utility to meet certain social and/or economic needs, when it comes to the intersection of rurality and education, these definitions fail to capture the significant interactions among the geography, demography, and economy of rural social space (Reid et al., 2010) and what it means to be a periphery/coastal/rural educator (Azano & Biddle, 2019).

Scholars who have sought to complexify the definition of rurality have framed it as a collection of places, communities, and individuals' lived experiences rather than as a binary category based solely on the shortcomings of rural areas (Azano et al., 2021a; Corbett & White, 2014; Gristy et al., 2020). In line with this perspective, researchers have also offered insightful critiques of deficiency, inferiority, or marginalization associated with rural environments (Azano, 2015; Corbett, 2007; Green & Reid, 2021; White & Downey, 2021). As a result, efforts have been made to transcend the deficit model (Lamont, 2012) and adopt a framework that views periphery, coastal and rural as sites of strength rather than merely of weakness and inadequacy (Bass & Azano, 2024; Crumb et al., 2023; Hartman & Klein, 2023; Sadorf, 2024).

This study is guided by the Rural Education (RE) theoretical framework that conceptualizes education as deeply shaped by place, community, and context. Drawing on Sociocultural theory (Vygotsky, 1978; Slavin, 1980) (exploring how education is shaped by social relationships, norms, and local knowledge) and Ecological systems theory (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2006) (examining how education is influenced by interconnected systems including family, school, community, and policy), the RE framework recognizes rurality not as a deficit but as a distinctive geographic, social, cultural, and economic context that influences educational structures, practices, and outcomes. Using RE as a lens, schools are understood as embedded within interconnected rural systems (such as families, local economies, and community institutions) that both constrain and enable educational opportunity. The RE framework also attends to the ways in which education policies and practices, often designed with urban or suburban contexts in mind, intersect with rural realities, producing unique challenges and possibilities. By centering place and context, the RE theoretical framework provides a critical lens for examining how educational experiences and outcomes are shaped in rural settings.

A key component of the effective adoption of an asset-based approach to the definition of rurality is the need to address the complexity of definitions and classifications with regard to the specific place being studied. To this end, studies which center rurality must explicitly design and describe the research setting and its features, including diversity in both general and specific populations and the distance between the center and peripheral locations, along with other key political, social, historic, and economic features.

This paper builds on the work of Gristy et al. (2020) and explores diverse definitions of rurality from the perspective and terms used in three countries: the term periphery in Israel; the term coastal in the UK; and the term rural in the US. Through the conceptual lens of RE, we offer an international and comparative view of the conceptualization of periphery, coastal and rural education in different countries by answering two questions: What does context mean for education in each country? Why does context matter for education in each country?

The multiple case-study genre was used in order to examine the notion of RE in three diverse places. Following the methodological assumptions of studying the singular by case study, it is worth mentioning that the purpose in the current paper was not to portray the educational experiences of all students across any of the nations as a whole. Thus, rather than use a national level rural perspective for the three countries, we selected three distinct geographic regions and their corresponding terminology to define the boundaries of each case study (Simons, 2025; Yin, 2018).

The term "periphery," widely used in Israel, conveys both physically distant locations with a numerical minority and symbolically signifies places representing marginality and lower power compared to central regions (Kühn, 2015; Shils, 1961). It is a complex and multidimensional concept that represents, at its basic and original level, areas that are far from central or large metropolitan areas measured by peripheral index (Israeli Central Bureau of Statistics, 2015). Generally, peripheral localities are defined by lower educational opportunities and other social services and resources (Grinshtain, 2022, 2023).

The term "coastal" is used to describe schools that are located within 5.5 km of the sea in England (Ovenden-Hope & Passy, 2015). Coastal schools appear to experience specific place-based challenges that impact student outcomes, particularly those from persistently disadvantaged backgrounds (Graham, 2024; Ovenden-Hope & Passy, 2017). There were signs that in 2012, the United Kingdom's Coalition government began to recognize the socioeconomic deprivation in coastal regions, and in 2019 the House of Lords reported on the need for seaside town regeneration (HoL, 2019). However, the way in which the government has categorized and reported data on schools typically excludes coastal location recognition, focusing instead on a rural–urban classification to consider school place. While many coastal schools are located rurally, many are not and therefore any difference in coastal schools' workforce or performance is challenging to identify using government data. It also means that these "educationally isolated" (Ovenden-Hope & Passy, 2019) coastal schools' place-based experiences are not understood or targeted for specific support to mitigate any additional challenges caused by their location (Ovenden-Hope & Passy, 2015; Ovenden-Hope et al., 2022).

The term "rural", which is a common term used in the United States (and other countries around the world), is based on a definition of rurality that typically includes reference to population density and distance from highly populated urban areas. In recent years, U.S. federal agencies responsible for allocating funding have adopted more flexible interpretations of rurality (Seelig, 2021), defining rural areas as nonmetropolitan districts that encompass a mix of open spaces, small rural communities with fewer than 2500 residents, and urban communities with populations ranging from 2500 to 49,999. This broader definition enables greater flexibility in policy design and resource allocation (Marietta & Marietta, 2020). However, rural scholars seeking to construct more comprehensive understandings of rural people and places have made it clear that the "rural" cannot be adequately defined through population density and geographic distance alone (Longhurst, 2022).

While rurality in these three countries comprises diverse sizes of populations and land, economic and political challenges and cultural background, there are also similarities regarding educational challenges and potential strengths, resources, and innovations which can be shared in support of education for people who live in peripheral, coastal or rural areas worldwide. To examine the unique meanings of the concepts in each of the three countries in detail, a description of each country will be presented separately.

4. Conceptualisation of Periphery, Coastal, and Rural Areas in Different Countries

For this theoretical review, three countries were chosen: Israel, England and the United States. Beyond the fact that each country emphasizes different concepts to describe its unique geographical and social environments, these countries also differ in characteristics such as size, location in the world, and culturally focused challenges related to political, economic, and social contexts. For this paper, we chose to include a general description of the regions within each country, with an emphasis on the unique geographical and social parameters relevant to this article and conclude with a discussion of the educational significance of these constructs in relation to the context under discussion. For each country,

policy documents, academic literature and national statistics data were used as reflected in the descriptions of each country which are based on references of these multiple sources.

It is interesting to note that while each country recognized 'place' as a combination of physical space, social, economic and community characteristics, they varied in the 'official' classification of the place being explored. For example, in Israel, the definition of the government regarding localities and regions as having national priority is determined by weighting a peripheral index (distance from the center) and a socioeconomic index (Israeli Government, 2013). In addition, localities adjacent to the border are included, in accordance with the Ministry of Defense. Thus, the declarative goal is to improve students' achievement in national priority areas to create a high-quality education system across the country. At the same time, emphasis is placed on the development of housing, infrastructure, transportation, agriculture, culture, and sports.

However, there are gaps between declarative policy and implemented policy, where weighing geographical and socioeconomic factors alongside a regional, non-localized perspective sometimes leads to resource allocations that do not prioritize a geographic basis, e.g., the northern periphery. The main axis to be addressed in this sense is the inequality between peripheral and central environments. Researchers are required to cross-check the data for peripheral indices with the data they intend to examine, while some data from the Ministry of Education are not available at the local or school level. Hence, sometimes, especially in the peripheral environment, where the local context is significant for examining needs and challenges, the information is not sufficiently focused.

In England, 'coastal' is not part of the official 'rural–urban' classification used to distinguish areas as either "urban" (settlements with over 10,000 residents) or "rural" (town and fringe, village, hamlet, and isolated dwellings) based on population density and settlement type. This classification is used by the government to inform policy and determine eligibility for rural funding and services (DEFRA, 2025). This has resulted in a paucity of research on coastal places, complicated by the rural–urban possibilities of coastal living (Ovenden-Hope & Passy, 2015). In the United States, the federal government has developed multiple definitions of rural which are largely based on quantitative indicators, such as population density and proximity to urban areas. A scoping review by Childs et al. (2022) documented 33 different definitions of rural currently in use, many of which are used to determine eligibility for various funding programs. Most of these definitions tend to be urban-centric, positioning the "rural" primarily in relation to what it is not. For example, the U.S. Census Bureau defines rural as "all population, housing, and territory not included within an urbanized area or urban cluster" (Ratcliffe et al., 2016). In education research, the most frequently cited definition of rural comes from the National Center for Education Statistics (NCES, 2022), which employs a metrocentric locale classification system to categorize places according to their distance from urban centers. Within this framework, rural areas are labeled as fringe, distant, or remote, effectively defining rurality as what remains after urban areas are identified. As a result, rural places are often positioned as residual categories, rather than as contexts with their own distinct characteristics (Azano et al., 2021b).

4.1. Periphery, Israel

The State of Israel is situated in the Middle East, on the shores of the Mediterranean Sea, with borders shared by Lebanon, Syria, Jordan, Egypt, and the Red Sea. Demographically, Israel is a multicultural and ethnically and religiously diverse country, with a population that includes Jews, Arabs (Muslims, Christians, Druze), and other minority groups. The total area of the State of Israel is about 21,946 square kilometers, and the distance from the northernmost point (Metula) in Israel to the southernmost point (Eilat) is about 418 km

in straight-line (as-the-crow-flies) or by road about 515–520 km, depending on the exact route. In Israel, there are distinct divisions of the population, both geographically and socially. The main division relevant to our discussion is between the peripheral and the central aeras.

The term "periphery" conveys both physically distant locations with a numerical minority and symbolically signifies places representing marginality and lower power compared to central regions (Kühn, 2015; Shils, 1961). Using this general description, peripheral areas are characterized by inequality in such diverse realms as health, transportation, occupation, and education (Dercon, 2009; Krugman, 1998).

"Periphery" is a complex and multidimensional concept that represents, at its basic and original level, areas that are far from central or large metropolitan areas (Israeli Central Bureau of Statistics, 2015). In peripheral areas, there are various types of settlements, including rural and urban communities with different characteristics, although in general these localities are defined by a significantly lower population density compared to that in central areas (e.g., Kiryat Shmona, the largest city in the northern periphery is about 22,000 residents; small rural communities in regional councils are about 400–200 residents).

In Israel, the main concepts discussed are geographic periphery and social periphery. Over the years, the concept of the periphery, which essentially emphasizes geographical distancing and isolation, has expanded to include diverse social meanings, including addressing cultural gaps, issues of language and identity, little political power, and few opportunities in various fields such as education, medicine, small businesses and transportation (Dabush, 2021; Goldstein, 2008; Greenberg et al., 2018; Heilbronner & Levin, 2007; Katz, 2008). The geographic definition of Israel's periphery is based on measurement by peripheral index. This metric is based on defining a region or space that is far from convenient amenities (such as markets, places of employment, and healthcare), activities (such as work, study, shopping, and leisure), or assets that exist in all areas, including the area itself. It is calculated according to two characteristics: (a) The Potential Accessibility Index, which is calculated according to the proximity of the locality for each of the localities in Israel, taking into account their population size, with population size indicating the intensity of the possibilities, activities, and assets in each locality; and (b) the proximity to the Tel Aviv District border, which is calculated as the distance from the Tel Aviv District border and expresses the monocentric structure of the State of Israel, in which the Tel Aviv District is an economic and business center (Israeli Central Bureau of Statistics, 2015, 2022). The index comprises ten peripheral levels, characterized by these characteristics (Israeli Central Bureau of Statistics, 2019). Clusters 1 and 2 are the most peripheral areas, which are the furthest from the center. Clusters 3 and 4 are considered peripheral areas that are still far from the center, but less so than clusters 1 and 2. Clusters 1–4 are the south (inhabited by 14.6% of Israel's population) and the northern region (16.1% of Israel's population). The current paper focuses on the northern periphery.

The reference to the social periphery is more complex than the geographical definition. A critical review article written by Nagar-Ron (2021) on the strengthening use of peripheral indices to define periphery ignored the importance of indices that examine inequality in Israeli society, regardless of geographic definitions, such as income level, poverty and unemployment rates, education level, and ethnic and cultural characteristics (Tzfadia & Gigi, 2022). Alongside the importance of promoting localities defined as socially but not necessarily geographically peripheral, studies indicate that geographical periphery signifies distance and isolation, which is expressed in the level of access to various public and private services (Grinshtain, 2023). This significance is expressed in the characteristics of inequality between peripheral and central environments.

Education in Israel is divided into four sectors: The State (secular) sector, the State–Religious sector, the Haredi sector, and the Arab sector. Following the blurring and the debates regarding the distinctions or the integration between geographic and social periphery, a significant portion of the studies and data on inequality in Israel focus on comparisons between these sectors (Feniger et al., 2021). Less data is focused on the northern and southern periphery, which includes representation of the various sectors. Comparative studies of peripheral and central regions indicate that in the geographic periphery, there are more teaching hours for teachers, and a lower teaching load in terms of student–teacher relations and the number of work hours per student compared to central environments, and that the level of education of teachers is higher than that of teachers in the center (Israeli Central Bureau of Statistics, 2019). Nevertheless, among high school graduates, those from peripheral areas are underrepresented in higher education: a smaller proportion of graduates from peripheral localities enroll in higher education, and the proportion of bachelor's degree recipients in the periphery is lower than that among residents of the country's center (Haisraeli, 2021; Refaeli et al., 2023).

In terms of students' academic achievements, it was found that a lower percentage of students are in the 5-unit math track (the highest level of secondary school mathematics in Israel, involving an advanced curriculum and conferring a substantial advantage for admission to selective higher education programs, especially in STEM fields). Generally, the level of achievement and the level of matriculation eligibility are lower in the periphery than in the center. In addition, it was found that resources in programs for gifted students as economic, infrastructural, and didactic resources were less available in the periphery (Grinshtain & Miedijensky, 2024; Grinshtain et al., 2024). These differences stem from the environment and the infrastructure in which the children grow up (Levy et al., 2025). For example, in a study based on interviews with educators in diverse roles, it was found that students have less intention for the future (academic studies or work in industry), as well as less exposure to sources or models of inspiration. Additionally, there is a low motivation that stems from the inculcation of a sense of devaluation in relation to the ability to succeed in professions considered "difficult". Finally, in the periphery, there is an ongoing shortage of infrastructure and pedagogy. On the parents' side, there is difficulty in funding private lessons and learning materials. On the part of the schools, there is a difficulty in retaining teachers, equipment, and resources. At the level of the authority and the state, there is no equality in economic, intellectual, and pedagogical opportunities (Bar-Zohar & Josefsberg Ben-Yehoshua, 2020).

4.2. Coastal England, United Kingdom

England is one of the four constituent countries of the United Kingdom (UK), alongside Scotland, Wales, and Northern Ireland. It is located on the island of Great Britain (GB), which also includes Scotland and Wales. England is therefore part of the UK politically and GB geographically. It is the largest country within the UK, occupying the southern and central parts of GB (approximately 130,278 square km). It is the most populous and culturally dominant nation in the UK, with London being the both the capital of England and the UK. As a small island, GB's coastline impacts on all its countries, but this paper will focus on England, which has 20 percent of its authority areas identified as coastal.

In England, the Rural Urban Classification (DEFRA, 2025), based on Lower Super Output Areas (LSOAs[1]), is used to distinguish rural and urban areas. The classification defines areas as rural if they fall outside of settlements with a more than 10,000 resident population (DEFRA, 2025). There is no distinguishing data for coastal settlements in this classification, and coastal areas are included in the Rural Urban Classification by number of resident population. The latest Department for Food, Environment and Rural Affairs

(DEFRA, 2026) Statistical Digest of Rural England estimates that 9.6 million (17.1%) of the 56.3 million population in England live in rural areas.

Coastal areas are a significant part of England, making up over a fifth of local authority areas, the way in which spatial areas in England are administrated (Social Mobility Commission, 2017). In 2020, the Office for National Statistics (ONS) produced a report on coastal towns in England and Wales that highlighted the specific socioeconomic place-based context of coastal towns. They identified 146 towns in England as coastal: 50 smaller seaside towns; 47 larger seaside towns; 28 smaller other coastal towns; and 21 larger other coastal towns. The ONS report defined seaside towns as those with a tourist beach, and other coastal towns as those with an industrial heritage or port; smaller towns were those with populations between 5000 and 20,000 and larger towns were those with a population greater than 20,000. Coastal villages with populations less than 5000 were not included in the report.

A comparison on local authority areas by the Social Market Foundation (SMF) in 2017 identified a widening economic gap between coastal and non-coastal communities, with coastal communities having lower economic output, employee pay and number of degree-level qualified residents (Corfe, 2017, p. 4). In 2019, the House of Lords Select Committee on Regenerating Seaside Towns and Communities reported in *The Future of Seaside Towns* that there are some specific challenges that characterize coastal communities in England. Coastal towns' economies are not only reliant upon seasonal patterns of trade, but have suffered from an ongoing loss of business over the last two decades. Entry-level jobs are few, which has impacted on opportunities and aspirations for young people (HoL, 2019, p. 17):

> *"Young people in seaside towns are being let down and left behind by poor standards in existing provision, limited access to educational institutions and a lack of employment opportunities, resulting in low levels of aspiration."* (HoL, 2019, p. 5)

In 2018, seaside towns had higher shares of self-employment, part-time and seasonal employment than non-coastal towns; two-thirds had higher levels of deprivation compared to one-third of non-coastal towns; they had slower population and employment growth than non-coastal towns; and had higher shares of residents over 65 years of age and lower shares of residents aged 0 to 15 compared to non-coastal towns (ONS, 2025).

The socioeconomic context of coastal areas in England is therefore challenging; limited and declining employment opportunities and aging populations have impacted on the infrastructures of these communities, negatively affecting housing, transport, technology and leisure (HoL, 2019). These infrastructural challenges, as well as socioeconomic issues, affect schools in coastal communities and result in more limited access to resources than schools in urban areas (Graham, 2024; Ovenden-Hope & Passy, 2015, 2019; Passy & Ovenden-Hope, 2019).

For coastal school pupils, attainment is lower than in non-coastal schools. SchoolDASH (2015) identified that pupils were, on average, achieving 3% lower results than pupils in urban schools, based on the benchmark five A*–C GCSEs including English and Maths. Thomson (2015) reported that there was a lower rate of relative progress from Key Stage 2 to Key Stage 4 among Pupil Premium[2] (a proxy measure of deprivation) pupils attending coastal schools, predominantly white British pupils in disadvantaged areas. The DfE (2019, p. 7) reported on this sustained inequity in outcomes for coastal school pupils in both the Progress and Attainment 8 scores (end of secondary school measures of performance) in 2018, regardless of levels of disadvantage.

Overall, attainment and progress for all pupils was higher for pupils attending schools located in non-coastal areas compared to pupils in coastal areas (Graham, 2024). The disparity in coastal school pupil attainment is sustained and pernicious in England. To add to this, the greatest resource for pupil attainment, high-quality teaching (The Sutton Trust, 2015),

has been shown to be affected by place. While there is a paucity of research in this area, the DfE (2016, p. 3) reported that "[schools] that were in coastal rural areas had the highest rate of teachers leaving the sector. Urban schools in general recruited a higher number of newly qualified teachers (NQTs)". This acknowledgement of poorer teacher retention and greater challenges with teacher recruitment for coastal and rural schools in England is significant, with the DfE (2016, p. 3) recognizing that "further research is needed to understand the underlying reasons for these differences". The concept of educational isolation provides a lens for understanding how place can limit a rural or coastal school's access to a sustained and high-quality teaching workforce and also explains the lower attainment of persistently disadvantaged pupils in these schools (Ovenden-Hope & Passy, 2019; Ovenden-Hope et al., 2022).

The UK government has had limited access to data on the specific place-based challenges for coastal schools in England due to reliance on the rural–urban classification. There have been attempts in policy over the last decade to mitigate place-based issues in education, such as the creation of Opportunity Areas (DfE, 2017), which saw the Conservative government utilize urban-normative measures of deprivation favoring high-desnsity populated areas (Ovenden-Hope et al., 2025a) to identify twelve places with high levels of deprivation for additional resources that included education, five of which were urban–coastal areas. There is some hope for change to a more place-informed approach to equitable government support for coastal schools. The government White Paper 'Every child achieving and thriving' (DfE, 2026) proposes 'Mission Coastal' reform to improve the opportunities and outcomes in coastal schools in England. The details of the way 'Mission Coastal' will be put into practice are yet to be seen, but government acknowledgement of specific place-based support for coastal schools is a new direction for education policy in England.

4.3. Rural Montana, United States

In the United States, rural communities vary by geography, history, and culure unique to each region of the country. For example, a National Academies (2025) report on rural STEM education and the workforce reflected how the term rural has been used to encompass everything from "a remote village located off the road system, accessible only by air, and dependent on traditional subsistence activities for livelihood . . . to an island teeming with vibrant life and diverse culture but isolated geographically, resulting in a high cost of living . . . to a picturesque mountain community with seasonal influx of population yet lacking affordable housing for year-round residents" (p. 35).

In terms of education, over half of U.S. school districts are rurally located, and in 28 states, rural districts account for at least one third of public schools (National Academies, 2025). Rural school districts enroll approximately 7.3 million public school students, which equates to more than one in every seven students in the country. Of those rural students, while more were likely to graduate high school than their non-rural counterparts (Showalter et al., 2023), research has also found that nearly one in seven experiences poverty, one in 15 lacks health insurance, and one in ten has changed residence in the previous 12 months (National Academies, 2025).

The state of Montana is considered by many to be rural due to its vast geography and sparse population. Montana encompasses over 145,000 square miles (375,548 square kms) of prairie, rivers, lakes, and mountains with elevation ranging from 1820 to 12,799 feet (555 to 3901 m) above sea level. The state borders three Canadian provinces and four US states and is the fourth largest state in United States. It takes over 11 h to drive diagonally across the state. Montana has only seven cities over 10,000 residents, only one city with more than 100,000 residents (U.S. Census Bureau, 2024), and three of the most geographically isolated

communities in the United States (National Rural Health, 2016). Thus, with just over one million residents, there is an average of only 6.86 people per square mile (2.65 per square km). For comparison, the population density of Washington, DC is 11,535 people per square mile. The state's ethnic composition is: White 88.7%; American Indian 6.4%; Hispanic 4.9%; Asian 1.0%; Black 0.7%; and Pacific Islander 0.1% (U.S. Census Bureau, 2024). There are 12 American Indian tribes in Montana recognized as sovereign nations by the United States and seven American Indian reservations located in the state. Primary industries include healthcare, retail, education, hospitality, construction, government, professional and agriculture.

The state is known for its vast, rolling landscapes dotted by small towns separated by long distances. This combination of large distances and small population centers has resulted in an education system with over 800 schools organized into roughly 400 public school districts—nearly all of them very small by national metrics. Only 59 schools (7%) serve 500 or more students; more than half of the state's schools have fewer than 100 students (OPI, 2024) and over 60 schools are so small that they only have one or two rooms. Thus, the vast majority of school districts in Montana are classified as "small rural" (93%) with fewer than 500 students and researchers have noted that no state has a higher percentage of small rural districts (Showalter et al., 2025). In 2023–24, Montana was home to 148,585 public school students and 17,108 non-public school (private and home school) students (OPI, 2024). One of the most important consequences of small school enrolments is that for the past number of years, Montana has averaged a 13:7 student/teacher ratio which is meaningfully below the national average of 15:4 (OPI, 2024).

The rural nature of the state, with its vast distances and sparse population, is not simply a movie set or a scenic backdrop for its residents. Rather, the fabric of each rural community in Montana has a complex and dynamic culture shaped by unique social, economic, political, cultural, and historical elements. Montana's educational landscape reflects strong connections between its schools and local communities, with clear support for place-based approaches and community-engaged practices. However, while rural schools serve as a backbone and social hub for their rural communities, keeping them staffed has become a challenge of serious proportions. According to data from the 2024–25 school year, 86% of school districts reported difficulty filling their vacant teaching positions (OPI, 2025). Remote rural districts reported almost twice the percentage of difficult-to-fill positions as non-rural districts. Additional areas of education concern include "Montana has the lowest percentage of students enrolled in public preschool (just one in five), more than 6% of rural students are unhoused, and nearly 8% of rural students are uninsured" (Showalter et al., 2025, p. 106).

5. Comparative View of the Three Countries

A thematic approach was employed as an analytic framework to guide cross-case comparison. This is appropriate for small-scale cases studies (three countries in the current paper). A shared coding matrix across cases was created inductively from the description of each country. By using this approach, the comparison included differences and similarities that were obtained. Thus, patterns across rows (cases: Israel, UK., Montana, USA) and columns (themes, e.g., for differences: classification, geographic scale, economic structure, demographic and social context, education and infrastructure implications; for similarities: geographic isolation, educational workforce crisis, etc.) are presented in Tables 1 and 2.

Table 1. Key features across places.

Dimension	Israel (Periphery)	England (Coastal)	Montana (Rural)
Classification	"Periphery" determined by distance from Tel Aviv and economic connectivity	"Coastal" status often overlooked in rural–urban classifications	"Rural" defined by large distances between towns and low population density (avg. 7.7/sq. mile; 2.97/sq. km)
Geographic Scale	Regional periphery within the national context	Coastal areas within 5.5 km of the sea	Vast rural expanse 147,040 sq. miles (380,832 sq. kms)
Economic Structure	Monocentric economy with a strong center–periphery divide	Tourism-dependent economies with seasonal labor and few large employers	Agriculture, natural resources, and tourism with few large employers due to its sparse population and expansive geography
Demographic & Social Context	Minority populations, complex political representation and power dynamics	Aging populations and youth out-migration	Predominantly White population; multiple sovereign Native American tribal nations; access to education, healthcare, and employment limited by geographic isolation
Education & Infrastructure Implications	Unequal resource distribution tied to centralization	Service seasonality affects school stability and community continuity	Over 65 one- or two-room schools across the state; persistent staffing shortages; 80% of teaching positions are difficult to fill

Table 2. Key similarities and shared challenges across the different contexts.

Geographic Isolation	Distance from metropolitan centers create access barriers.
Educational Workforce Crisis	Severe teacher recruitment and retention difficulties.
Economic Disadvantage	Limited employment opportunities and infrastructure challenges.
Complex Identity	Definitions extending beyond simple geographic measures to include social and cultural dimensions.
Resource Limitations	Reduced access to educational resources and support services (including transportation challenges).

As presented above, there are significant differences between the three contexts, some of which are related to the size and structure of each country, while others are related to social and political aspects that have evolved over time (Table 1). Thus, for example, the concept of small rural schools is common in Montana, largely due to low population density. Another example is the presentation of dependence and power relations between the center and the periphery, which are considered very central in Israel and are also the product of decades of history and political decisions during these years. In England, coastal areas are associated with tourism, loss of industry and generally with socioeconomic decline. Each national government has operationalized place in practice to achieve different purposes, and thus how scholars within each country must work with, critique, and adapt those official definitions. Furthermore, these operationalized classifications tend to determine which data are available, which schools or communities are visible to policymakers, and

decisions about how resources are allocated. Thus, the solutions needed for these areas are different and require unique attention. Each point of comparison presented in the table summary serves as the basis for the broad development of challenges, strengths, and processes that each context must address.

Alongside these differences, there are also common points between these regions in different countries. Isolation and geographical distancing are prominently expressed in the three countries, with an emphasis on the increased cost of living and the compromises that people are required to make to live in these areas. Outcomes for those living in these places align through educational experiences that demonstrate a more limited access to resources (from teachers to classrooms), which can affect those living in deprivation and result in poorer outcomes than their more affluent peers. It can also be reflected in a complex identity. The similarities between these environments (Table 2) can also lead to identifying the common ways that community strengths are used to address challenges and develop the positive directions forward for those communities by utilizing local resources and understanding their strengths.

6. Solutions and Strategic Implications

The diversity of the challenges identified for periphery, coastal and rural areas above reaffirms the need to move beyond deficit models, and the importance of adopting a new approach that transitions thinking in RE from 'simplicity to complexity', avoiding the Simplicity–Accuracy Paradox (Tversky & Kahneman, 1974) that has reduced understanding in the field. As previously stated, while the place may be perceived as a problem by researchers, policymakers, and residents within and outside these areas, it can also be seen as a solution. The main principle is that embracing complexity rather than seeking refuge in simplicity offers the most promising path toward educational approaches that honor the distinctive character of rural communities for place-informed education. This principle will be presented through four key points that may outline a path and direction for the solutions needed in these places, with an emphasis on the assets and resources that exist in them, with an observation that transcends different policies and types of regions: context-responsive policy design; targeted workforce strategies; international learning exchange; and policy and classification reform (for the full principles, see Table 3).

Table 3. Summary of the solutions and strategic implications.

1. Context-Responsive Policy Design
• **Reject One-Size-Fits-All**: Champion the role of place in education for interventions that acknowledge local contexts. • **Asset-Based Approach**: Identify and leverage unique strengths rather than focusing solely on deficits. • **Cultural Integration**: Incorporate local knowledge, traditions, and community resources into educational practice.
2. Targeted Workforce Strategies
• **Place-Specific Recruitment**: Address unique challenges of each context (isolation, housing, career progression). • **Retention Support**: Provide mentorship, professional development, and community integration assistance. • **Innovative Staffing**: Explore technology-enhanced teaching, shared positions, and alternative certification paths.
3. International Learning Exchange
• **Comparative Analysis**: Learn from successful interventions across different peripheral contexts. • **Best Practice Sharing**: Adapt solutions from Israel's periphery programs, England's coastal initiatives, and Montana's rural innovations. • **Research Collaboration**: Develop cross-national studies to build an evidence base for place-informed education.

Table 3. *Cont.*

4. Policy and Classification Reform
• **Recognition**: Ensure peripheral, coastal, and rural schools receive appropriate categorization in government data. • **Resource Allocation**: Target funding-based on place-specific challenges and needs. • **Infrastructure Investment**: Address connectivity, transportation, and facility challenges that compound educational isolation.

6.1. Context-Responsive Policy Design

The main basis for leading educational processes in a complex reality is the development of a policy model that emphasizes local context (Ovenden-Hope & Passy, 2023). This policy model should be because educational interventions for the benefit of students, educators, and teachers are tailored to local needs. In addition, local resources should be relied upon, considering the knowledge and tradition of the communities in which the policy is implemented (Autti & Hyry-Beihammer, 2025; Bitušíková, 2021; Marques da Silva, 2023). Thus, solutions may be diverse, even among different communities or in two schools located in the same district. Special emphasis should also be placed on educational experiences that have been successful in the past in the specific community, as well as on sharing with community members what works and things that do not, to learn from the experience within the specific context in which the policy is supposed to be implemented (Ovenden-Hope et al., 2025b). Local leaders need to be recognized and listened to, as they typically have a clearer view of how their local systems function because they experience inequities and constraints firsthand. This perspective enables them to identify problems, as well as the solutions to those problems, that may be invisible to those who do not live in periphery, coastal or rural areas.

6.2. Targeted Workforce Strategies

In addition, and in a more focused manner, special attention is required in support of the local workforce, which includes recruiting and welcoming teachers who also embrace living in the community (Dahan & Grinshtain, 2025). There is significant value in intentionally integrating new teachers into the community itself alongside the workplace, through providing resources such as housing assistance, connection with community members, and creating a sense of meaning in connection to the place (Brenner et al., 2021a, 2021b). In addition, it is important to provide mentoring and adapted professional development at work, for example, in small, distant, or isolated schools, while also thinking about the future of educators in an environment where it is necessary to create opportunities for the future or initiate the development of opportunities (Downey & Luebeck, 2025).

6.3. International Learning Exchange

Although learning from other rural or external environments may seem to contradict the essence of finding local and unique solutions, experience in these environments suggests that learning from colleagues or interventions in other countries or regions can help find solutions or inspire new interventions. International collaborations, similar to the cooperation described in this article, can contribute to the promotion of rural environments. This is especially true when the support of the wider community is required, as well as the adoption of successes in these areas.

6.4. Policy and Classification Reform

The success of comprehensive reforms relies on small steps, and in rural environments, this refers to processes that grow from the field and from the people who live there and are committed to it out of a worldview about the importance of the place and the recognition

of its advantages and strengths (Passy & Ovenden-Hope, 2019). The actions of people in the field can gradually expand and lead to broader, more significant changes. This process requires economic and political support at the macro level, with an emphasis on national databases, intelligent allocation of resources according to local needs, and attention to issues of transportation, health, and other challenges arising from location and distance (Kühn, 2015).

7. Summary and Contribution

Using the rural education (RE) theoretical perspective, peripheral, coastal, and rural schools and communities are generative spaces in which education and educational innovation can be informed by place, relationships, and context. By using a place-informed education (PIE) lens, our contribution to the field is significant as it reframes peripheral, coastal, and rural contexts with conditions for agency and resilience, where innovative policies and interventions are able to be imagined, tested, and refined. Understanding the role of educational leadership demonstrated in peripheral, coastal, and rural areas is crucial, as this leadership occurs closest to unmet needs, constraints, and inequities experienced in these places and thereby produces solutions that work in practice.

RE theory emphasizes that educational practice is shaped by the social, cultural, economic, and geographic contexts in which it occurs, positioning rural communities as sites of knowledge production rather than deficit spaces (Gruenewald, 2003; Gruenewald & Smith, 2008). Because rural schools often operate at the geographic and policy margins of education systems, they must respond creatively to challenges related to distance, limited resources, and policies designed for urban contexts (Azano & Stewart, 2016; Corbett, 2020). These conditions foster forms of leadership and innovation grounded in local knowledge, relationships, and community priorities (Howley et al., 2005). From a place-informed education (PIE) perspective, such innovations are valuable because they are context-responsive, disrupt urban-normative assumptions about schooling, and offer alternative models of educational practice and leadership that can inform broader educational systems (Azano et al., 2021a; Corbett, 2016). The significant contribution of this paper is to re-position peripheral, coastal and rural teaching, innovation and leadership so that they are understood as outcomes of place-based conditions rather than deviations from dominant norms.

The limitations of this paper are recognized in the reach of the international examples and constraints of the narrative review. The authors welcome academic engagement with the conceptual development of place-informed education (PIE) as a lens for embracing the complexity of peripheral, coastal and rural educational experiences. The theoretical comparative directions outlined here provide a novel foundation for empirically examining place-informed education conditions and for extending such analyses across national contexts. Empirical inquiry should attend to the distinctive features of place within each country while also identifying shared challenges that enable mutual learning and the cross-national adaptation of policies and practices informed by international perspectives; it should in other words embrace complexity for a place-informed education.

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Notes

[1] Lower Super Output Areas (LSOA) are a geographic hierarchy designed to improve the reporting of small-area statistics in England and Wales.

[2] Pupil Premium was introduced in England in 2011 and is a sum of money given to schools each year by the Government to improve the attainment of disadvantaged children.

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