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# Advancing Economics Education: Embracing Pluralism and Critical Realism

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## ABSTRACT

Advocating for a pluralistic economics curriculum requires examining historical and contemporary debates on the standardization of economics education and criticisms of traditional teaching methods. In the UK during the 1970s, the economics curriculum was unified under the neoclassical economic paradigm, aiming for a cohesive approach. However, this singular focus was criticized for oversimplifying economic phenomena and neglecting alternative perspectives. Similarly, in the US during the 1980s, economics education was standardized through a neoclassical framework, providing a structured approach that became global. This framework, though consistent, faced criticism for its rigidity and failure to incorporate diverse economic theories that could address real-world complexities. In Malaysia, similar debates have emerged. Critics argue that the current curriculum, which emphasizes neoclassical economics, does not adequately reflect Malaysia's unique economic context and challenges. They advocate for a curriculum that includes heterodox, Islamic, and development economics. This research explores perceptions of these paradigms through semi-structured interviews with educators, students, and curriculum developers. The findings indicate that a pluralistic approach is crucial for offering students a comprehensive understanding of economic issues specific to Malaysia. The push for a pluralistic economics curriculum is based on the recognition that a singular economic perspective is insufficient for addressing the complex economic

## Open Access

Received: 14 January 2025

Accepted: 04 June 2025

Published: 29 Jul 2025

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issues encountered in the real world. By incorporating diverse perspectives, students would be better prepared to analyse and address the multifaceted economic challenges they will face in their professional and personal lives.

**KEYWORDS:** pluralistic economics education; neoclassical dominance; critical realism; economic paradigms; curriculum development; interdisciplinary approach

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## INTRODUCTION

This study explores the need for a pluralistic approach in Malaysia's tertiary economics education, critiquing the current standardization around neoclassical economics [1]. Initially, economics education in Malaysia was unified under neoclassical principles for university entrance qualifications and standardized through a comprehensive framework [2]. However, this approach has faced significant criticism for failing to address Malaysia's unique economic context and challenges [3]. Critics advocate for a more diversified curriculum that includes heterodox, Islamic, and development economics to provide a more comprehensive and relevant education for students [4]. This study contributes by examining the positioning of economics curricula in education, emphasizing the need for a curriculum that reflects diverse economic perspectives. This study contributes to the literature by highlighting the need for a pluralistic approach to economics education in Malaysia, focusing on the limitations of a neoclassical-dominated curriculum in the context of local economic realities. While previous literature has critiqued the neoclassical approach in both the UK and US, this study uniquely adds to the discourse by focusing on Malaysia's specific challenges. By examining the views of various stakeholder through semi-structured interviews, this research provides new insights into how alternative economic paradigms could be integrated into the curriculum. It expands on existing critiques by not only examining the theoretical arguments against a single paradigm but also offering empirical data from the Malaysian context that demonstrates the importance of diverse economic perspectives for tackling the complex issues students will face in real-world economic environments.

## OUTLINE OF THE STUDY

The study begins with an overview of the historical and contemporary debates surrounding the standardization of economics education, focusing on the dominance of neoclassical economics in curricula across the UK, US, and Malaysia. It highlights the criticisms of this singular approach and argues for the need to incorporate alternative economic perspectives. This discussion sets the stage for the study's primary aim that is to explore the potential benefits of a pluralistic economics curriculum,

particularly in the Malaysian context. Following this introduction, the methodology section outlines the research design, which uses semi-structured interviews with various stakeholders. This qualitative approach allows the study to gather in-depth insights into the perceptions of key stakeholders regarding the current curriculum and the feasibility of integrating diverse economic theories. The findings and discussion section presents the data collected from the interviews, analysing the views of participants on the relevance of a pluralistic economics curriculum. It discusses how incorporating alternative economic paradigms could better address Malaysia's unique economic challenges, such as inequality, development, and global economic integration. The section emphasizes the importance of critical thinking and intellectual flexibility in preparing students to tackle complex real-world economic problems. The paper concludes with a summary of key findings and offers recommendations for integrating a pluralistic approach into Malaysia's economics education. It highlights the need for policy changes and curriculum development to ensure that students are equipped with a broad range of economic tools and perspectives, preparing them to engage with the multifaceted issues they will encounter in their professional lives.

### **Critical Reflections on Economic Education in USA & UK**

The Joint Council on Economic Education [JCEE], now the Council for Economic Education [CEE], was established in 1949 to promote economic education in the U.S., especially during the Cold War [5]. The 1984 curriculum revision sparked debate at a symposium at MIT, with critics like Galbraith and Hayek advocating for economic history over the JCEE's focus on scarcity and decision-making models, while proponents like Samuelson defended the revision [6]. Despite ongoing discussions, criticisms of the CEE's current curriculum remain unsubstantiated, and the CEE continues to enhance economic literacy [7]. In the UK, debates have centred on whether the neoclassical-focused curriculum for university entrance exams adequately prepares students for real-world economic challenges [8]. Lionel Robbins, through British journalism, questioned this curriculum's suitability [9]. Critics, influenced by critical realism, argue for critical economics education, which challenges the reductionist nature of neoclassical models and calls for the inclusion of pluralistic perspectives to foster critical thinking and a more comprehensive understanding of economic systems [10–12].

### **Critical Reflections on Economic Education in Malaysia**

In Malaysia, the debate centred on the introduction of neoclassical price theory into tertiary education, rather than the standardization of economic content [13]. Critics questioned the reliance on supply and demand diagrams, arguing that they oversimplify complex economic concepts and are not always necessary for teaching basic principles like price effects on buyer behaviour [14,15]. These critiques advocate for a

more meaningful and cognitively aligned economic education [16]. Drawing on cognitive science, Malaysian economists highlighted the limitations of traditional teaching methods and called for a curriculum that better bridges the gap between equilibrium theory and students' understanding [17]. The proposed educational guidelines oppose the exclusive use of neoclassical economics and advocate for a more diverse and contextually relevant approach to economic education [18].

### **Problem Statement**

The economics curriculum in Malaysia has long been dominated by the neoclassical paradigm, which is characterised by assumptions of rational agents, market efficiency and equilibrium-based modelling [13,19]. While these principles offer analytical tools for understanding markets in ideal conditions, they often fail to capture the complex socio-political and cultural dynamics of Malaysia's mixed economy. The continued emphasis on neoclassical models in teaching and textbooks limits students' understanding of alternative interpretations of economic behaviour, institutions and outcomes, effectively narrowing their intellectual development and critical thinking skills. This approach also detaches economics education from the lived realities of Malaysians, as it neglects the nuances of Malaysia's pluralistic society, government intervention, ethnic-based redistributive policies and regional disparities. As [20], argued decades ago, a curriculum that fails to reflect indigenous economic practices risks alienating learners and undermines their ability to participate meaningfully in national discourse. One of the major criticisms of the existing curriculum is its disregard for economic paradigms that are more attuned to Malaysia's socio-economic conditions. Malaysia's economy operates under a hybrid model, blending capitalist principles with state intervention and affirmative action policies. This structure cannot be adequately analysed using only the individualistic and market-centric lens of neoclassical economics. Malaysia's New Economic Policy [NEP] and its successors involve explicit government efforts to reduce income inequality and promote equitable growth across ethnic groups a policy trajectory that neoclassical models struggle to accommodate [21]. In contrast, heterodox economic approaches, such as Marxist economics, place emphasis on class structures, historical materialism and power relations. These perspectives can more effectively explain structural inequalities, particularly those that persist despite sustained economic growth.

To address the inadequacies of the dominant neoclassical framework, scholars have called for the incorporation of pluralistic approaches, including Islamic, Marxist, feminist, ecological and institutional economics [22]. In Malaysia's context, Islamic economics holds particular relevance due to the country's majority Muslim population and existing Islamic financial infrastructure. It introduces ethical considerations, prohibition of interest [Riba] and a focus on social justice and wealth

distribution. These principles resonate with national development goals and offer an alternative to the value-neutral stance of neoclassical theory [23]. By focusing on labour exploitation, capital accumulation and the dynamics of class, Marxist economics can provide insights into Malaysia's persistent income inequality and uneven development between urban and rural regions. It enables students to critically examine who benefits from economic growth and how power relations influence resource distribution. Feminist economics challenges the androcentric bias of mainstream economics by highlighting the role of unpaid labour, gendered wage gaps, and caregiving responsibilities [24]. In Malaysia, where women play a vital but often invisible role in both formal and informal economies, this perspective could offer tools for designing inclusive economic policies [15]. These paradigms, when integrated thoughtfully into the curriculum, offer more robust and context-sensitive frameworks for understanding the economic realities of Malaysia. They also promote critical inquiry, encourage debate and reflect the diverse values and experiences of the population. Despite the compelling case for pluralism in economics education, several institutional and pedagogical barriers hinder its implementation in Malaysia. One key challenge is the lack of faculty trained in heterodox approaches. Most instructors have been educated in neoclassical traditions and may be unfamiliar or uncomfortable teaching alternative paradigms [25]. Additionally, there is a shortage of locally produced textbooks and teaching materials that reflect Malaysian realities through multiple theoretical lenses [26]. There is also an ideological inertia within academic institutions, where neoclassical economics is often perceived as the scientific or objective standard. This bias reinforces the marginalisation of alternative perspectives, even when those perspectives offer more explanatory power in local contexts. Reforming the economics curriculum to include pluralistic perspectives is essential for cultivating well-rounded, critically engaged graduates [27,28]. Exposure to diverse economic theories equips students with the analytical tools to tackle complex and evolving challenges such as climate change, gender inequality, food security and financial instability issues that do not lend themselves to simplistic, market-based solutions. Incorporating local perspectives, especially Islamic economics, also ensures cultural relevance and promotes a sense of ownership and connection to national development. Ultimately, a pluralistic curriculum not only enriches academic discourse but also strengthens Malaysia's capacity for inclusive and sustainable economic policymaking.

### **Research Objectives**

The primary aim of this research is to critically assess the dominance of neoclassical economics within Malaysia's economics curriculum and evaluate its alignment with the nation's socio-economic context. Neoclassical economics, characterized by its focus on rational agents,

market efficiency and equilibrium models has been the cornerstone of economic education in Malaysia. While these principles offer valuable analytical tools, they often fall short in addressing the complexities of Malaysia's mixed economy, which is marked by significant government intervention, ethnic-based redistributive policies and regional disparities. This study seeks to quantify the extent to which neoclassical theories dominate academic programs and identify gaps in the curriculum that may neglect Malaysia-specific economic issues, such as income inequality, rural development and the economic integration of diverse ethnic groups. By highlighting these gaps, the research aims to underscore the limitations of a monolithic economic framework in capturing the multifaceted realities of Malaysia's economy. Furthermore, the research will explore the potential benefits of integrating alternative economic paradigms including Islamic, Marxist, feminist, ecological and institutional economics into the curriculum. Islamic economics, with its emphasis on ethical principles and social justice, aligns closely with Malaysia's majority Muslim population and its well-established Islamic financial infrastructure. In contrast, Marxist economics offers a framework for understanding structural inequalities and class dynamics, providing valuable insights into the country's persistent income disparities. Feminist economics highlights the gendered dimensions of economic participation, making it particularly relevant for analysing the roles and contributions of women within both Malaysia's formal and informal economies. Ecological economics addresses pressing environmental challenges and supports the nation's commitment to sustainable development goals. Meanwhile, institutional economics emphasizes the influence of institutions and governance structures on economic outcomes, offering a lens to assess the effectiveness of Malaysia's policy and regulatory frameworks. In addition to evaluating the theoretical underpinnings, this study will examine institutional and pedagogical barriers that may hinder the adoption of a more pluralistic curriculum. Challenges such as faculty training limitations, resource constraints and ideological resistance within academic institutions will be investigated to understand the feasibility of curriculum reform. Ultimately, the study aims to propose actionable strategies for curriculum reform that incorporate diverse economic theories. By broadening the theoretical framework, the goal is to enhance critical thinking among graduates and better equip them to address Malaysia's unique economic challenges. A more inclusive and context-sensitive economics education can foster graduates who are not only analytically proficient but also attuned to the socio-economic intricacies of their own country, thereby contributing more effectively to national development and policymaking.

## LITERATURE REVIEW

### Economics Education in Malaysia

The current economics curriculum in Malaysia remains heavily dominated by neoclassical economics, which shapes students' perceptions through a narrow lens focused on market-centric concepts such as supply and demand, market equilibrium and rational utility-maximising behaviour [29,30]. These foundational principles, while analytically elegant, often abstract from the complex socio-political and historical realities of economies, particularly in mixed-economy contexts like Malaysia. The neoclassical assumption of rational agents operating in perfectly competitive markets under conditions of full information is rarely mirrored in real-world scenarios, leading to an oversimplified understanding of economic processes [31,32]. The exclusion of alternative theoretical approaches such as Marxist, feminist, ecological, or institutional economics from mainstream curricula further limits students' capacity to engage with economic issues critically and contextually [33,34]. Marxist economics offers a structural analysis of class, capital and power highlighting how economic inequality is embedded in the capitalist mode of production and accumulation. In contrast to the neoclassical focus on individual choice and marginal utility, Marxist analysis provides tools to examine Malaysia's persistent income inequality, labour exploitation in export-oriented industries and uneven regional development [35]. By foregrounding the role of ownership, historical materialism and systemic contradictions, Marxist economics situates economic behaviour within broader societal relations something neoclassical models tend to abstract away from.

Similarly, feminist economics challenges the gender-blind nature of neoclassical analysis, drawing attention to unpaid labour, care work and wage disparities issues that are particularly relevant in Malaysia, where gendered divisions of labour persist both in formal and informal sectors [36,37]. Feminist scholars argue that economic models must account for the interdependence of market and non-market activities and the systemic undervaluation of work traditionally done by women, which neoclassical frameworks systematically exclude [38]. This paradigm broadens the notion of economic contribution beyond paid employment, which is crucial for inclusive policy formulation in emerging economies. Institutional economics, by contrast, places emphasis on the role of legal, political and social institutions in shaping economic outcomes. In the Malaysian context, characterized by strong state intervention, ethnic-based affirmative action and unique postcolonial development trajectories, institutional economics can better account for how policy frameworks, bureaucratic structures and governance mechanisms influence economic growth [39,40]. Unlike the historical assumptions of neoclassical theory, institutional economics treats economic development

as a path-dependent process shaped by norms, rules and institutional evolution.

Additionally, ecological economics highlights the limitations of conventional models that treat environmental resources as infinite or external to economic systems. In contrast, ecological economists consider biophysical constraints, intergenerational equity and sustainability as central to any economic analysis [41]. Given Malaysia's environmental vulnerabilities and commitments to sustainability in the context of the SDGs and climate change, such perspectives offer more realistic and future-oriented approaches to policymaking. The lack of exposure to these diverse paradigms in the current Malaysian curriculum not only impedes critical thinking but also risks producing economists who are ill-equipped to address real-world challenges such as inequality, financial instability and climate change [42]. As [43] observed, the overemphasis on neoclassical efficiency and market solutions often leads to policy recommendations that favour capital over labour, inadvertently reinforcing socio-economic disparities. Malaysia's hybrid development model characterized by developmental state practices, affirmative action policies and strategic industrial policies makes it uniquely positioned to benefit from a curriculum that includes development economics, especially postcolonial and heterodox strands. These perspectives stress the importance of structural transformation, public investment and equitable growth elements critical for sustained and inclusive development [44].

### **Dominance of Neoclassical Economics in University Curricula**

The historical development and global influence of neoclassical economics in university curricula can be traced back to the late 19th and early 20th centuries, when economists sought to establish the discipline as a formal science through mathematical modelling and deductive reasoning [45,46]. This paradigm gained further prominence in the mid-20th century, with scholars such as Paul Samuelson formalizing economic principles through calculus-based models, reinforcing the methodological rigor of neoclassical economics in academic settings [47]. As economic thought evolved, the dominance of neoclassical economics in university curricula was further cemented by its alignment with neoliberal policy prescriptions, particularly in the late 20th century, when global institutions like the International Monetary Fund [IMF] and World Bank promoted market liberalization based on neoclassical principles [48,49]. Neoclassical economics is characterized by core principles such as rational choice theory, market equilibrium and efficiency, which have significantly shaped economic education [50]. Rational choice theory posits that individuals act to maximize utility based on preferences and constraints, providing a structured framework for microeconomic analysis [51]. The concept of market equilibrium, as developed in general equilibrium theory, assumes that markets naturally tend toward a stable state where



supply equals demand, ensuring efficient resource allocation [52]. These theoretical foundations have been widely adopted in economics education, offering students a systematic approach to analysing markets, consumer behaviour and firm decision-making [53]. While neoclassical economics provides a strong analytical framework, critics argue that its abstraction and reliance on mathematical formalism often detach it from real-world complexities [54]. The assumption of perfectly rational agents neglects behavioural and psychological factors that influence decision-making, as highlighted by behavioural economists like [55]. Additionally, market efficiency theories struggle to account for economic crises and financial market failures, as demonstrated by the 2008 global financial crisis, which exposed the limitations of equilibrium-based models in predicting systemic risks [56,57]. Furthermore, the reliance on aggregate models often overlooks structural inequalities, labour market frictions and power dynamics that shape economic outcomes [58].

Mainstream textbooks and teaching materials reinforce the dominance of neoclassical economics by presenting it as the standard approach to economic analysis. Widely used textbooks predominantly focus on neoclassical models, with only limited discussion of alternative economic paradigms [30] argues that the standardization of economic education around neoclassical principles has led to intellectual homogeneity, discouraging critical engagement with heterodox approaches such as Marxist, feminist, ecological and institutional economics. Despite these critiques, neoclassical economics offers several advantages in higher education. Its mathematical precision enables students to develop strong quantitative and analytical skills, which are valuable for policy analysis, business strategy and financial modelling [59]. Additionally, the emphasis on market efficiency and optimization provides policymakers with tools to evaluate trade-offs in resource allocation and economic planning [60]. Furthermore, neoclassical models have been instrumental in shaping economic policies that have contributed to economic growth and poverty reduction in various regions [61]. However, the rigid adherence to neoclassical assumptions limits the ability of graduates to engage with complex socio-economic challenges such as climate change, inequality and financial instability [62,63]. In the Malaysian context, the neoclassical framework falls short in capturing the intricacies of the country's mixed economy, which blends market mechanisms with state intervention and ethnic-based redistributive policies [64]. Malaysia's NEP and its successors involve explicit government efforts to reduce income inequality and promote equitable growth across ethnic groups a policy trajectory that neoclassical models struggle to accommodate [65]. Heterodox economic approaches, such as Marxist economics offer insights into class structures and power relations, which are crucial for understanding Malaysia's persistent income disparities and regional development gaps [34]. Similarly, Islamic economics provides an alternative framework that aligns with Malaysia's socio-cultural context, emphasizing ethical

considerations, social justice and wealth distribution [23]. Given these limitations, scholars have called for a pluralistic approach in economics education, advocating for the integration of alternative paradigms alongside neoclassical models [66,67]. Incorporating diverse economic theories into the curriculum can equip students with a broader analytical toolkit, enabling them to critically evaluate economic policies and adapt to evolving global challenges. Addressing institutional and pedagogical barriers such as faculty training limitations and ideological resistance will be essential for implementing such reforms [25]. By embracing pluralism in economics education, universities can cultivate a generation of economists who are not only proficient in technical analysis but also attuned to the socio-economic realities of their own country, thereby enhancing Malaysia's capacity for inclusive and sustainable development.

### **Reassessing Neoclassical Economics in Malaysia**

Neoclassical economics, with its emphasis on rational agents, market equilibrium and efficiency, has long been the dominant framework in higher education worldwide, including in Malaysia [68]. However, several studies have highlighted the inadequacies of this framework when applied to mixed economies like Malaysia, where state intervention, ethnic-based affirmative action policies and significant regional disparities complicate economic analysis. The traditional neoclassical paradigm, which assumes market efficiency and rational decision-making, struggles to address these complexities, often resulting in analyses that are detached from real-world socioeconomic realities. In Malaysia, the economy operates under a hybrid model that blends capitalist market dynamics with significant government intervention, particularly in the form of affirmative action policies aimed at reducing ethnic-based economic disparities. Malaysia's NEP, launched in 1971, aimed to reduce poverty and address income inequality between ethnic groups, a goal that neoclassical economics struggles to incorporate due to its focus on individualistic, market-centric solutions [13,19]. Neoclassical economics, with its emphasis on market efficiency and equilibrium does not sufficiently account for the role of the state in redistributing resources or promoting social justice. As a result, it falls short of explaining how policies such as the NEP, which involve targeted interventions and resource redistribution based on ethnicity, contribute to broader economic outcomes. The exclusion of socio-political, historical and institutional contexts from economic analysis is a major critique of neoclassical economics. Mainstream economic theories, by prioritizing abstract models of market equilibrium, often overlook the impact of historical legacies, institutional structures and political dynamics that shape economic behaviour in diverse contexts. In the Malaysian context, the country's pluralistic society, with its complex interplay of ethnic, cultural and economic factors, requires a more nuanced analytical approach. Neoclassical economics, with its reliance on simplified assumptions of market equilibrium, is ill-equipped to deal with the legacy

of colonialism, the ethnic-based redistribution of wealth, or the political considerations that underpin policies like the NEP. This lack of attention to context-specific variables means that neoclassical models fail to capture important dimensions of Malaysia's socio-economic reality, resulting in policies that may not be effective in addressing the root causes of inequality [49].

Furthermore, Malaysia's regional disparities present another challenge for neoclassical economics. While the neoclassical model assumes the efficient allocation of resources in an economy, Malaysia's significant regional differences especially between urban and rural areas are not adequately addressed by this framework. Regions such as West Malaysia experience rapid growth and industrialization, while other areas in East Malaysia continue to lag behind economically. The neoclassical model, with its focus on national-level economic performance and aggregate variables like GDP, often fails to recognize the unequal distribution of wealth and opportunities across different regions. In contrast, more contextually sensitive frameworks, such as institutional or ecological economics can provide deeper insights into the spatial distribution of wealth and opportunities, offering more targeted recommendations for policy [69]. A further limitation of the neoclassical approach in Malaysia is its neglect of the role of social and institutional factors in shaping economic outcomes. Neoclassical economics largely ignores the influence of institutions such as government policies, cultural practices, and social norms on economic behaviour. In Malaysia, government intervention through policies like the NEP and the subsequent National Development Policy (NDP) has been critical in shaping economic outcomes, particularly in promoting equity among different ethnic groups. Neoclassical economics, by focusing on individual choices and market mechanisms, overlooks the significance of these institutional interventions in influencing economic outcomes [70]. The lack of a co success, underpinned by a strong focus on human capital development and market efficiency, contrasts with Malaysia's emphasis on socio-economic equity through redistributive policies. However, even in Singapore, institutional economics plays a significant role in understanding the state's involvement in strategic sectors like housing and finance [71]. This comparative analysis underscores the importance of adopting a pluralistic approach to economic education that recognizes the diverse ways in which mixed economies function and evolve.

To address these limitations, comprehensive institutional framework within neoclassical models limits their ability to explain how such policies have affected the country's long-term economic development. Comparing Malaysia's economic experience with that of other mixed economies also highlights the shortcomings of the neoclassical paradigm. In contrast to Malaysia's focus on affirmative action and state intervention, countries such as Singapore have relied more heavily on market-driven policies, albeit within a highly regulated environment. Singapore's

economic scholars have called for the incorporation of alternative economic paradigms that are better suited to understanding the complexities of Malaysia's hybrid economy. Approaches such as institutional economics, Marxist economics and ecological economics provide more robust frameworks for analysing Malaysia's socio-economic conditions. These paradigms offer critical perspectives on how power dynamics, institutional structures and environmental factors shape economic outcomes. Incorporating these perspectives into the curriculum could provide students with a more comprehensive understanding of Malaysia's economic challenges, including issues of inequality, sustainable development and regional disparities [54]. Moreover, there are institutional and pedagogical barriers that hinder the integration of pluralistic approaches into the Malaysian economics curriculum. A significant challenge is the lack of faculty trained in heterodox economics, as most instructors are educated in the neoclassical tradition and may lack familiarity with alternative paradigms [25]. Additionally, the lack of locally relevant teaching materials that reflect Malaysia's unique socio-economic realities further compounds this issue [26]. To overcome these challenges, policymakers and academic institutions must invest in faculty development programs, update curricula and encourage the development of locally produced textbooks that reflect the diversity of economic thought and the specific challenges faced by Malaysia. Ultimately, reforming the economics curriculum to include pluralistic perspectives is essential for cultivating well-rounded graduates who are equipped to address Malaysia's complex economic realities. By integrating alternative economic paradigms, the curriculum can promote critical thinking, encourage students to question the status quo and better prepare them to contribute to the formulation of inclusive and sustainable economic policies. A pluralistic curriculum not only enriches academic discourse but also ensures that Malaysia's future policymakers and business leaders have the tools to navigate and address the socio-economic challenges that shape the nation's development.

### **Alternative Economic Paradigms Relevant to Malaysia**

Islamic economics, rooted in ethical foundations, emphasizes social justice, risk-sharing and the prohibition of Riba [interest], making it particularly relevant to Malaysia's economic and cultural landscape. Given Malaysia's significant Islamic financial infrastructure, Islamic economics provides an alternative to the value-neutral stance of neoclassical models by integrating moral and ethical considerations into economic transactions [72]. Recent scholarship highlights how Islamic financial principles contribute to financial stability, particularly in times of economic crises, by discouraging excessive speculation and ensuring risk-sharing [73]. The growth of Islamic finance in Malaysia, including sukuk [Islamic bonds] and Sharia-compliant banking, demonstrates the practical applicability of this paradigm [74]. However, challenges remain

in fully integrating Islamic economics into mainstream education, as many economics faculties predominantly focus on conventional financial systems [75]. Marxist economics, with its emphasis on class struggle, power dynamics and capital accumulation, provides a critical lens through which to analyse Malaysia's persistent income inequality and uneven regional development. The historical materialist approach of Marxist economics highlights how capital accumulation benefits specific social classes while marginalizing others, a phenomenon evident in Malaysia's urban-rural divide and persistent wealth concentration among certain economic elites [76]. Scholars have pointed out that Malaysia's economic policies, including affirmative action programs such as the NEP, have had mixed success in addressing these disparities [65]. The structural critique offered by Marxist economics allows for a deeper understanding of why economic inequalities persist despite sustained economic growth [77]. However, the ideological resistance to Marxist thought in mainstream economic curricula has hindered its widespread acceptance in Malaysia [78].

Feminist economics challenges the androcentric biases of traditional economic models by highlighting the role of unpaid labour, caregiving and gender disparities in wages and economic opportunities. In Malaysia, where women play a vital but often overlooked role in both formal and informal economies, feminist economic perspectives offer tools for designing more inclusive policies [36]. Studies have shown that gendered economic inequalities in Malaysia stem from structural barriers such as wage gaps, limited access to leadership positions and the undervaluation of reproductive labour [79]. Moreover, recent research suggests that integrating gender perspectives into economic policymaking leads to more equitable and sustainable outcomes [80]. Despite this, feminist economics remains underrepresented in Malaysia's economic curriculum, reflecting broader global trends in the marginalization of gender-focused economic analysis [81]. Ecological economics provides a crucial framework for addressing sustainability, resource constraints and climate change issues that are highly relevant to Malaysia's development agenda. Traditional economic models often fail to account for environmental externalities, whereas ecological economics explicitly recognizes the interdependence between economic activities and ecological systems [82]. Malaysia's rapid industrialization and deforestation have led to environmental degradation, making it imperative to incorporate ecological principles into economic planning [83]. The ecological economics approach advocates for policies such as carbon pricing, sustainable resource management, and a transition to a circular economy [84]. Recent policy shifts, including Malaysia's commitments to reducing carbon emissions and promoting green technology, reflect a growing recognition of ecological concerns in economic planning [85]. However, the integration of ecological economics into the mainstream curriculum remains limited, as traditional economics still prioritizes growth-centric models over sustainability [86].

Institutional economics, which examines the role of governance structures, historical institutions and policy frameworks in shaping economic outcomes, provides valuable insights into Malaysia's economic development. Institutional theorists argue that economic performance is deeply influenced by the quality of institutions, including property rights, regulatory frameworks and legal systems [39]. In Malaysia, the state's role in directing economic development through industrial policies, government-linked companies (GLCs), and affirmative action programs highlights the importance of institutional dynamics [49]. Studies have shown that Malaysia's success in attracting foreign direct investment (FDI) and fostering economic growth is partly due to its stable political institutions and proactive economic policies [60]. However, concerns over governance inefficiencies, corruption and policy inconsistencies have also been raised as challenges to long-term economic stability [87]. Recent scholarship has emphasized the need for institutional reforms to enhance transparency and accountability in Malaysia's economic governance. The integration of these alternative economic paradigms into Malaysia's economics curriculum is essential for fostering a more comprehensive and context-sensitive understanding of the nation's economic challenges. While neoclassical economics provides valuable analytical tools, its limitations necessitate a broader, pluralistic approach that incorporates diverse perspectives such as Islamic, Marxist, feminist, ecological and institutional economics. By exposing students to multiple frameworks, economics education can cultivate critical thinking skills, encourage intellectual debate and equip future policymakers with the tools needed to address Malaysia's unique socio-economic complexities. Despite institutional and ideological barriers, a pluralistic curriculum would not only enrich academic discourse but also contribute to more informed and inclusive economic policymaking in Malaysia [66].

### **Challenges in Implementing a Pluralistic Economics Curriculum**

Despite the compelling arguments for pluralism in economics education, several significant challenges hinder its widespread adoption, particularly in countries like Malaysia. One of the primary obstacles is faculty training and ideological barriers. The majority of economics faculty members, especially in developing economies like Malaysia have been trained within the neoclassical tradition. This training is often reinforced by educational systems and institutions that emphasize the scientific rigor of neoclassical methods, which are perceived as objective and universally applicable [25]. As a result, these instructors may lack familiarity with or have limited exposure to alternative economic paradigms. A study by [88] found that economics faculty at several universities in the US overwhelmingly identified with neoclassical economics, and similar trends have been reported in Malaysian institutions [19]. This situation presents a significant barrier to implementing pluralistic approaches, as instructors are unlikely to teach

what they have not been trained to understand thoroughly. Furthermore, the availability of textbooks and educational resources is another critical challenge. A lack of comprehensive heterodox textbooks and case studies tailored to local contexts exacerbates the difficulties in adopting alternative economic frameworks in the classroom. While Western textbooks remain the standard in economics departments globally, they often fail to incorporate perspectives from Islamic economics, Marxist theory or other heterodox schools which are highly relevant to Malaysia's unique socio-economic conditions [26]. As a result, students are predominantly exposed to neoclassical thought, which can create a mismatch between the education they receive and the challenges they will face in their professional careers. In contrast, countries like Germany, France, Netherlands have made strides in publishing and distributing more pluralistic and locally relevant economic texts that are inclusive of diverse economic schools of thought [89]. Such an approach could serve as a model for Malaysia, where the integration of locally relevant materials remains underdeveloped.

Institutional resistance is perhaps the most formidable barrier to the successful implementation of a pluralistic curriculum. In Malaysia, as in many other countries, mainstream economic departments often resist the inclusion of heterodox economic theories because of an ingrained belief in the superiority of neoclassical economics. This resistance is often tied to the notion of scientific objectivity that has dominated academic economic thought for decades [34]. As neoclassical economics is entrenched within academic institutions, it is difficult for alternative paradigms to gain traction. Faculty members may view these alternative approaches as less rigorous or less applicable to the real world. This ideological resistance to pluralism has also been observed globally, particularly in the US and Europe, where heterodox economics has struggled to gain institutional legitimacy. However, efforts by institutions such as the University of Sydney and School of Oriental and African Studies (SOAS) in London demonstrate that with concerted effort, pluralism can be successfully incorporated into the curriculum despite institutional inertia [67]. These instances highlight that while resistance exists, it is not insurmountable and concerted institutional reform can shift the academic focus toward a more inclusive economics education. Policy recommendations to address these challenges should prioritize faculty training, ensuring that educators are not only proficient in neoclassical economics but also well-versed in alternative paradigms relevant to Malaysia's socio-economic context. This can be achieved through workshops, seminars and postgraduate courses designed to expose faculty members to heterodox economic theories. Textbook development must be a collaborative effort between local scholars, government agencies and international experts to create educational materials that reflect Malaysia's unique economic landscape, incorporating Islamic economics, Marxist theory, feminist economics and ecological economics. A shift toward locally relevant case studies would

also support the application of these diverse theories to real-world situations. A shift in institutional attitudes toward pluralism is necessary. This could be facilitated through changes in academic policy, including the recognition and support of alternative research approaches in university funding models and academic promotions. Institutional change can also be fostered by including pluralism in accreditation standards, as seen in other countries that have successfully integrated pluralistic curricula.

Globally, many countries have made remarkable progress in embracing pluralism in economics education by incorporating both Marxist and Islamic economics into its undergraduate and postgraduate curricula to offer students a broader range of perspectives [90]. Similarly, the University of Sydney's economics department has successfully integrated ecological economics into its courses, emphasizing sustainability and environmental economics an increasingly critical aspect in the context of global challenges like climate change [91]. Malaysia, by following such international precedents, can not only broaden the scope of its economics education but also better equip its future policymakers, economists and business leaders to address the country's unique socio-economic challenges. While challenges such as faculty training, resource constraints and institutional resistance remain significant, they are not insurmountable. By learning from global best practices and adopting targeted reforms, Malaysia can move toward a more pluralistic and inclusive economics curriculum that better aligns with its socio-economic reality and prepares its students to tackle contemporary global issues. As such, the transition to a pluralistic curriculum is not only a necessary academic shift but also a strategic step toward building a more informed, critical and capable workforce that can contribute meaningfully to Malaysia's sustainable development.

### **The Need for Curriculum Reform in Malaysia**

The need for curriculum reform in Malaysia's economics education has become more pressing as the limitations of the neoclassical economics framework continue to surface. As highlighted in earlier sections, the dominance of neoclassical economics in Malaysian higher education does not adequately address the country's unique socio-economic challenges, such as state intervention, ethnic-based affirmative policies and regional disparities [13,19]. Neoclassical economics, with its focus on market equilibrium and rational choice, provides useful analytical tools but it often overlooks the complexities inherent in Malaysia's mixed economy, such as government policies designed to address social justice and inequality. This detachment from real-world issues such as unequal development and the need for inclusive growth, demands a curriculum that incorporates alternative economic paradigms [35]. A pluralistic approach, which includes Islamic economics, Marxist economics, feminist economics, ecological economics and institutional economics, would provide students with a more comprehensive understanding of the



economy and its socio-political dimensions. Recent policy discussions, such as the Malaysian Education Blueprint (2015–2025), have called for greater flexibility in curricula and the inclusion of diverse perspectives in economics education [92]. However, the shift towards pluralism has been slow due to institutional inertia, ideological barriers and the entrenched dominance of the neoclassical framework in both academic departments and textbooks [26,34]. Despite these challenges, there is growing recognition that a curriculum cantered solely on neoclassical economics fails to prepare students to tackle pressing global and national issues, including income inequality, environmental sustainability and the integration of marginalized groups into the economy [54].

To overcome these barriers, a multi-pronged approach is required. One strategy is the development of faculty training programs to equip instructors with the knowledge and tools necessary to teach heterodox economic theories [25]. This would help address the lack of exposure to alternative paradigms and allow educators to adopt a more inclusive teaching methodology. Additionally, creating textbooks and case studies that reflect Malaysia's unique socio-economic context is essential. These materials should highlight the challenges of implementing policies in a mixed economy and provide students with a more practical, locally relevant understanding of economic theory [26]. Furthermore, collaborations with international institutions which have successfully integrated pluralism in their economics curricula, could serve as valuable models for Malaysia to follow in adapting its own educational frameworks. Fostering an academic culture that encourages critical inquiry and challenges the perceived scientific rigor of the neoclassical model would help open space for more diverse and inclusive economic thought [34]. The reform of Malaysia's economics curriculum to embrace pluralism is not merely an academic exercise, but a critical step toward equipping future leaders and policymakers with the skills necessary to navigate the country's complex economic and social landscape. By incorporating a wider range of economic perspectives, students will gain a deeper understanding of the nuances of real-world economic issues and be better prepared to contribute to Malaysia's growth and development in a sustainable and equitable manner. This curriculum shift is essential for fostering a new generation of economists who are not only analytically proficient but also attuned to the socio-economic challenges and opportunities of both Malaysia and the broader global economy.

## METHODOLOGY

The research utilizes a qualitative approach, ideal for exploring the nuanced issues of economics education and capturing the diverse perspectives of stakeholders [93]. This method allows for an in-depth examination of how different economic paradigms are perceived and integrated into the curriculum, which might be overlooked in quantitative studies [94]. Semi-structured interviews are the primary data collection

method, chosen for their flexibility in probing deeper into specific areas as they arise [95]. Interviews with educators focus on their views of neoclassical dominance, integration of alternative paradigms and the balance between theoretical and practical teaching. Student interviews explore experiences with the current curriculum, exposure to various economic theories and opinions on curriculum diversity. Curriculum developers are interviewed to understand the challenges of creating a balanced curriculum, criteria for including economic theories and responses to critiques of the neoclassical focus. Industry experts were interviewed to understand their expectations of economics graduates and the relevance of current academic training to real-world economic challenges. National accreditation bodies were interviewed to explore their role in shaping curriculum standards and ensuring academic quality in economics education. Interviews were conducted in person, via video conferencing, or by phone based on participant preferences [96]. The semi-structured format allows participants to express their experiences in their own words while ensuring key topics are covered. Thematic analysis will be used to identify, analyse and report patterns within the data [97]. This involves transcribing interviews, coding data, collating codes into themes and refining these themes to generate a coherent narrative. Interview questions were designed to align with research objectives and elicited detailed responses. For educators, questions focused on curriculum theory, practical application and alternative paradigms [98]. Students were asked about their experiences and understanding of diverse theories [99], while curriculum developers addressed challenges and relevance [100]. For curriculum developers and others, questions should focus on curriculum theory, practical application and alternative paradigms. The questions were piloted to ensure clarity and relevance. This qualitative approach with thematic analysis aims to provide a comprehensive understanding of integrating pluralistic approaches into economics education.

### **Sampling**

The study engaged 20 participants from diverse backgrounds to provide a comprehensive perspective on the economics curriculum. The cohort included five educators [E1–E5], ranging from associate professors specializing in development and environmental economics to a professor emeritus with extensive experience in international trade. Five students [S1–S5] participated, including PhD candidates focusing on international and digital economies, as well as undergraduate and master's students exploring behavioural economics and economic history. The curriculum development sector was represented by five professionals [C1–C5], such as senior curriculum developers and educational technologists, emphasizing the integration of diverse economic paradigms and digital tools into education. Additionally, five policymakers and industry professionals [P1–P5] contributed insights, including policy analysts from the Ministry of

Education, economists from leading think tanks and representatives from accreditation bodies and the financial sector, focusing on aligning educational outcomes with industry and policy expectations. This study used convenience sampling to select participants, focusing on practicality and alignment with study objectives. A final sample of 20 respondents, from various fields was chosen based on their availability, willingness and professional experience [101]. This criterion ensured that participants had the depth of knowledge needed to provide valuable insights. Interviews were conducted using open-ended, semi-structured questions, allowing for in-depth exploration of participants' thoughts while covering core topics consistently. Interviews were held in person, capturing both verbal responses and non-verbal cues, enhancing the context and depth of the data. Each interview lasted 60 minutes to 90 minutes, ensuring thorough exploration of topics at a comfortable pace for participants. With their consent, interviews were audio-recorded to ensure accuracy, allowing the researcher to focus on the conversation without extensive notetaking.

### **Pilot Study**

To gain a deeper understanding of the perspectives surrounding pluralistic approaches in economics education and to establish a foundation for developing robust interview guidelines for the main study, a pilot interview was conducted with five participants [102]. These participants were selected based on their involvement in economics education, as educators, curriculum developers and student with advanced knowledge of economics. Recruitment was done through academic and professional networks, including referrals from colleagues and academic mailing lists. All pilot participants had experience in teaching, learning or developing curricula for economics education in the past three years. They also represented a variety of stakeholder roles within the educational ecosystem, such as faculty members, graduate students and curriculum specialists. Among the five participants, four had formal training in economics and were actively engaged in discussions around curriculum design or reform. The goal of this pilot study was to explore key themes, challenges and opportunities related to integrating pluralism economics into current teaching practices. Each pilot interview lasted between 60 to 90 min and was conducted either face-to-face or via virtual platforms. Feedback from the pilot interviews was instrumental in refining the formal study's interview protocol. Based on participant suggestions, the sequencing of key questions was adjusted to allow for a more natural flow of conversation and to include specific prompts addressing participants' exposure to lesser-known economic paradigms. In preparation for the full study, questions about participants' experiences with curriculum reform processes and teaching methodologies were also integrated, enabling a better understanding of the dynamics and tensions involved in transitioning towards a more pluralistic economics education. The pilot study confirmed the relevance and depth of this research topic as it highlighted the necessity of nuanced questioning to

uncover not only individual perspectives but also the institutional and cultural factors that shape economics education [103]. These insights laid the groundwork for the formal data collection and thematic analysis phases of the study.

### Formal Study

The formal study was designed to systematically explore the perspectives of key stakeholders' educators, students, curriculum developers, policy influencers and industry professionals on the adoption and integration of pluralistic approaches in economics education [104]. Particular attention was paid to participants' theoretical leanings, teaching experiences, curriculum design strategies and perceived barriers or enablers in embedding diverse economic paradigms into institutional contexts. For participants with experience in curriculum development or policymaking, we explored additional dimensions related to educational design standards, institutional accreditation and interdisciplinary teaching strategies. Students were asked about how well the current curriculum resonated with real-world issues, while educators were asked how their teaching aligns with or diverges from canonical economic frameworks. The qualitative data obtained through interviews were analysed thematically, following Braun and Clarke's six-phase method [105]. Codes were first generated inductively and then organized under overarching themes [106] such as Curricular Rigidity, Theoretical Diversity, Institutional Resistance, Student Demand for Relevance and Innovative Teaching Strategies. Each theme was then mapped to the study's research questions to ensure coherence [107]. Throughout the process, the research team engaged in multiple rounds of coding calibration to enhance reliability. NVivo software was employed to support coding organization and visualization of thematic patterns [108]. Attention was also paid to inter-participant variation, particularly across stakeholder types and regions. Participants with curriculum design experience were further consulted during a secondary round of interviews to reflect on and validate emerging findings. These follow-up discussions helped to refine the interpretations and confirm the credibility of the identified themes.

The demographic variables in Table 1 reflect a diverse and well-balanced group of participants representing various roles, levels of experience, and areas of expertise within the field of economics education. The participants include educators (E1–E5), students (S1–S5), curriculum developers (C1–C5), and policymakers or industry professionals (P1–P5). Their professional backgrounds range from early-career students to senior academics and experienced policymakers, ensuring a broad spectrum of insights. Specializations span across key areas such as development economics, environmental economics, macroeconomics, public policy, educational technology, and curriculum design. This diversity provides a rich foundation for understanding economics education from multiple perspectives academic, pedagogical, practical and policy-related thereby enhancing the depth and relevance of the study. Table 2 highlights participant

demographics reflect a diverse group including educators, students, curriculum developers, policymakers, and industry professionals. Participants vary in age, gender, and qualifications, offering a wide range of perspectives from pluralist, ecological and digital-focused to policy-driven and competency-based approaches. Their contributions are shaped by regional contexts and cultural influences, enriching the study with insights into the current and future directions of economics education.

**Table 1.** Participant breakdown and background.

Participant Code	Background and Details
E1	Associate professor with expertise in development economics and social policy, emphasizes alternative economic paradigms.
E2	Senior economics professor with 15+ years of experience, specializing in microeconomics and public policy. Focuses on real-world case studies.
E3	Lecturer in macroeconomics with a research focus on emerging markets and economic resilience.
E4	Assistant professor specializing in environmental economics, integrating ecological perspectives into economic analysis.
E5	Professor emeritus with extensive experience in international trade and economic development.
S1	PhD student in economics focusing on international economics, actively engaged in research projects on economic policy and its impact on social issues.
S2	Graduate student in economics examining the role of economic theory in real-world decision-making, involved in student organizations.
S3	Master's student researching behavioural economics and its applications in consumer behaviour.
S4	Doctoral candidate exploring the intersection of economics and technology, particularly the digital economy.
S5	Undergraduate honours student with a keen interest in economic history and its implications for modern policy.
C1	Senior curriculum developer with over 10 years of experience in designing economics curricula, focusing on integrating diverse economic paradigms.
C2	Specialist in educational technology, working to incorporate digital tools into economics education. Experienced in developing interdisciplinary curricula.
C3	Curriculum consultant with a background in sociology, aiming to embed social context into economic education.
C4	Instructional designer focusing on competency-based education in economics.
C5	Educational researcher analysing the effectiveness of current economics curricula in secondary and tertiary education.
P1	Policy analyst from the Ministry of Education, involved in shaping national education strategies related to economics.
P2	Economist at a leading think tank, contributing to policy papers on economic reform and education.
P3	Representative from an economic education NGO, advocating for inclusive and diverse economic curricula.
P4	Industry professional from the financial sector, providing insights on the skills and knowledge required for economics graduates.
P5	Member of a national accreditation body, overseeing the standards and quality of economics programs across educational institutions.

Source: Compiled by the author from interviews conducted during the research study.

**Table 2.** Participant profile matrix.

Code	Gender	Age	Qualification	Occupation	Region	Stakeholder Role	Perspective on Economics Education	Research Focus/Specialization	Method of Participation	Cultural/Regional Influence	Unique Contribution
E1	Female	45	PhD	Associate Professor	Asia	Educator	Pluralist—emphasizes alternatives to neoclassical economics	Alternative economic paradigms	Face-to-Face	Southeast Asian context	Advocated for integrating diverse economic schools into teaching
E2	Male	50	PhD	Senior Professor	Asia	Educator	Pragmatic—supports applied, real-world economics	Microeconomics & Public Policy	Zoom	Southeast Asia, highly policy-driven	Provided detailed examples of microeconomics in real-world policy
E3	Male	38	PhD	Lecturer	Asia	Educator	Resilience-focused—macro lens on development	Economic resilience & emerging markets	Face-to-Face	Emerging economies in Asia	Highlighted need for context-driven macroeconomic education
E4	Female	35	PhD	Assistant Professor	Asia	Educator	Ecological—integration of sustainability and environment	Environmental economics	Zoom	Southeast Asian context, focus on sustainability	Emphasized environmental economics as core to future curriculum
E5	Male	68	PhD	Professor Emeritus	Asia	Educator	Traditionalist with reformist leanings	History of economic thought	Face-to-Face	Legacy of traditional economics in Asia	Reflected on historical evolution and future needs in economics education
S1	Female	28	MPhil [PhD in progress]	PhD Student	Asia	Student	Policy-oriented—links research to social outcomes	International economics, social policy	Zoom	Asian and European policy influence	Shared research on trade and policy affecting communities
S2	Male	26	MSc	Graduate Student	Asia	Student	Critical—questions theory-practice gap	Economic theory vs. real-world decision making	Zoom	Southeast Asia, global policy influence	Raised concerns about outdated theoretical models in teaching
S3	Female	25	MA	Master's Student	Asia	Student	Behavioural-student of real-world decision-making	Behavioural economics and consumer behaviour	Face-to-Face	Southeast Asia, focus on consumer psychology	Shared views on how behaviour economics is missing in mainstream curriculum
S4	Male	29	PhD [ongoing]	Doctoral Candidate	Asia	Student	Tech-forward—explores economics and digital transitions	Digital economy and tech in economics	Face-to-Face	Southeast Asia, technology-centric	Highlighted gaps in teaching digital economy and technology
S5	Female	22	BA [Hons]	Undergraduate Student	Asia	Student	Historical-critical—draws on past to question present	Economic history and inequality	Zoom	Southeast Asia, focus on historical context	Connected economic history to inequality debates in modern education
C1	Female	42	MA	Senior Curriculum Developer	Asia	Educator	Integrative—advocates for pluralism in curricula	Designing diverse curricula	Face-to-Face	Southeast Asia, focus on interdisciplinary teaching	Worked on integrating alternative economic paradigms into curricula

**Table 2.** *Cont.*

Code	Gender	Age	Qualification	Occupation	Region	Stakeholder Role	Perspective on Economics Education	Research Focus/Specialization	Method of Participation	Cultural/Regional Influence	Unique Contribution
C2	Male	40	MSc	Educational Technologist	Asia	Curriculum Developer	Digital-centric-focuses on technology integration in education	Digital tools in economics education	Zoom	Southeast Asia, digital-first mindset	Shared insights on leveraging digital platforms for economics education
C3	Female	45	MSc	Curriculum Consultant	Asia	Educator	Social-contextual—aims to bring socio-political dynamics into economics teaching	Integrating social context into economics	Face-to-Face	Southeast Asia, socio-political focus	Advocated for integrating socio-economic factors into curriculum
C4	Male	38	MA	Instructional Designer	Asia	Educator	Competency-focused—builds curricula based on skill development	Competency-based economics education	Zoom	Southeast Asia, focus on skills training	Promoted competency-based approaches to economic education
C5	Female	34	PhD	Educational Researcher	Asia	Researcher	Effectiveness-focused—evaluates curricula impact on student outcomes	Impact of economics curricula	Zoom	Southeast Asia, focus on assessment	Provided evidence-based feedback on curriculum effectiveness
P1	Male	48	MA	Policy Analyst	Asia	Policy Maker	Systemic—focused on policy reform and integration of modern economics	National education strategies	Face-to-Face	Southeast Asia, policy-driven	Contributed insights into national policy shaping education strategies
P2	Female	43	MSc	Economist	Europe	Policy Analyst	Research-driven—advocates for policy reforms in education	Economic policy analysis	Zoom	European perspective, policy-driven	Contributed to policy papers on reforming economics education
P3	Male	39	MSc	NGO Representative	Asia	NGO	Inclusive—advocates for broad, inclusive curricula for diverse societies	Education advocacy in economics	Zoom	Southeast Asia, inclusive focus	Promoted inclusive and diverse economics education at the grassroots level
P4	Female	50	MA	Industry Professional	Asia	Industry Expert	Industry-oriented—bridges academia and practice	Skills for economics graduates	Face-to-Face	Southeast Asia, focus on practical skills	Emphasized skills needed in the financial sector
P5	Male	56	MA	Accreditation Specialist	Asia	Regulator	Standards-focused—ensures high-quality educational standards	Quality control in education	Zoom	Southeast Asia, regulatory focus	Focused on maintaining high standards in economics education

## ANALYSIS

### Toward a Pluralistic and Contextual Economics Curriculum

Interviews with educators [E], students [S], curriculum developers [C], and policymakers [P] revealed five interrelated themes that align with critiques in the literature on economics education in Malaysia. These themes highlight the dominance of neoclassical thought, marginalisation of alternative paradigms, lack of contextual relevance, structural barriers to pluralism and the call for curriculum reform. Participant narratives offer direct insight into these dynamics. Participants consistently noted that economic teaching in Malaysia centres on market-based models, rational behaviour and efficiency principles. This focus on neoclassical economics, while theoretically elegant, often fails to capture the socio-economic complexities of the Malaysian economy. E1 observed, *'We teach them about supply and demand, equilibrium, marginal utility... but these concepts are idealised. In reality, markets here are influenced by politics, ethnicity, and historical legacies.'* Similarly, S1 remarked, *'We rarely discuss how poverty is created or why inequality persists. We only analyse it as numbers, not as a social issue.'* These critiques echo the arguments that neoclassical economics presents an abstract and overly simplified model of human behaviour [29,32]. A recurring theme in the interviews was the marginalisation of alternative paradigms in the curriculum. Many participants highlighted the lack of exposure to critical schools of thought, such as Marxist, feminist, institutional and ecological economics. C1 noted, *'We avoid Marxist ideas due to sensitivity. But how do we expect students to critique capitalism without that lens?'* S2 added, *'I only learned about feminist economics when I took a sociology elective. Why isn't this part of the economics syllabus?'* Similarly, E2 observed, *'Ecological concerns are treated as externalities rather than central to economic analysis.'* These sentiments align with critiques of economics education that call for a more inclusive approach, one that incorporates diverse paradigms to reflect real-world challenges and promote social equity [36,37]. The interviews also revealed concerns regarding the lack of contextual relevance in the curriculum, particularly when it comes to Malaysian socio-economic and institutional realities. Participants voiced their concerns that the curriculum often presents a universalised model of capitalism, disregarding Malaysia's specific development trajectory. P1 remarked, *'Our students are taught about perfectly competitive markets, but how does that relate to a country like Malaysia with affirmative action policies and a strong state presence?'* E3 explained, *'The role of the state, postcolonial institutions, and ethnic dynamics, these are not discussed, but they are central to Malaysia's development.'* These comments reflect the need for an institutional economics lens to better understand development processes in a context like Malaysia [39]. Furthermore, institutional and structural barriers to pluralism were identified as significant challenges. Several participants



highlighted constraints within the education system that hinder curriculum diversification. E4 shared, *'Even if I want to introduce feminist or institutional economics, students get confused because the exam only tests neoclassical theory.'* C2 stated, *'There is pressure to stick to the textbook because that's how performance is measured.'* S3 echoed this sentiment: *'We're told economics is scientific and objective, but it never considers values, ethics, or who benefits from policies.'* These insights are consistent with concerns that economics education often reinforces policies favouring capital and efficiency over equity and labour rights [43]. There was also a broad consensus on the need for curriculum reform and pedagogical innovation. Across the interviews, participants advocated for an approach that integrates real-world relevance and theoretical pluralism. E5 proposed, *'Use local case studies. Let students simulate what happens when subsidies are removed or when environmental policies change.'* P2 added, *'Malaysia needs economists who understand inequality, environment and structural change not just marginal utility curves.'* Students, too, expressed a desire for a curriculum that is both relevant and transformative. S4 said, *'We want to learn economics that matters not just theory, but something that helps us understand our own country better.'* These aspirations align with the arguments of scholars who advocate for an economics education that prepares students to tackle contemporary global and national challenges, including inequality, financial instability and environmental degradation [42,54]. The thematic analysis reveals significant dissatisfaction with the current economics curriculum in Malaysia. Participants collectively called for a more pluralistic, context-sensitive and practically oriented approach to economics education. Their voices reinforce what many scholars have long argued that an economics curriculum must reflect both theoretical diversity and real-world relevance to prepare students to critically engage with the complex socio-economic challenges of our time.

Table 3 presents key stakeholder perspectives on the current challenges within the economics education curriculum. The themes highlight the dominance of neoclassical economics, the marginalisation of alternative paradigms such as Marxist, feminist, and ecological economics, the lack of contextual relevance to Malaysia's socio-political realities, and institutional barriers like exam-centric teaching and textbook dependency. These insights reveal concerns that the curriculum is overly theoretical, disconnected from real-world issues, and resistant to pluralistic and locally relevant approaches.

**Table 3.** Stakeholder perspectives on challenges in economics education curriculum.

Themes	Sub-Themes	Description	Participant Quotes	Literature
Neoclassical Dominance	Market-based Models & Rational Behaviour	Focus on market-based models, rational behaviour, and efficiency principles, which often oversimplify the socio-economic realities.	‘We teach them about supply and demand, equilibrium, marginal utility... but these concepts are idealised. In reality, markets here are influenced by politics, ethnicity, and historical legacies.’ [E1]	[29,67]
	Simplification of Poverty & Inequality	Economics teaching often reduces complex issues like poverty and inequality to mere numbers, neglecting the social aspects.	‘We rarely discuss how poverty is created or why inequality persists. We only analyse it as numbers, not as a social issue.’ [S1]	[29,67]
Marginalisation of Alternative Paradigms	Exclusion of Critical Theories	Limited exposure to Marxist, feminist, institutional, and ecological economics.	‘We avoid Marxist ideas due to sensitivity. But how do we expect students to critique capitalism without that lens?’ [C1]	[36,37,82]
	Lack of Feminist Economics	Feminist economics is not integrated into the curriculum despite its relevance.	‘I only learned about feminist economics when I took a sociology elective. Why isn’t this part of the economics syllabus?’ [S2]	[36,37]
	Neglect of Ecological Concerns	Ecological economics is treated as peripheral, with environmental issues not central to economic analysis.	‘Ecological concerns are treated as externalities rather than central to economic analysis.’ [E2]	[37,82]
Lack of Contextual Relevance	Universalized Capitalism Model	The curriculum often presents a universal model of capitalism that disregards Malaysia’s specific socio-political and institutional realities.	‘Our students are taught about perfectly competitive markets, but how does that relate to a country like Malaysia with affirmative action policies and a strong state presence?’ [P1]	[39,40,64]
	Exclusion of Postcolonial & Ethnic Dynamics	The curriculum fails to address the role of the state, postcolonial institutions, and ethnic dynamics in Malaysia’s development.	‘The role of the state, postcolonial institutions, and ethnic dynamics these are not discussed, but they are central to Malaysia’s development.’ [E3]	[39,40,64]
Institutional & Structural Barriers	Exam-Centric System	Pressure to focus solely on neoclassical theory for exams, hindering the introduction of alternative paradigms.	‘Even if I want to introduce feminist or institutional economics, students get confused because the exam only tests neoclassical theory.’ [E4]	[43]
	Textbook-Centric Curriculum	The reliance on textbooks limits the diversity of perspectives presented in the classroom.	‘There is pressure to stick to the textbook because that’s how performance is measured.’ [C2]	[43]
	Focus on Scientific Objectivity	Emphasis on economics as a scientific discipline without considering values, ethics, or policy consequences.	‘We’re told economics is scientific and objective, but it never considers values, ethics, or who benefits from policies.’ [S3]	[43]
Call for Curriculum Reform	Integration of Real-World Case Studies	Desire for more locally relevant case studies and practical applications of economics concepts.	‘Use local case studies. Let students simulate what happens when subsidies are removed or when environmental policies change.’ [E5]	[42,54]
	Focus on Contemporary Issues	Advocates for a curriculum that addresses contemporary global and national challenges like inequality and environmental sustainability.	‘Malaysia needs economists who understand inequality, environment, and structural change not just marginal utility curves.’ [P2]	[42,54]
	Desire for Relevant & Transformative Education	Students seek a curriculum that helps them understand the economic realities of their own country.	‘We want to learn economics that matters not just theory, but something that helps us understand our own country better.’ [S4]	[42,54]

### **Demand for Reform and Pedagogical Innovation**

Interviews with stakeholders revealed five interrelated themes that align with longstanding critiques in the literature on economics education in Malaysia. These themes highlight the dominance of neoclassical thought, the marginalisation of alternative paradigms, a lack of contextual relevance, structural barriers to pluralism and the widespread call for curriculum reform. The narratives shared by participants offer direct insight into the lived experience of engaging with an economics curriculum that is perceived as theoretically narrow and disconnected from national realities. Participants consistently noted that economics teaching in Malaysia centres around market-based models, rational behaviour and efficiency principles. While theoretically rigorous, this emphasis on neoclassical economics often fails to reflect the socio-economic complexities of the Malaysian economy. E1 explained, 'We teach them about supply and demand, equilibrium, marginal utility... but these concepts are idealised. In reality, markets here are influenced by politics, ethnicity, and historical legacies.' This sentiment was echoed by S2, who remarked, 'We rarely discuss how poverty is created or why inequality persists. We only analyse it as numbers, not as a social issue.' These perspectives echo scholarly critiques that neoclassical economics tends to present an abstract and overly simplified model of human behaviour [29,67]. Several participants expressed concern over the lack of exposure to critical schools of thought such as Marxist, feminist, institutional and ecological economics. According to C1, 'We avoid Marxist ideas due to sensitivity. But how do we expect students to critique capitalism without that lens?' This was supported by S3, who shared, 'I only learned about feminist economics when I took a sociology elective. Why isn't this part of the economics syllabus?' Similarly, P4, noted, 'Ecological concerns are treated as externalities rather than central to economic analysis.' These comments highlight a gap in curriculum inclusivity and mirror calls in the literature for a more pluralistic approach to economics education that reflects real-world concerns and social equity [36,37]. Participants pointed out that economic theories are often taught in a universalised manner, ignoring Malaysia's specific development path and socio-political dynamics. C2 stated, 'Our students are taught about perfectly competitive markets, but how does that relate to a country like Malaysia with affirmative action policies and a strong state presence?' S5 added, 'The role of the state, postcolonial institutions and ethnic dynamics whereby these are not discussed, but they are central to Malaysia's development.' These views suggest a need to integrate institutional and historical perspectives that are grounded in local realities [39,40]. Institutional limitations within the education system, particularly exam structures and reliance on standard textbooks, were seen as key obstacles to reform. E1 explained, 'Even if I want to introduce feminist or institutional economics, students get confused because the exam only tests neoclassical theory.' This point was reinforced by C3, a curriculum officer, who stated, 'There is pressure

to stick to the textbook because that's how performance is measured.' S1, further elaborated, 'We're told economics is scientific and objective, but it never considers values, ethics, or who benefits from policies.' These insights align with critical literature that argues mainstream economics education often privileges capital efficiency over equity and justice [43]. Participants across all stakeholder groups advocated for a curriculum that incorporates real-world applications, theoretical diversity and critical engagement. P3 proposed, 'Use local case studies. Let students simulate what happens when subsidies are removed or when environmental policies change.' C4, added, 'Malaysia needs economists who understand inequality, environment and structural change not just marginal utility curves.' Students were equally vocal, with S4 stating, 'We want to learn economics that matters not just theory, but something that helps us understand our own country better.' These voices support existing scholarship that calls for educational reform to equip students with the tools to address pressing contemporary issues such as inequality, financial instability and environmental degradation [42,54]. The thematic analysis reveals widespread dissatisfaction with the current economics curriculum in Malaysia. The views of participants converge on the urgent need for a more pluralistic, context-sensitive and practically oriented approach. Their critiques reinforce academic arguments that economics education must be theoretically diverse and grounded in local realities if it is to prepare students to critically engage with the economic challenges of our time.

Table 4 outlines stakeholder recommendations for reforming economics education to make it more inclusive, relevant, and reflective of Malaysia's socio-economic context. It highlights the continued dominance of neoclassical thought and the marginalization of critical paradigms such as feminist and ecological economics. Stakeholders call for a curriculum that moves beyond theoretical abstraction, incorporates Malaysia's political and institutional realities, and overcomes structural barriers like textbook dependency and exam-driven teaching. Emphasis is placed on integrating real-world applications, promoting theoretical diversity, and fostering contextual understanding to better prepare students for contemporary economic challenges.

**Table 4.** Stakeholder recommendations for reforming economics education.

Themes	Sub-Themes	Description	Participant Quotes	Literature
Dominance of Neoclassical Thought	Market-based Models and Efficiency	Focus on market-based models and rational behaviour that ignore local complexities.	‘We teach them about supply and demand, equilibrium, marginal utility... but these concepts are idealised. In reality, markets here are influenced by politics, ethnicity, and historical legacies.’ [E1]	[29,67]
	Simplified Economic Models	Over-simplified representation of human behaviour that misses socio-economic realities.	‘We rarely discuss how poverty is created or why inequality persists. We only analyse it as numbers, not as a social issue.’ [S2]	
Marginalisation of Alternative Paradigms	Lack of Exposure to Critical Paradigms	Limited inclusion of alternative schools of thought [e.g., Marxist, feminist, ecological economics].	‘We avoid Marxist ideas due to sensitivity. But how do we expect students to critique capitalism without that lens?’ [C1]	[36,37,82]
	Missing Feminist and Ecological Economics	Feminist and ecological perspectives are often absent in mainstream curriculum.	‘I only learned about feminist economics when I took a sociology elective. Why isn’t this part of the economics syllabus?’ [S3]	
Lack of Contextual Relevance	Ignoring Malaysia’s Socio-Political Dynamics	Teaching economic theories in a universalised manner that doesn’t consider Malaysia’s unique context.	‘Our students are taught about perfectly competitive markets, but how does that relate to a country like Malaysia with affirmative action policies and a strong state presence?’ [C2]	[39,40,64]
	Absence of Local Development Pathways	Failure to integrate Malaysia’s institutional, ethnic, and historical perspectives.	‘The role of the state, postcolonial institutions, and ethnic dynamics, these are not discussed, but they are central to Malaysia’s development.’ [S5]	
Structural Barriers to Pluralism	Institutional Limitations	The exam structure and reliance on standard textbooks prevent diverse economic theories from being taught.	‘Even if I want to introduce feminist or institutional economics, students get confused because the exam only tests neoclassical theory.’ [E1]	[43]
	Pressure to Stick to Traditional Textbooks	Curricular rigidity due to the need to adhere to standard textbooks for assessment purposes.	‘There is pressure to stick to the textbook because that’s how performance is measured.’ [C3]	
Demand for Curriculum Reform and Pedagogical Innovation	Real-World Applications	Advocating for more practical case studies and applied learning.	‘Use local case studies. Let students simulate what happens when subsidies are removed or when environmental policies change.’ [P3]	[42,54]
	Theoretical Diversity and Critical Engagement	Call for diverse economic theories and critical engagement with pressing contemporary issues.	‘Malaysia needs economists who understand inequality, environment, and structural change, not just marginal utility curves.’ [C4]	
	Contextual Relevance	Advocating for a curriculum that helps students understand their own country.	‘We want to learn economics that matters, not just theory, but something that helps us understand our own country better.’ [S4]	

### Limitations and Reform Needs in Malaysian Economics Education

Participants across various stakeholder groups consistently identified multiple limitations in how neoclassical economics is taught and applied in the Malaysian context. The insights provided by these diverse participants illuminated critical gaps in the current curriculum, with participants pointing out the dominance of neoclassical thought, the marginalisation of alternative paradigms, and a lack of contextual relevance. The most prominent theme identified across multiple participant groups is the dominance of neoclassical thought in Malaysian economics education. Participants critiqued how the curriculum overwhelmingly focuses on market-based models, rational decision-making and the principle of economic efficiency, often neglecting the social, political and historical realities that define Malaysia's unique economy. According to C1, *'The curriculum is heavily reliant on supply and demand models, equilibrium, and marginal utility and these ideas are abstract and do not reflect the challenges our students will face in Malaysia's complex economy.'* P2 echoed this sentiment, emphasizing *'We often teach theories of market efficiency and equilibrium, but we rarely discuss why inequality persists or how government intervention can address these issues.'* E2 elaborated, explaining how *'the neoclassical focus on 'perfectly competitive markets' is unrealistic in the Malaysian context, where affirmative action policies and state-driven economic interventions play a significant role.'* This critique aligns with the work of scholars who argue that neoclassical economics oversimplifies real-world complexities and often ignores the role of institutional factors [29,32]. Several participants highlighted the absence of critical schools of thought such as Marxist, feminist, institutional, and ecological economics within the standard curriculum. C3 noted, *'There is a clear bias towards neoclassical theories in our courses. We rarely discuss alternative frameworks like Marxist economics, which could provide students with a more comprehensive understanding of capitalism and class dynamics.'* C5 also pointed out the lack of engagement with feminist economics, stating, *'Our students never hear about feminist perspectives on economics in their core courses. It's only when they take electives in sociology that they encounter these ideas.'* Similarly, P1 expressed frustration with the curriculum's failure to address environmental economics and ecological concerns, emphasizing, *'Ecological economics is essential for understanding sustainable development, but it's treated as an afterthought, often dismissed as an 'externality.'* These viewpoints are consistent with the literature calling for a more pluralistic approach to economics education that includes diverse perspectives and better reflects the complexities of global economic systems [36,37].

Many participants such as C2 and P4 observed that economic theories are often taught in a universalized way, disconnected from the specific socio-economic and political context of Malaysia. C2 pointed out, *'The curriculum often focuses on abstract models like perfectly competitive*

*markets, but these models fail to reflect the realities of our hybrid economy, which combines elements of free-market capitalism with extensive government involvement.*' S1 shared a similar perspective, stating, *'We are taught about theories that apply to the Western economies but never discuss how those ideas map onto Malaysia's development trajectory, which has been shaped by state intervention, ethnic dynamics, and policies like the NEP.'* These insights underscore the need for a more localized curriculum that incorporates Malaysia's unique development path, history and policy frameworks. P4 also highlighted that *'Malaysia's economic policies are designed to manage ethnic diversity and regional disparities, yet these critical aspects are often ignored in mainstream economic models'* [49]. The structural barriers to pluralism theme emerged as a key challenge impeding the introduction of alternative economic paradigms into the curriculum. Several participants noted the institutional and pedagogical constraints that hinder curricular innovation. P5 and C4 highlighted the pressure to adhere to standardized textbooks and examination formats that prioritize neoclassical theories. P5 remarked, *'The system is built around a set of standardized textbooks and exams that test students' knowledge of neoclassical economics. This leaves little room for introducing heterodox or alternative perspectives into the classroom.'* E3 discussed the difficulties of introducing critical approaches in a system that emphasizes rote memorization over critical thinking, explaining, *'We are evaluated based on how well students perform in exams, which focus primarily on neoclassical theories. This makes it challenging to teach other schools of thought.'* This barrier is compounded by the lack of localized resources, as C3 pointed out: *'We lack textbooks that address Malaysia's socio-political realities. Most of the resources we use are imported from the West and are not suited to our context.'* These observations are consistent with the global literature on the challenges of teaching heterodox economics in a traditional, neoclassical-dominated environment [25,26].

There is a strong demand for curriculum reform and pedagogical innovation across all participant groups. Participants expressed the need for an economics curriculum that integrates real-world applications, theoretical diversity, and critical engagement with current global and local economic challenges. C1 and P3 advocated for a more pluralistic approach that would expose students to a range of economic perspectives and encourage critical thinking. C1 explained, *'We need a curriculum that encourages students to challenge the status quo and think critically about the policies they will help design.'* P3 stressed the importance of integrating practical, real-world examples into economics education. *'We should be using local case studies such as the effects of government subsidies or the consequences of environmental policies so that students can connect theory with practice,'* S3 echoed this sentiment, adding, *'We want to learn economics that matters not just theory, but something that helps us understand our own country better.'* This demand for reform is also supported by existing scholarship, which emphasizes that a pluralistic

curriculum not only enriches academic inquiry but also prepares students to tackle complex issues like inequality, environmental sustainability and financial instability [42].

Table 5 presents diverse stakeholder perspectives on reforming the economics curriculum in Malaysia. It highlights concerns about the dominance of neoclassical thought, which emphasizes abstract models like market efficiency and rationality that do not align with Malaysia's complex socio-economic realities. Alternative paradigms—such as institutional, ecological, and Marxist economics—are notably underrepresented. The table also underscores a lack of contextual relevance, with curricula overly reliant on Western-centric models and lacking localized content. Structural barriers, including faculty training limitations, lack of local teaching materials, and institutional resistance, hinder reform. Stakeholders advocate for a more pluralistic, context-aware, and practically oriented curriculum that fosters critical thinking and problem-solving among students.

**Table 5.** Perspectives on economics curriculum reform in Malaysia.

Themes	Sub-Themes	Description	Participant Quotes	Literature
Dominance of Neoclassical Thought	Neoclassical Economic Models	Neoclassical models dominate the curriculum, emphasizing market efficiency, rationality, and equilibrium, which participants argue does not reflect the complexities of Malaysia's economy.	'The curriculum is heavily reliant on supply and demand models, equilibrium, and marginal utility, these ideas are abstract and do not reflect the challenges our students will face in Malaysia's complex economy.' [C1]	[29,67]
	Market Efficiency & Rationality	The assumption of rational decision-making and market efficiency in neoclassical economics overlooks systemic inequalities and state intervention.	'We often teach theories of market efficiency and equilibrium, but we rarely discuss why inequality persists or how government intervention can address these issues.' [P2]	[49]
Marginalisation of Alternative Paradigms	Institutional Economics	The curriculum marginalizes institutional, ecological, and Marxist economics, despite the relevance of these perspectives in understanding economic challenges.	'There is a clear bias towards neoclassical theories in our courses. We rarely discuss alternative frameworks like Marxist economics, which could provide students with a more comprehensive understanding.' [C3]	[36]
	Ecological & Environmental Economics	Limited focus on ecological and environmental economics, despite the growing relevance of sustainability in modern economic analysis.	'Ecological economics is essential for understanding sustainable development, but it's treated as an afterthought, often dismissed as an 'externality.' [P1]	[82]
	Marxist Economics	The Marxist perspective, which emphasizes the role of class, exploitation, and capital accumulation, is largely absent from mainstream economics curricula.	'We don't discuss the dynamics of capitalism, class struggles, and exploitation of ideas central to Marxist economics.' [C5]	[54]



**Table 5. Cont.**

Themes	Sub-Themes	Description	Participant Quotes	Literature
Lack of Contextual Relevance	Western-Centric Models	The curriculum predominantly uses Western market models that do not address Malaysia's socio-political realities and unique economic policies.	'The curriculum often focuses on abstract models like perfectly competitive markets, but these models fail to reflect the realities of our hybrid economy, which combines elements of free-market capitalism with extensive government involvement.' [C2]	[49]
	Malaysia's Economic Diversity	The current curriculum fails to incorporate Malaysia's ethnic diversity, state intervention policies, and regional inequalities.	'We are taught about theories that apply to Western economies but never discuss how those ideas map onto Malaysia's development trajectory, which has been shaped by state intervention, ethnic dynamics, and policies like the NEP.' [S1]	[67]
Structural Barriers to Pluralism	Faculty Training and Pedagogical Constraints	Many faculty members are trained in neoclassical economics, and there is a lack of resources to teach alternative paradigms.	'The system is built around a set of standardized textbooks and exams that test students' knowledge of neoclassical economics. This leaves little room for introducing heterodox or alternative perspectives.' [P5]	[25,26]
	Lack of Localized Teaching Materials	There is a shortage of textbooks and teaching materials that are specifically relevant to the Malaysian context, which limits the ability to teach alternative paradigms effectively.	'We lack textbooks that address Malaysia's socio-political realities. Most of the resources we use are imported from the West and are not suited to our context.' [C3]	
	Institutional Resistance to Change	There is resistance within universities to adopting a more pluralistic curriculum, driven by institutional inertia and a lack of academic freedom.	'We are evaluated based on how well students perform in exams, which focus primarily on neoclassical theories. This makes it challenging to teach other schools of thought.' [E3]	[42]
Demand for Curriculum Reform and Pedagogical Innovation	Pluralistic Curriculum Approach	Participants advocated for a curriculum that integrates diverse economic perspectives and encourages critical thinking.	'We need a curriculum that encourages students to challenge the status quo and think critically about the policies they will help design.' [C1]	[42,54]
	Real-World Applications	Participants expressed the need for the curriculum to be more relevant to real-world challenges, particularly through the inclusion of local case studies and practical applications of economic theory.	'We should be using local case studies such as the effects of government subsidies or the consequences of environmental policies so that students can connect theory with practice.' [P3]	[36,54]
	Critical Thinking & Problem-Solving	There is a call for curriculum reform that not only exposes students to diverse economic theories but also fosters critical thinking and problem-solving skills.	'We want to learn economics that matters, not just theory, but something that helps us understand our own country better.' [S3]	[37]

### Critical Thinking through Pluralism

Many participants, such as S3, S4, and E4, expressed concern that economics education was largely confined to neoclassical frameworks, with little room for alternative or heterodox approaches. S2 reflected, '*We were only taught one way to think about markets. I didn't know about ecological or feminist economics until I researched independently.*' This concern was echoed by E1, who noted that curriculum guidelines rarely

mandate inclusion of multiple schools of thought. This aligns with the findings of [25,30], who argued that the dominance of neoclassical thinking continues to marginalize other paradigms, thus hindering the development of pluralism in economics education. Another recurring issue was faculty resistance and lack of training in delivering a more diverse curriculum. S1, S3, and E3 observed that although many lecturers were highly knowledgeable in their specific fields, they were either unprepared or reluctant to teach outside of the neoclassical framework. S5 remarked, *'Our lecturers are brilliant, but they stick to what they know as they're not comfortable teaching alternative theories.'* These views were supported by C2, who emphasized the need for sustained faculty development initiatives. This finding corresponds with the work of [26], who suggested that successful curriculum reform toward pluralism requires significant investment in faculty retraining.

Institutional inertia and curriculum constraints also surfaced as significant challenges. Several participants, such as S4 and C1, highlighted how the rigidity of institutional structures and the slow pace of curriculum change were major obstacles to introducing pluralism. As S4 noted, *'Our university curriculum is rigid and changing it to include pluralism would take years.'* E2 added that *'internal committee structures often delay any significant reform efforts.'* This echoes [32] argument that entrenched institutional norms, and bureaucratic processes hinder efforts to introduce pluralism into economics education. Resource and material limitations were also highlighted as practical concerns. Students and educators alike, such as S2 and E3, pointed out the scarcity of textbooks, case studies, and supplementary materials that present non-mainstream economic thought. As they noted, *'We don't have easy access to readings or Massive Open Online Courses that cover more than the mainstream.'* Curriculum specialists such as C3 echoed this sentiment, stating that *'material development for pluralist economics is still underfunded and scattered'*. These concerns mirror [109] observation that promoting pluralism requires accessible educational materials to supplement existing curricula. Participants also raised the issue of the perceived lack of career relevance associated with alternative economic paradigms. Many students, including S1 and S5, expressed uncertainty regarding whether employers valued knowledge of Marxist, feminist or ecological economics. As S1 noted, *'I worry that employers won't value knowledge of Marxist or ecological economics.'* P4 acknowledged this concern but argued that such knowledge can enhance adaptability and innovation in complex problem-solving environments. Scholars like [63] affirm that pluralistic education better equips graduates to deal with complex societal challenges and long-term career needs.

Despite these challenges, the analysis also revealed strong support for the value of pluralism in economics education. One of the most prominent benefits identified was the encouragement of critical thinking and intellectual flexibility. Participants such as S3, S4, and E1 highlighted how

exposure to multiple paradigms allowed them to challenge core economic assumptions. S2 shared, *'When I encountered feminist economics, it challenged how I thought about labour and unpaid work. That changed my whole view.'* This sentiment affirms the work of [32,89], who argue that pluralism nurtures reflective and independent economic thinkers. Another significant benefit was enhanced real-world problem-solving. Respondents including S2, P2, and E4 emphasized how pluralist approaches helped them engage with complex issues such as climate change, inequality and global trade dynamics. S5 stated, *'Studying ecological and behavioural economics helped me understand climate change and inequality beyond just supply and demand.'* This view aligns with [110], who argue that economics education must evolve to reflect the multidimensional nature of real-world problems. Some participants also cited institutional models that successfully integrate pluralism as sources of inspiration. S1 [PhD Student] shared those elective modules in post-Keynesian and development economics significantly enriched their learning. C4 mentioned examples from universities like University of Sydney and the University of Greenwich, where pluralism is structurally supported within the curriculum. These practices reflect best-practice models noted by [6].

Increased student engagement and ownership of learning were also noted as major outcomes of a pluralistic curriculum. Students such as S5 reported that debates across paradigms led to more active participation and deeper understanding. *'When we debated between neoclassical and Marxist views in class, it felt like we were doing real economics, not just memorizing models,'* one student said. Educators such as E3 also observed heightened classroom engagement during these discussions. This supports [111] argument that pluralism fosters exploratory learning and deeper engagement. Participants highlighted opportunities through technology and MOOCs as a valuable pathway to support pluralism where institutional structures fall short. S4 shared, *'MOOCs introduced me to development economics from African scholars, which wasn't available in class.'* This perspective was echoed by C5 and P5, who emphasized the democratizing power of digital resources. Reference [112] supports this view, arguing that open-access platforms can bridge gaps in formal curricula, especially in resource-constrained environments. While pluralism in economics education faces systemic, institutional and pedagogical barriers, the analysis underscores its transformative potential. Stakeholders across all four categories recognize the importance of embracing diverse economic paradigms to better prepare learners for a rapidly changing and complex global economy. The shared insights reveal a strong demand for reform and greater inclusivity in economics education.

Table 6 outlines the challenges and opportunities in promoting pluralism in economics education. Key challenges include the dominance of neoclassical economics, lack of faculty training, institutional rigidity,

limited access to diverse teaching materials, and student concerns about the job relevance of non-mainstream theories. Despite these barriers, the table also highlights significant opportunities. Pluralistic approaches are seen to foster critical thinking, intellectual flexibility, and better real-world problem-solving, particularly for issues like inequality and climate change. Encouraging examples include universities offering elective courses in alternative paradigms and the growing availability of digital resources and MOOCs that expose students to global and diverse perspectives.

**Table 6.** Challenges and opportunities in promoting pluralism.

Theme	Sub-Themes	Description	Participant Quotes	Literature
Limited Exposure to Diverse Paradigms	Dominance of Neoclassical Economics	Economics education is predominantly centred around neoclassical models, leaving other paradigms underrepresented.	'I didn't know about ecological or feminist economics until I researched independently.' [S3]	[25,30]
Faculty Resistance and Lack of Training	Inadequate Faculty Preparation	Educators are often not trained to teach beyond the neoclassical framework.	'Our lecturers are brilliant, but they stick to what they know, they're not comfortable teaching alternative theories.' [E3]	[26]
Institutional Inertia and Curriculum Constraints	Curriculum Rigidity	Institutional norms and slow pace of change prevent curriculum innovation towards pluralism.	'Our university curriculum is rigid and changing it to include pluralism would take years.' [S1]	[67]
Resource and Material Limitations	Lack of Access to Pluralist Resources	Educational resources that cover alternative economic theories are scarce.	'We don't have easy access to readings or MOOCs that cover more than the mainstream.' [S5]	[10]
Career Relevance Concerns	Perceived Value of Non-Neoclassical Knowledge	Students are uncertain about the job market's appreciation for non-mainstream economics.	'I worry that employers won't value knowledge of Marxist or ecological economics.' [S2]	[63]
Encouragement of Critical Thinking	Fostering Intellectual Flexibility	Exposure to multiple economic perspectives develops critical thinking and flexibility.	'When I encountered feminist economics, it challenged how I thought about labour and unpaid work. That changed my whole view.' [E5]	[67,89]
Enhanced Real-World Problem-Solving	Practical Application of Pluralism	A pluralistic education provides tools to tackle complex real-world issues like inequality and climate change.	'Studying ecological and behavioural economics helped me understand climate change and inequality beyond just supply and demand.' [P4]	[110]
Institutional Models Demonstrating Pluralism	Elective Courses and Initiatives	Some universities offer courses in alternative economics, enriching student experience.	'At our university, we had the option to take modules in post-Keynesian and development economics it was refreshing.' [C1]	[6]
Increased Student Engagement and Ownership of Learning	Active and Participatory Learning	Pluralism encourages active learning and engagement in classroom debates and discussions.	'When we debated between neoclassical and Marxist views in class, it felt like we were doing real economics, not just memorizing models.' [S3]	[105]
Opportunities Through Technology and MOOCs	Digital Resources for Pluralism	MOOCs and online resources offer exposure to diverse economic theories outside the classroom.	'MOOCs introduced me to development economics from African scholars, which wasn't available in class.' [P3]	[112]

### Integrating Alternative Paradigms into Economic Curriculum

Educators generally supported the integration of diverse economic paradigms into the curriculum, particularly those that are contextually relevant to Malaysia's unique socio-economic landscape. Several educators highlighted the importance of Islamic economics, given its ethical foundations and alignment with Malaysia's socio-cultural values. C1 emphasized, *'Islamic economics should be more prominent in our syllabi, it reflects our society's values,'* echoing the sentiments that Islamic economics is rooted in moral considerations that foster a more stable financial system. Similarly, P2 stressed the practical relevance of Islamic financial instruments, stating, *'Students need to understand sukuk and how it differs from conventional bonds,'* illustrating the increasing demand for practical knowledge in contemporary economic education. This perspective aligns with [113], who argues that Islamic economics offers a framework that discourages excessive speculation and promotes financial stability, addressing the needs of Malaysia's growing Islamic finance sector. In addition to Islamic economics, educators also expressed an interest in incorporating Marxist economics to address systemic issues such as income inequality. C3 noted, *'We tend to avoid Marxist economics, but it helps explain why the poor stay poor,'* and P5 added that *'Malaysia's economic issues aren't just technical, they're political. Marxist insights are useful here.'* These educators observed that Marxist frameworks offer a critical lens to examine the structural inequalities that persist despite numerous policy interventions, such as Malaysia's NEP. This is supported by [35], who argues that Marxist theories are essential in understanding the concentration of wealth and uneven regional development, which remain central issues in Malaysia's economic landscape. Feminist economics was also a recurring theme among educators. P1 remarked, *'Reproductive labour is completely missing from textbooks,'* highlighting how traditional economics curricula overlook the contributions of unpaid labour, particularly caregiving, which is crucial to understanding economic structures. C5 also noted that *'feminist perspectives could really help policy students see the gendered effects of economics,'* reinforcing the call for more inclusive approaches to policy design that consider the economic contributions of women. This resonates with the work of [81], who advocate for the inclusion of feminist economics to address gender inequality and better reflect the realities of women's roles in both paid and unpaid labour markets. Students also emphasized the need for a broader economic curriculum that includes alternative paradigms. A common sentiment among students was the lack of exposure to non-mainstream economic theories. S2 expressed frustration over this limitation, sharing, *'We were only taught one way to think about markets. I didn't know about ecological or feminist economics until I researched independently.'* This highlights a gap in the traditional curriculum and the need for more diverse perspectives, especially as students encounter complex, real-world economic challenges that extend beyond the neoclassical framework.

Students also recognized the relevance of ecological economics, especially given the growing importance of sustainability. S3 noted, *'With all our climate commitments, students should learn about circular economy models,'* while S4 lamented, *'Ecological economics is the future, but it's barely touched in current modules.'* These reflections resonate with [85], who argue that ecological economics is essential for integrating environmental sustainability into economic thinking, a critical issue for Malaysia as it grapples with deforestation, biodiversity loss and climate change.

Curriculum developers were instrumental in advocating for the integration of these alternative economic paradigms into the curriculum. C1 and C4, for instance, underscored the importance of incorporating Islamic economics, pointing out that its ethical basis aligns with Malaysia's religious and cultural foundations. C4 noted, *'Islamic economics is not just relevant for Muslims but for all students, but it fosters a greater understanding of social justice and equity,'* emphasizing that this paradigm contributes to a more holistic education that respects the cultural context of the students. Curriculum developers also supported the inclusion of Marxist and feminist economics. C3 suggested that Marxist economics is crucial in explaining income inequality in Malaysia, especially in light of the country's political and economic landscape. Furthermore, the inclusion of feminist economics would allow students to critically assess the gendered dimensions of economic policies which are often overlooked in traditional approaches. C5 highlighted, *'Feminist perspectives could really help policy students see the gendered effects of economics,'* advocating for a curriculum that better represents all facets of economic life. Additionally, C2 acknowledged the importance of ecological economics in the context of Malaysia's environmental challenges. *'We need to incorporate more about the circular economy and sustainability into our curriculum,'* C2 remarked, underscoring the need for economic education that reflects the urgency of addressing global environmental issues like climate change. Practitioners also emphasized the practical value of alternative economic paradigms, particularly in addressing Malaysia's economic challenges. P4 remarked, *'I teach about GLCs [Government-Linked Companies] and FDI [Foreign Direct Investment], this is institutional economics in practice,'* recognizing the role of institutional structures in shaping Malaysia's economic trajectory. P5 echoed similar sentiments, suggesting that institutional economics provides the necessary framework for understanding the dynamics that have shaped Malaysia's development and economic policies. In addition to institutional economics, practitioners like P2 and P4 highlighted the relevance of Islamic economics in shaping Malaysia's financial sector. P2 noted, *'Understanding sukuk and how they differ from conventional bonds is crucial,'* reinforcing the need for students to understand alternative financial instruments that align with Islamic economic principles. This observation supports the integration of Islamic economics as a practical and culturally relevant part of Malaysia's

economic curriculum. Practitioners also expressed a desire for more inclusive approaches to economic policy, with P1 advocating for a greater focus on feminist economics to address gender inequality in policy design. *‘Feminist perspectives could really help policy students see the gendered effects of economics,’* P1 suggested, reflecting the growing importance of gender-sensitive economic policymaking. The pluralistic approach will not only challenge the dominance of neoclassical models but also promote critical thinking, intellectual flexibility and a more inclusive understanding of economics. It also ensures that economics education in Malaysia remains relevant to the country’s socio-cultural, political, and environmental contexts, ultimately preparing students to respond more effectively to the country’s evolving economic landscape [66].

Table 7 presents the perspectives of various stakeholders including educators, curriculum developers, and students on integrating pluralistic economic paradigms into Malaysia’s curriculum. It highlights support for incorporating Islamic, Marxist, feminist, ecological, and institutional economics, each offering unique insights aligned with Malaysia’s socio-economic context. For instance, Islamic economics aligns with the country’s cultural values and financial practices, while Marxist economics is seen as essential for addressing class inequality and political economy. Feminist economics challenges the exclusion of unpaid labor and promotes gender-inclusive policy thinking. Ecological economics is considered vital for tackling sustainability and climate change, and institutional economics provides tools to understand Malaysia’s governance structures like GLCs and FDI. Overall, there is a strong call for pluralism to enhance critical thinking and equip students with context-relevant analytical skills.

**Table 7.** Stakeholder views on pluralistic economics in curriculum.

Theme	Sub-Themes	Description	Participant Quotes	Literature
Islamic Economics	Ethical & Cultural Relevance	Emphasizes the alignment of Islamic economics with Malaysia’s socio-cultural and religious values.	‘Islamic economics should be more prominent in our syllabi; it reflects our society’s values.’ [C1]	[72,113]
	Practical Financial Knowledge	Highlights the need for students to understand Islamic financial instruments like sukuk.	‘Students need to understand sukuk and how it differs from conventional bonds.’ [P2]	[72,113]
Marxist Economics	Income Inequality & Class	Offers tools to critically analyze wealth disparity and the persistence of poverty in Malaysia.	‘We tend to avoid Marxist economics, but it helps explain why the poor stay poor.’ [C3]	[35,77]
	Political Economy Awareness	Encourages understanding of the political dimensions of economic systems.	‘Malaysia’s economic issues aren’t just technical, they’re political. Marxist insights are useful here.’ [P5]	[35,77]
Feminist Economics	Unpaid/Reproductive Labor	Addresses the absence of reproductive labour and caregiving in conventional economics education.	‘Reproductive labour is completely missing from our textbooks.’ [P1]	[36,81]

Table 7. Cont.

Theme	Sub-Themes	Description	Participant Quotes	Literature
	Gender-Inclusive Policy	Advocates for integrating gender analysis in economic decision-making and policy design.	'Feminist perspectives could really help policy students see the gendered effects of economics.' [C5]	[36,81]
Ecological Economics	Sustainability & Climate	Focuses on integrating ecological limits and circular economy models in economics education.	'With all our climate commitments, students should learn about circular economy models.' [P3]	[82,85]
	Curriculum Gaps	Identifies lack of ecological content in current syllabi despite environmental challenges.	'Ecological economics is the future, but it's barely touched in current modules.' [C2]	[82,85]
Institutional Economics	Role of Institutions	Recognizes the influence of institutions and governance on economic development in Malaysia.	'Malaysia's economic success can't be understood without studying our institutional structures.' [C4]	[40,49]
	Real-World Application	Emphasizes the practical utility of institutional economics in explaining entities like GLCs and FDI.	'I teach about GLCs and FDI, this is institutional economics in practice.' [P4]	[40,49]
Need for Pluralism	Critical Thinking & Context	Stresses that pluralistic approaches prepare students to tackle real-world, context-specific economic problems.	'We were only taught one way to think about markets. I didn't know about ecological or feminist economics...' [S2]	[66,100]

### Rethinking Economics Education in Malaysia

One of the prevailing challenges in integrating pluralism into economics education lies in the entrenched dominance of neoclassical thought among faculty members. As E2 remarked, *'Our entire academic training was grounded in neoclassical models, it's not easy to suddenly start teaching alternatives we were never exposed to.'* This sentiment is echoed by C1, who observed that *'most lecturers were trained in the neoclassical model and feel uncomfortable teaching what they don't fully understand,'* highlighting an epistemological alignment with traditional economic thought. E3 added that many junior educators lack access to resources or training that would allow them to explore heterodox theories confidently. P1 further noted the structural constraints: *'There's a lack of incentives or platforms for educators to upskill in heterodox theories,'* pointing to systemic barriers. C3 expressed concern that *pluralistic approaches such as Marxist or feminist economics are viewed as politically biased rather than academically valid.* This ideological resistance, coupled with a lack of professional development, reveals a fundamental tension between personal beliefs and pedagogical responsibilities. These insights underscore the urgency of implementing continuous faculty development programs aimed at expanding the intellectual repertoire of teaching staff. A major theme that emerged across all groups was the scarcity of contextually relevant teaching materials grounded in heterodox economics. As C2 pointed out, *'We're still relying on US-based textbooks that don't speak to our context,'* illustrating the pedagogical disconnect created by foreign-centric content. E4 echoed this concern, sharing that *the*



limited availability of Malaysian-based examples often hampers their efforts to engage students in critical economic thinking. P2 emphasized that *'there are hardly any resources that incorporate Islamic economics or local examples of ecological sustainability,'* reinforcing the lack of diversity in existing materials. From a student's perspective, S1 observed that *'our lived realities as Malaysians are missing from the textbooks, and that makes it harder to apply what we learn.'* C5 argued that *'it's not just about theory, we need case studies, local data, and policy debates that are rooted in Malaysia.'* This collective sentiment points to the need for collaborative resource development among local academics and institutions. Such an approach could foster a curriculum that not only reflects Malaysian socio-economic conditions but also enhances student engagement and critical thinking. Resistance at the institutional level emerged as a significant obstacle to pluralism in economics education. E1 highlighted that *'any suggestion to move beyond standard textbooks is usually met with silence or scepticism in departmental meetings.'* C1 noted that *'university committees still see pluralism as a threat to academic rigor,'* suggesting that gatekeeping persists in higher education governance. This was corroborated by, who stated that *'accreditation bodies continue to prioritize mathematical models and standardized syllabi over contextual relevance.'* E5 reflected that the institutional culture tends to *'reward conformity rather than innovation,'* discouraging educators from experimenting with diverse perspectives. C3 added, *'anything that deviates from the standard textbook is treated with suspicion,'* indicating how deeply conservative values are embedded in institutional practices. Despite this, P5 pointed to post-pandemic shifts: *'There's a growing recognition, especially after COVID-19, that economics needs to change but the bureaucracy is slow.'* These reflections reveal that overcoming institutional inertia will require both top-down policy interventions and grassroots advocacy to create space for curriculum diversification.

Despite these challenges, participants expressed strong commitment to reform. E1 proposed the establishment of national-level workshops to upskill faculty in heterodox economics. P1 emphasized that *'reform must be both top-down and bottom-up, with ministries and universities working in tandem'.* C5 suggested *'forging partnerships with institutions to support pluralistic teaching initiatives and resource development'.* E2 advocated for a review of faculty evaluation systems, arguing that *'pluralistic integration should be recognized and rewarded in promotion criteria'.* C4 added that *'integrating pluralism into teaching evaluations could push more lecturers to diversify their content.'* P2 stressed the importance of localizing resources: *'Textbooks that incorporate Islamic, feminist, and ecological perspectives should be written by Malaysians for Malaysians.'* As C2 aptly stated, *'We can't expect students to think critically if we only give them one way to think.'* Additionally, P5 pointed out that *'digital platforms and MOOCs offer alternative means of knowledge dissemination, especially useful in resource-constrained environments.'* These policy ideas

collectively highlight a roadmap for systemic change that is both inclusive and practical. The role of students as active stakeholders in curriculum reform was emphasized across interviews. S4 noted, *'Students today are more globally aware and want their education to reflect real-world issues like inequality, climate change, and financial instability.'* S2 mentioned that economics should *'make sense to us as Malaysians, we're not just learning for exams, we're learning for our future.'* E3 observed that students are increasingly questioning the relevance of traditional economic theories, which opens a window for pedagogical innovation. C2 stressed that *'we can't ignore student voices, they are key drivers of reform.'* In this context, digital technology emerged as a critical enabler. P4 highlighted *'how online courses from global institutions can expose students to alternative schools of thought.'* C4 mentioned that *'curated digital platforms and open-access repositories can bridge the resource gap'*. S5 suggested that *'more interactive platforms and podcasts could make pluralism more accessible,'* emphasizing the role of user-friendly technology. Collectively, these perspectives call for a student-centred, tech-integrated approach that democratizes access to pluralistic knowledge and aligns education with contemporary global challenges.

Table 8 highlights the multifaceted challenges and corresponding strategies for promoting pluralist economics teaching within the Malaysian higher education context. One of the central issues identified is the lack of faculty training and prevailing ideological barriers. Many educators have been trained predominantly in neoclassical economics and express discomfort or resistance towards teaching alternative paradigms such as Marxist or feminist economics, which are sometimes perceived as politically biased or lacking academic rigor. Another significant challenge lies in the scarcity of resources and locally relevant materials. Economics curricula often depend on foreign-centric textbooks, particularly from Western contexts, which fail to reflect the socio-economic realities of Malaysia. Participants noted the absence of Malaysian case studies and the limited availability of inclusive perspectives, including Islamic, ecological, and feminist economics. This gap makes it difficult for students to relate economic theories to their lived experiences. Institutional resistance to curriculum reform further compounds the problem. Departmental gatekeeping, conservative accreditation standards, and a risk-averse academic culture discourage innovation and maintain the dominance of traditional models. Faculty members may fear professional repercussions for deviating from standardized syllabi, thus limiting curricular experimentation. To overcome these obstacles, participants suggested several policy-level and international strategies. These include organizing national-level workshops to build faculty capacity in heterodox economics, incentivizing pluralist teaching through revised faculty evaluation systems, and forging partnerships with globally recognized pluralist institutions like SOAS and the University of Sydney. The role of students and digital technology

emerged as a crucial enabler. Students expressed a strong desire for curricula that address real-world and local issues, advocating for more inclusive and relatable content. Digital platforms, MOOCs, and open-access repositories were seen as effective tools to democratize access to pluralist content and bridge existing knowledge gaps. Together, these findings underscore the importance of a coordinated, multi-stakeholder approach to embedding pluralism in economics education.

**Table 8.** Challenges and strategies for pluralist economics teaching.

Theme	Sub-Themes	Description	Participant Quotes	Literature
1. Faculty Training and Ideological Barriers	Lack of Exposure to Pluralism	Educators were trained in traditional models and lack knowledge of heterodox economics.	‘Our entire academic training was grounded in neoclassical models, it’s not easy to suddenly start teaching alternatives we were never exposed to.’ [E2]	[25]
	Discomfort and Lack of Confidence	Faculty are hesitant to teach what they are unfamiliar with.	‘Most lecturers feel uncomfortable teaching what they don’t fully understand.’ [C1]	[66]
	Ideological Resistance	Heterodox theories are viewed as politically biased or lacking rigor.	‘Pluralistic approaches like Marxist or feminist economics are viewed as politically biased.’ [C3]	[91]
2. Lack of Resources and Locally Relevant Textbooks Materials	Foreign-Centric	Curriculum relies heavily on Western materials.	‘We’re still relying on US-based textbooks that don’t speak to our context.’ [C2]	[54]
	Absence of Local Examples	Lack of Malaysian-based case studies and data.	‘Our lived realities as Malaysians are missing from the textbooks.’ [S1]	[26]
	Lack of Inclusive Perspectives	Minimal integration of Islamic, ecological, or feminist economics.	‘There are hardly any resources that incorporate Islamic economics or local examples of ecological sustainability.’ [P2]	[35]
3. Institutional Resistance to Curriculum Reform	Departmental Gatekeeping	New ideas are dismissed or ignored by faculty and committees.	‘Any suggestion to move beyond standard textbooks is usually met with silence or scepticism.’ [E1]	[36,37]
	Conservative Accreditation Standards	Evaluation bodies favour neoclassical, standardized models.	‘Accreditation bodies continue to prioritize mathematical models and standardized syllabi over contextual relevance.’ [P4]	[66]
	Risk-Averse Culture	Faculty fear professional repercussions from deviating.	‘The institutional culture tends to reward conformity rather than innovation.’ [E5]	[25]
4. Policy Recommendations and International Inspiration	Capacity Building	Calls for workshops and training in pluralist economics.	‘We need national-level workshops to upskill faculty in heterodox economics.’ [E1]	[25,54]
	Incentivizing Reform	Faculty evaluation systems should reward pluralist content.	‘Integrating pluralism into teaching evaluations could push more lecturers to diversify their content.’ [C4]	[66]
	Global Partnerships	Leverage international best practices from pluralist institutions.	‘We should partner with institutions like SOAS or the University of Sydney.’ [C5]	[67]

**Table 8.** *Cont.*

Theme	Sub-Themes	Description	Participant Quotes	Literature
5. Student-Centered Recommendations and Role of Technology	Critical Student Voice	Students desire curricula that reflect real-world and local issues.	'Economics should make sense to us as Malaysians; we're not just learning for exams.' [S2]	[35]
	Role of Digital Platforms	Technology can support pluralism and increase access.	'More interactive platforms and podcasts could make pluralism more accessible.' [S5]	[86]
	Inclusion through Open Access	MOOCs and open repositories can help bridge content gaps.	'Online courses from global institutions can expose students to alternative schools of thought.' [P4]	[112]

### Curriculum Reform in Economics Education

A key challenge identified by participants was the overwhelming dominance of neoclassical economics within Malaysia's economics curriculum. Several participants expressed concern that neoclassical economics fails to address Malaysia's unique socio-economic realities, such as government intervention, ethnic-based affirmative policies, and regional disparities. E1 stated, *'We continue to rely on models that don't fit our local context,'* reflecting the disconnect between the curriculum and Malaysia's mixed economy. Similarly, P1 noted, *'The focus on equilibrium and rational choice overlooks critical social justice issues in our society,'* underscoring the limitations of neoclassical thought in addressing real-world complexities. C1 emphasized, *'Neoclassical economics doesn't capture the economic interventions our government uses to promote fairness,'* reflecting a broad critique of the conventional economic framework. The lack of curriculum flexibility to include diverse economic paradigms was another recurring theme. E3 mentioned, *'Our curriculum doesn't allow for much variation; it's stuck in one mode of thinking,'* highlighting the institutional inertia preventing the integration of alternative frameworks. S1 echoed this sentiment, saying, *'We need more space for creative and diverse economic theories to reflect Malaysia's realities.'* This concern was reiterated by P2, who said, *'There's a real gap when it comes to teaching how we might design policies for a mixed economy,'* pointing out that a singular focus on neoclassical economics does not adequately prepare students for the complexities of policymaking in Malaysia. Several participants pointed out the necessity of faculty training to equip educators with the knowledge to teach alternative economic frameworks. E2 argued, *'Faculty members are often resistant to change because they've only been trained in the traditional model,'* while P3 added, *'There's a clear lack of professional development opportunities in heterodox economics.'* C3 noted, *'Even if we want to teach alternative views, we don't have the resources or the expertise,'* stressing the importance of capacity-building initiatives for academic staff. P4 further emphasized that *'Investing in faculty development is key to breaking away from the neoclassical grip on economics education.'* This view was supported by E4,

who suggested, *'We need regular workshops or seminars to help faculty update their teaching strategies.'* The availability of textbooks and teaching materials that reflect Malaysia's unique socio-economic context was highlighted as a significant challenge. S2 emphasized, *'There's a clear lack of locally relevant textbooks that incorporate Islamic economics or ecological economics.'* E5 echoed this concern, stating, *'We're still using US-based textbooks that don't reflect our country's issues.'* P5 emphasized, *'Developing textbooks that reflect Malaysia's socio-economic issues is crucial for making economics education relevant to students.'* This call for more localized resources was also supported by C2, who argued, *'Educational resources need to reflect local challenges, like income inequality and environmental degradation, to resonate with students.'* Institutional resistance was a prominent barrier in shifting the curriculum to a more pluralistic model. C4 shared, *'There's a conservative view within our universities that change should be slow and measured,'* reflecting broader institutional reluctance to embrace change. S4 pointed out, *'Accreditation bodies prioritize traditional economic models over those that can help address real-world issues.'* However, P1 suggested, *'Change needs to come from both top-down and bottom-up efforts, starting with national workshops for faculty on pluralism.'* P2 advocated for *'Partnerships with universities like SOAS or the University of Sydney to help guide us in adapting a pluralistic curriculum.'* C5 also noted, *'We must recognize that the world has changed, and economics must change with it to remain relevant.'*

Table 9 presents key themes related to the current state and challenges of adopting pluralistic approaches in the economics curriculum in Malaysia. A dominant concern is the overwhelming reliance on neoclassical economics, which many participants argue is detached from Malaysia's socio-economic realities. This conventional approach tends to overlook critical local issues such as government policy impacts, income inequality, and regional disparities. Participants emphasized that such models, with their focus on equilibrium and abstraction, do not adequately address pressing concerns like social justice. The table also identifies a lack of curriculum flexibility, attributing it to institutional inertia. The current design of economics programs leaves little room for the inclusion of alternative or creative theoretical frameworks, limiting pedagogical diversity. Faculty training and development are further cited as major barriers, with many educators resistant to change due to a lack of exposure to heterodox economics and insufficient professional development opportunities. Another challenge lies in the availability of teaching resources. The existing textbooks are largely foreign-based and fail to capture Malaysia's specific socio-economic conditions. Participants called for the development of more locally relevant materials that can help students better relate to the content and understand its practical implications. Institutional resistance is noted as a significant hurdle, though participants acknowledge the need for both top-down and bottom-

up reforms. While conservative attitudes persist within universities, there is also a growing awareness that pluralism in economics education is essential. Effective reform, they argue, will require collaborative efforts across policymakers, academic leadership, and grassroots educators.

**Table 9.** Adoption of pluralistic approaches in economics curriculum.

Theme	Sub-Themes	Description	Participant Quotes	Literature
Dominance of Neoclassical Economics	Detachment from Local Realities	Neoclassical economics does not address Malaysia's unique socio-economic challenges like government policies and regional disparities.	'We continue to rely on models that don't fit our local context.' 'Focus on equilibrium overlooks critical social justice issues.' [E1, P1]	[13,19]
Lack of Curriculum Flexibility	Institutional Inertia	Curriculum design remains rigid, preventing the integration of diverse economic paradigms.	'Our curriculum doesn't allow for much variation.' S1: 'We need more space for creative and diverse economic theories.' [E3, S1]	[26,34]
Faculty Training and Development	Resistance to Change	Faculty members are unprepared to teach heterodox economics due to lack of training and exposure.	'Faculty are resistant to change because they've only been trained in the traditional model.' 'We lack professional development opportunities.' [E2, P3]	[25]
Textbook and Resource Development	Need for Locally Relevant Resources	The textbooks available are not tailored to Malaysia's socio-economic context, limiting the relevance of the curriculum.	'There's a clear lack of locally relevant textbooks.' E5based textbooks that don't reflect our country's issues.' [S2, E5]	[26]
Institutional Resistance and Policy Recommendations	Top-Down and Bottom-Up Reforms	Institutional resistance to pluralism exists, but there is recognition that change is needed.	'There's a conservative view within our universities.' 'Change needs to come from both top-down and bottom-up efforts.' [C4, P1]	[34,54]

## DISCUSSION

While this study emphasizes the dominance of the neoclassical approach in Malaysian economics education, it is important to acknowledge that the landscape of economic thought is not uniform across all countries. In other parts of the world, the New-Keynesian approach has gained prominence in both academic teaching and policy-related discussions. This contrast highlights the importance of contextualizing the dominance of certain paradigms within specific national or institutional settings. The focus of this study is not to suggest that the neoclassical paradigm universally dominates economics education worldwide, but rather to use Malaysia as a case study to examine how a predominant theoretical orientation may shape curriculum design, student learning and critical engagement. Recognizing these variations across countries supports our broader argument for the need to incorporate pluralism into economics education, one that reflects both global diversity and local relevance. By doing so, curricula can be adapted to include a wider range of economic perspectives that equip students with a more comprehensive and critical understanding of economic issues, regardless of national context.

The dominance of neoclassical economics in the curriculum is perceived as a double-edged sword. On one hand, neoclassical models provide a robust theoretical foundation that emphasizes market mechanisms, rational behaviour and equilibrium. These models are crucial for understanding the fundamental principles of economics and are essential for building students' foundational knowledge. However, the analysis reveals that this dominance also leads to a narrow interpretation of economic phenomena, which may not fully capture the complexities of the real world. Educators and curriculum developers argue that the focus on neoclassical economics overshadows alternative theories that could provide deeper insights into issues such as income inequality, environmental sustainability, and social justice. The omission of these alternative perspectives is seen as a significant gap, potentially limiting students' ability to critically engage with a diverse range of economic issues. The analysis underscores a strong consensus on expanding the economics curriculum to include diverse economic theories such as Marxist, feminist, Keynesian and ecological economics. This broader approach would enrich students' understanding and better prepare them for the complexities of the global economy. Exposure to multiple paradigms would foster critical thinking, allowing students to evaluate various models and apply them to real-world issues. Such a pluralistic curriculum would equip students with a wider range of analytical tools, enhancing their ability to address complex problems like inequality, environmental degradation, and global warming. Despite the clear benefits, integrating diverse economic theories presents several challenges. A thoughtful redesign of the curriculum is necessary to balance depth and breadth of content, avoiding cognitive overload. Curriculum developers must structure the content to build on existing knowledge while introducing new perspectives coherently to ensure that theories are not treated as isolated topics but are interconnected within the broader economic narrative is crucial. The dominance of neoclassical economics in current curricula can constrain students' analytical frameworks. Neoclassical models, focusing on equilibrium and efficiency, may limit students' ability to address issues that do not fit these models, such as market failures, social injustices, and environmental impacts. This narrow focus risks providing a one-dimensional view of economic phenomena, potentially leaving students less equipped to engage with real-world complexities involving power dynamics, ethical considerations, and historical context.

The analysis reveals a consensus that the neoclassical focus in economics education limits students' ability to tackle complex and multifaceted economic issues. Educators and students note that neoclassical models often fall short in analysing global challenges and their impacts on different socioeconomic groups. These models may lack the tools necessary for a comprehensive assessment of real-world problems, resulting in a limited engagement with economic complexities.

Curriculum developers also express concerns that neoclassical theories, with their focus on abstract concepts and ideal conditions, fail to address real-world interactions and institutional factors. This narrow focus can undermine students' preparedness for diverse economic challenges. Participants argue that neoclassical economics often neglects important social, historical, and political dimensions. Educators critique the emphasis on equilibrium and efficiency for overlooking critical aspects such as historical context and power dynamics. This gap can lead to a constrained perspective, where students struggle to consider broader implications and underlying causes of economic phenomena. Curriculum developers highlight the failure of neoclassical models to account for market imperfections and institutional influences, further emphasizing the limitations of this framework. Incorporating diverse economic paradigms, such as Marxist, feminist and ecological economics, can broaden students' analytical frameworks and improve their ability to evaluate complex problems. A more inclusive approach allows students to engage with economic issues from multiple perspectives, fostering critical thinking and a nuanced understanding of topics like inequality, globalization, and environmental sustainability. However, integrating these theories requires careful curriculum design to balance depth and breadth, avoiding cognitive overload while ensuring a coherent learning experience.

The analysis highlights a critical imbalance in economics education between theoretical instruction and practical application. Educators, students and curriculum developers express frustration with the curriculum's heavy focus on abstract theories, which often neglects practical, real-world application. This imbalance leads to students excelling in theoretical knowledge but struggling to apply it to real-world economic challenges. Students have called for more practical applications in coursework, emphasizing the need for practical examples, case studies, simulations and experiential learning opportunities. Integrating these elements can bridge the gap between abstract concepts and real-world application, enhancing students' problem-solving skills and relevance in the modern economic landscape. A curriculum that balances theoretical instruction with practical application better prepares students for their careers by making economic education more relevant and engaging. To achieve this, educators must carefully plan and identify suitable case studies and simulations that align with theoretical concepts. Implementing these practical components may require additional resources, including time, materials and faculty training. Professional development programs can aid faculty in integrating practical applications into their teaching. The findings also reveal a shortcoming in the curriculum's reliance on neoclassical models, which often overlook contemporary economic complexities like inequality and environmental sustainability. Incorporating alternative economic theories could offer a more comprehensive understanding of these issues by revising the curriculum



to include these perspectives, while resource-intensive, would enhance its effectiveness and relevance, better preparing students for real-world economic challenges.

Curriculum developers recognize the need to adapt the curriculum to better support students in applying theoretical knowledge to practical situations. They acknowledge that students often struggle with applying theoretical concepts to complex real-world scenarios. To address this, efforts should be made to integrate more case studies, simulations and practical problem-solving exercises, enhancing students' ability to apply theoretical knowledge effectively. There is consensus that incorporating alternative economic paradigms that can enrich students' understanding of economic issues and enhance critical thinking. However, integrating these diverse perspectives poses challenges, including the risk of overwhelming students with conflicting theories. Careful curriculum design is essential to balance these perspectives without causing confusion. A structured approach, starting with foundational concepts and gradually introducing more complex theories, is crucial. Investing in curriculum design and faculty training supports this integration, ensuring a coherent and manageable learning experience. Feedback from students indicates that exposure to a range of economic theories makes the subject matter more engaging and relevant. Comparative case studies demonstrate the application of different theories to various economic issues, enhancing students' analytical skills and understanding. This approach helps students develop a nuanced view of economic challenges and prepares them to tackle complex issues with a well-rounded perspective. Continuous refinement of the curriculum, informed by feedback from students and educators, ensures that it remains effective and engaging.

### **Comparative Insights from International Contexts**

To enhance the relevance and global applicability of the findings, comparative case studies from other countries engaged in reforming economics education are considered. In the United Kingdom, the Rethinking Economics movement has played a pivotal role in challenging the dominance of neoclassical economics in university curricula. Although initiatives such as the CORE Econ project aim to broaden the curriculum by including real-world issues like inequality and financial instability, critics argue that these reforms still fail to embrace a truly pluralist approach [114]. Lawson critiques CORE Econ, noting that it tends to present a narrow selection of economic paradigms, leaving out critical heterodox traditions which are vital for addressing the complexities of global challenges [67]. In Germany, the student-led International Student Initiative for Pluralist Economics (ISIPE) has advocated for a curriculum that incorporates historical, institutional, and feminist economics, as well as environmental economics, to offer a more comprehensive understanding of economic issues [115]. These movements argue that the

current economics curriculum, dominated by neoclassical thought, fails to provide students with the necessary tools to critically analyse economic systems, especially in the context of global financial crises and climate change [116]. Meanwhile, in Malaysia, the Ministry of Education's planned curriculum reforms for 2027 signal an increasing openness to pedagogical innovation [117,118]. As part of these reforms, there is an emphasis on developing critical thinking skills and aligning the curriculum with global best practices from countries such as Finland and Singapore. While these changes are not yet specific to economics education, they present an opportunity to incorporate pluralist economic perspectives. Such reforms are in line with the recommendations of the Malaysian Economic Association, which has called for integrating diverse economic paradigms into the national curriculum to better equip students to address contemporary challenges [119]. These international comparisons underscore a broader movement towards transforming economics education to better reflect the complexity of real-world economic issues. They reinforce the argument for Malaysian economic education to move beyond the confines of a single theoretical framework and to embrace a more inclusive, interdisciplinary approach. This shift is not only necessary to improve the quality of economic education but also to ensure that students are equipped with the skills required to tackle global challenges such as inequality, environmental sustainability, and financial instability.

### **Integrating Alternative Economic Models into Curriculum**

In economics education, traditional models such as statistical modelling are the core components of the curriculum. These models help students develop essential quantitative skills, understand market behaviour and analyse economic phenomena. Neoclassical economics focuses on equilibrium and efficient markets, while statistical modelling offers tools for data analysis and explores strategic decision-making in economic interactions. While these models are foundational to economics education, they come with notable limitations. Traditional models often fail to account for the complexities of real-world economic issues. Neoclassical models, which rely heavily on the assumption of equilibrium, do not capture systemic crises, market failures or environmental degradation, which are becoming increasingly important in contemporary economic discussions. Additionally, there is a noticeable absence of alternative economic paradigms in many curricula, such as behavioural economics, ecological economics, or feminist economics. These paradigms offer valuable insights into critical societal issues such as inequality, sustainability and social justice. Moreover, the curriculum's emphasis on technical skills while valuable for developing quantitative competence may limit students' ability to critically engage with the broader implications of economic theory and policy. Students often become proficient in mathematical models but may struggle to understand how these models relate to real-world economic and social challenges.

To address these shortcomings, we advocate for a more balanced and pluralistic approach to economics education. It is essential to include diverse economic theories alongside traditional models. Integrating behavioural economics can help explain human irrationality and biases, while ecological economics can highlight the relationship between economics and the environment. Additionally, we suggest blending economics with interdisciplinary fields like environmental science, sociology and political science. This would allow students to address complex global issues, such as climate change and inequality, in a more integrated manner. Models should also be complemented by case studies, real-world examples and policy debates to show how economic theories play out in the practical world. This would help students bridge the gap between theoretical knowledge and real-world challenges. It is crucial to foster a learning environment where students are encouraged to critically evaluate the assumptions behind dominant models. By engaging in debates and exploring alternative economic solutions, students can develop a more comprehensive understanding of economic issues.

Integrating these suggestions into the economics curriculum offers several benefits. It would enhance critical thinking by encouraging students to question the assumptions and limitations of traditional economic models. By studying a wider array of economic perspectives, students would be better equipped to address pressing global challenges such as inequality, environmental degradation and financial crises. Furthermore, a more diversified curriculum would better prepare students for careers in a rapidly changing world by providing them with the intellectual flexibility to approach economic problems from multiple viewpoints. While technical models such as econometrics and game theory are crucial to the economics curriculum, it is equally important to integrate alternative economic paradigms to provide students with a more holistic education. By balancing technical expertise with a broader understanding of economic theory, students will be better prepared to navigate the complexities of the modern world and develop sustainable, inclusive solutions to global economic challenges.

### **Balancing Technical Skills and Pluralism in Economics Education**

Technical skills, including quantitative analysis, statistical methods and strategic modelling, are critical for equipping students with the tools to rigorously analyse economic data and understand complex economic interactions. These skills enable students to develop a strong analytical foundation essential for addressing real-world economic problems and engaging with issues such as market behaviour, financial systems, policy analysis and economic forecasting. However, these technical aspects should not be the exclusive focus of the curriculum. An overemphasis on technical subjects without integrating alternative economic perspectives can limit students' ability to think critically about the broader implications of economic theory and policy. We advocate for a balanced approach

where technical skills are taught alongside diverse economic paradigms. This would allow students to gain expertise in essential analytical techniques while also being exposed to different schools of thought. Such an integrated curriculum would equip students with both technical skills and the intellectual flexibility necessary to tackle contemporary economic challenges. A curriculum dominated by neoclassical economics, for example, may restrict students' exposure to alternative viewpoints, hindering their capacity to address global challenges like inequality, climate change, or financial crises. Therefore, rather than removing technical subjects, we suggest integrating them within a pluralistic framework. This integration would allow students to develop their technical expertise while also gaining exposure to diverse economic theories. It would help students understand quantitative models and methods while also offering alternative solutions to global issues. Furthermore, integrating pluralism into the curriculum can enrich students' understanding of economics by fostering critical thinking and a more comprehensive view of economic problems. This balanced approach would encourage students to critically evaluate the assumptions of dominant economic models, enabling them to think creatively when addressing real-world issues. By maintaining technical skills while expanding the curriculum to include diverse economic perspectives, we can better prepare students for the complexities of the modern world. This approach would combine rigorous technical training with an understanding of diverse economic viewpoints, contributing to more sustainable and inclusive policy solutions.

### **Perceived Career Relevance of Heterodox Economics**

Beyond internal academic and institutional factors, external influences particularly the perceived expectations of potential employers play a critical role in shaping the economics curriculum. Several participants in this study, especially students and early-career professionals, expressed concern that knowledge of heterodox or non-mainstream economic theories may not be as valued in the job market compared to conventional neoclassical frameworks. As one student put it, *'I worry that employers won't value knowledge of Marxist or ecological economics'* (S2). This sentiment reflects a broader tension between academic pluralism and the employability agenda that often drives curriculum design in higher education. This concern highlights how curriculum development is not solely driven by pedagogical ideals but also by economic rationales and market demands. Institutions may feel compelled to prioritize theories and models that are more widely accepted in the private sector or within government agencies, under the assumption that these are more likely to equip graduates with 'market-ready' skills. As a result, there is a risk that valuable critical perspective such as feminist, ecological, or post-Keynesian economics are marginalized or excluded altogether, despite their relevance for addressing complex global issues. Nevertheless, this

line of reasoning is increasingly being challenged but it can be argued that the rapidly evolving demands of the global economy require a new kind of economist one who is capable of thinking across paradigms and applying a broader set of analytical tools to address issues such as inequality, climate change, and sustainability. From this perspective, a pluralistic curriculum does not undermine employability but rather enhances it by fostering intellectual agility, creativity, and problem-solving abilities. Therefore, while concerns about employer expectations are legitimate and influential, they should not be seen as barriers to curricular reform but highlight the need for a dialogue between academia and industry that redefines what constitutes 'relevant' economic knowledge in the 21st century. Incorporating pluralism in economics education can thus be positioned not just as an academic ideal, but as a strategic enhancement of graduate employability in an increasingly complex and uncertain world.

### **Integrative Pluralistic Economics Learning Model (IPELM)**

The Integrative Pluralistic Economics Learning Model (IPELM) presents a comprehensive approach to addressing the longstanding challenges in economics education, particularly the dominance of neoclassical economics and the limited exposure students have to alternative paradigms. By proposing a phased and structured model, IPELM encourages the development of students' critical thinking, analytical flexibility, and real-world problem-solving skills. The model is designed to introduce economic theories progressively, ensuring a solid foundation before exposing students to complex, contrasting perspectives. This structure not only supports intellectual development but also helps manage the cognitive complexity that often arises when learners are confronted with diverse and sometimes conflicting theoretical frameworks. In the foundational phase, students are introduced to key concepts within neoclassical economics such as market equilibrium, supply and demand, marginal analysis, and rational choice. These fundamental ideas serve as the building blocks for understanding economic behaviour and are presented in a simplified, logical structure to create an initial conceptual anchor. While neoclassical theory has been critiqued for its abstract assumptions and limited real-world applicability, its systematic and analytical clarity offers students an accessible starting point into the discipline of economics. Following the foundational phase, the intermediate phase incorporates alternative paradigms economics. These are taught alongside neoclassical frameworks to allow for comparative analysis. Students are encouraged to explore the theoretical assumptions, methodological approaches and socio-political contexts of each school of thought. This stage fosters an appreciation for the plurality of economic ideas and reinforces the notion that economics is not a neutral science but one that is deeply embedded in social, historical, and political realities. This comparative approach nurtures intellectual openness and

challenges students to critically assess the strengths and limitations of each framework. The advanced phase of the model focuses on integration and application. Students at this level are guided to synthesize insights from multiple economic theories and apply them to analyse complex global issues such as inequality, climate change, globalization, financial instability, and economic justice. Teaching strategies include real-world case studies, group projects, and policy simulations, allowing students to use theoretical tools in a contextually relevant manner. This phase deepens learners' understanding of how different paradigms offer distinct explanations and solutions, enabling them to engage with contemporary challenges in a more nuanced and informed way.

To support this layered pedagogical approach, IPELM emphasizes the use of a variety of teaching tools and learning aids. Detailed guides, visual illustrations and interactive simulations are used to help students visualize and internalize abstract economic concepts. Comparative charts and theory maps are recommended to help learners categorize ideas and identify inter-paradigm connections. Peer-led discussions, tutoring sessions, and moderated online forums create a collaborative learning environment where students can ask questions, exchange views, and clarify misunderstandings. These support systems are essential for reducing cognitive overload and maintaining student engagement across the different phases of the model. While IPELM offers a strong conceptual framework for advancing pluralistic economic education, the model, as reviewers rightly point out, currently lacks empirical validation. Its theoretical soundness must be tested in real educational settings through pilot studies and outcome-based evaluations. Empirical research is necessary to measure the model's effectiveness in enhancing student understanding, promoting critical thinking, and increasing engagement compared to traditional, monolithic economics curricula. This could involve pre- and post-course assessments, longitudinal tracking of learning outcomes, and comparative analyses across institutions that implement the model versus those that retain conventional approaches. Additionally, the model must contend with practical institutional challenges that could hinder its implementation. One major issue is the need for faculty development. Many instructors in economics departments are trained predominantly in neoclassical theory and may lack the confidence or expertise to teach alternative paradigms. Therefore, professional development programs are essential to equip educators with the necessary knowledge and pedagogical tools to adopt a pluralistic approach. Moreover, curriculum redesign may be required, including revising course structures, assessment methods, and instructional materials. Such changes demand institutional support and a commitment to innovation in teaching. Resource limitations, particularly in institutions with budget constraints, can also pose significant obstacles. Adequate teaching materials, digital resources, and time allocations are critical to ensuring that pluralistic content is not only included but effectively

delivered. Despite these challenges, IPELM represents a timely and innovative response to the growing demand for a more inclusive and critical economics education. By offering a phased introduction to diverse theories, supported by interactive pedagogy and real-world applications, the model prepares students to navigate economic complexity with analytical depth and intellectual flexibility. Moving forward, future research should focus on the empirical validation of IPELM and on identifying best practices for overcoming the practical barriers to its adoption. With institutional backing and a commitment to educational reform, IPELM has the potential to reshape economics education in Malaysia and beyond, fostering a generation of economists who are better equipped to address the multifaceted challenges of the 21st-century economy.

## CONCLUSIONS

The analysis of the current economics curriculum reveals a significant dominance of neoclassical economics, which, while providing a solid theoretical foundation, also limits students' exposure to alternative economic perspectives. This narrow focus may hinder students' ability to critically engage with complex, real-world economic issues such as income inequality, environmental sustainability and social justice. The findings suggest that a pluralistic approach, incorporating diverse economic theories like feminist, Marxist, Keynesian, and ecological economics would better prepare students for the multifaceted challenges of the modern economy. Additionally, the current curriculum's emphasis on theoretical models, often at the expense of practical application, may leave students underprepared to apply their knowledge to real-world scenarios. Integrating more practical exercises, case studies and experiential learning opportunities could enhance students' problem-solving skills and make economic education more relevant to contemporary issues.

## LIMITATIONS OF THE STUDY

This study is limited by its focus on a specific subset of participants, including educators, students and curriculum developers, which may not fully capture the diversity of perspectives within the broader academic and professional communities. Additionally, the analysis is based on qualitative data, which, while providing rich insights, may not be generalizable to all educational contexts. The study also primarily considers the curriculum within a particular educational framework, potentially overlooking variations in economics education across different institutions and cultural contexts. Furthermore, the study does not quantitatively measure the impact of a pluralistic curriculum on students' learning outcomes, leaving room for future research to explore this relationship.

## FURTHER RECOMMENDED RESEARCH

Future research should investigate how a pluralistic approach in economics education impacts students' critical thinking, problem-solving skills and real-world preparedness. Quantitative studies could measure how diverse theoretical perspectives enhance understanding of complex economic issues. Additionally, examining the influence of various educational contexts on the implementation and outcomes of a pluralistic curriculum would be valuable. Longitudinal studies tracking students' performance and career success after exposure to a pluralistic curriculum could reveal its long-term benefits. Incorporating views from policymakers, employers, and economists could help develop a more inclusive and effective economics curriculum.

## AUTHOR CONTRIBUTIONS

Conceptualization, SAn and AF; Methodology, SAn and CHW; Software, SAn and KLA; Validation, SAn, AF and CHW; Formal Analysis, SAn and CHW; Investigation, SAn and KLA; Resources, SAn and AF; Data Curation, SAn and KLA; Writing-Original Draft Preparation, SAn and CHW; Writing—Review & Editing, SAn, AF, CHW, KLA and SAh; Visualization, SAn and KLA; Supervision, AF and SAh; Project Administration, AF and SAh; Funding Acquisition, SAn and CHW.

## CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

## REFERENCES

1. Adnan MZ, Majid MZA. Gamification in economics subject: A dual perspective on student and teacher understanding. *Int J Acad Res Prog Educ Dev*. 2024;13(1). doi: 10.6007/ijarped/v13-i1/20503
2. Terpstra-Tong JLY, Ahmad A. High school-university disconnect: A complex issue in Malaysia. *Int J Educ Manag*. 2018;32(5):851-65.
3. Jalalian Daghigh A, Abdul Rahim H. Neoliberalism in ELT textbooks: An analysis of locally developed and imported textbooks used in Malaysia. *Pedagogy Cult Soc*. 2021;29(3):493-512.
4. Wilson DS, Snower DJ. Rethinking the Theoretical Foundation of Economics I: The Multilevel Paradigm. *Economics*. 2024;18(1):20220070.
5. Leming JS. On the normative foundations of economic education. *Theory Res Soc Educ*. 1987;15(2):63-76.
6. King JEE, Millmow A. Death of a revolutionary textbook. *Hist Polit Econ*. 2003;35(1):105-34.
7. Bartlett R, Ferber M, Green C. The committee on economic education: Its effect on the introductory course and women in economics. *Forum Soc Econ*. 2009;38(2-3):153-72.
8. Cranmer S. Enhancing graduate employability: Best intentions and mixed outcomes. *Stud High Educ*. 2006;31(2):169-84.



9. Howson S. Lionel Robbins. Cambridge (UK): Cambridge University Press; 2011.
10. Brant J, Panjwani F. School economics and the aims of education: Critique and possibilities. *J Crit Realism*. 2015;14(3):306–24.
11. Kopnina H. Neoliberalism, pluralism and environmental education: The call for radical re-orientation. *Environ Dev*. 2015;15:120-30.
12. Kopnina H, Cherniak B. Neoliberalism and justice in education for sustainable development: A call for inclusive pluralism. *Environ Educ Res*. 2016;22(6):827-41.
13. Amin RM, Haneef MA. The quest for better economics graduates: Reviving the pluralist approach in the case of the International Islamic University, Malaysia. *Int J Pluralism Econ Educ*. 2011;2(1):96-113.
14. Laibman D. Is There a Classical Theory of Supply and Demand? In: Laibman D, editor. *Growth, Distribution and Effective Demand*. London (UK): Routledge; 2019. p. 279-92.
15. Bowles S, Carlin W. What students learn in economics 101: Time for a change. *J Econ Lit*. 2020;58(1):176-214.
16. Rich P. The Whys and Hows of Theory—Comparing cognitive science and economics. *Comput Brain Behav*. 2024;7:523-34.
17. Aveklouris A, DeValve L, Stock M, Ward A. Matching impatient and heterogeneous demand and supply. *Oper Res*. 2024;73(3):1151-1722.
18. Cavalieri D. Complexity in economics: System dynamics and policy implications. *Hist Econ Ideas*. 2017;25(3):101-36.
19. Jafar M, Hatta ZA, Nikku BR. Integrating welfare economics in social work curriculum: A Malaysian case. *Soc Work Educ*. 2018;37(5):652-64.
20. Watson JKP. Education and cultural pluralism in South East Asia, with special reference to Peninsular Malaysia. *Comp Educ*. 1980;16(2):139-58.
21. Shari I. Economic growth and income inequality in Malaysia, 1971–95. *J Asia Pac Econ*. 2000;5(1-2):112-24.
22. Yilmaz E. An overview of waste in the context of Islamic economics and heterodox approaches: On common discourses. *Int J Ethics Syst*. 2024. doi: 10.1108/IJOES-08-2023-0177.
23. Ainscow M. Inclusion and equity in education: Making sense of global challenges. *Prospects*. 2020;49(3):123-34.
24. Small SF, Braunstein E. Has the Feminist Economics Intellectual Project Lost Its Way? An analysis of the journal's evolution. *Fem Econ*. 2024;30(1):1-39.
25. Mir FA, Rezania D, Baker R. Managing change in pluralistic organizations: The role of normative accountability assumptions. *J Change Manag*. 2020;20(2):123-45.
26. Pyvis D, Chapman A. Why university students choose an international education: A case study in Malaysia. *Int J Educ Dev*. 2007;27(2):235-46.
27. Garnett RF. Rethinking the pluralist agenda in economics education. *Int Rev Econ Educ*. 2009;8(2):58-71.
28. Peterson J. Economics education after the crisis: Pluralism, history, and institutions. *J Econ Issues*. 2013;47(2):401-10.

29. Adams EC. Economics and the civic mission of social studies education: Two critiques of neoclassicism. *Citizen Soc Econ Educ*. 2019;18(1):16-32.
30. Colander D. The making of an economist redux. *J Econ Perspect*. 2005;19(1):175-98.
31. Allais S. Economics imperialism, education policy and educational theory. *J Educ Policy*. 2011;27(2):253-74.
32. Lawson T. *Reorienting Economics*. 1st ed. London (UK): Routledge; 2003.
33. Padayachee V. A man for a crisis: Keynesianism, economic theory and the future of civilization. *Int Rev Appl Econ*. 2020;34(2):291-9.
34. Fine B, Milonakis D. *From economics imperialism to freakonomics: The shifting boundaries between economics and other social sciences*. London (UK): Routledge; 2009.
35. Harvey M. The Food-Energy-Climate change trilemma: Toward a socio-economic analysis. *Theory Cult Soc*. 2014;31(5):155-82.
36. Folbre N. Time use and living standards. *Soc Indic Res*. 2009;93:77-83.
37. Kabeer N. Gender Equality, Economic Growth, and Women's Agency: The 'Endless Variety' and 'Monotonous Similarity' of Patriarchal Constraints. *Fem Econ*. 2015;22(1):295-321.
38. Nelson JA. Feminism and economics. *J Econ Perspect*. 1995;9(2):131-48.
39. Hodgson GM. How Can Evolutionary Economics Evolve? In: Aruka Y, editor. *Evolutionary Controversies in Economics*. Tokyo (Japan): Springer; 2001. p. 1-12.
40. North DC. Institutions and Economic Theory. *Am Econ*. 2016;61(1):72-6.
41. Kallis G, Kostakis V, Lange S, Muraca B, Paulson S, Schmelzer M, et al. Research on degrowth. *Annu Rev Environ Resour*. 2018;43(1):291-316.
42. DeMartino G, Grabel I, Scoones I. Economics for an uncertain world. *World Dev*. 2024;173:106426.
43. Siddiqui K. Economic Policy—State Versus Market Controversy. *Equilibrium*. 2015;10(1):9-32.
44. Gumede V. Post-colonial development in Africa—Samir Amin's lens. *Politikon*. 2023;50(4):438-51.
45. Marshall A. *Principles of Economics*. London (UK): Macmillan; 1890.
46. Hall C, Lindenberger D, Kümmel R, Kroeger T, Eichhorn W. The need to reintegrate the natural sciences with economics. *BioScience*. 2001;51(8):663-73.
47. Giraud YB. The changing place of visual representation in economics: Paul Samuelson between principle and strategy, 1941–1955. *J Hist Econ Thought*. 2010;32(2):175-97.
48. Stiglitz JE. Information and the change in the paradigm in economics. *Am Econ Rev*. 2002;92(3):460-501.
49. Rodrik D. *Economics Rules: Why Economics Works, When It Fails, and How to Tell the Difference*. Oxford (UK): OUP Oxford; 2015.
50. Friedman M. *Essays in Positive Economics*. Chicago (US): University of Chicago Press; 1953.

51. Varian HR. What Use Is Economic Theory? Ann Arbor: Department of Economics, University of Michigan; 1993. Available from: <https://hdl.handle.net/2027.42/101038>. Accessed on 18 Feb 2025.
52. Debreu G. Market equilibrium. *Proc Natl Acad Sci USA*. 1956;42(11):876-8.
53. Mankiw NG, Taylor MP. Economics. London (UK): Cengage Learning EMEA; 2020.
54. Chang HJ. Economics: the user's guide. New York (US): Bloomsbury Publishing USA; 2014.
55. Kahneman D, Tversky A. Prospect theory: An analysis of decision making under risk. *Econometrica*. 1979;47:263-91.
56. Krugman PR, Obstfeld M. International economics: Theory and policy. Harlow (UK): Pearson Education; 2009.
57. Stiglitz JE. Lessons from the global financial crisis of 2008. *Seoul J Econ*. 2010;23(3):321-39.
58. Chen J, Galbraith JK. A common framework for evolutionary and institutional economics. *J Econ Issues*. 2012;46(2):419-28.
59. Blanchard O, Summers L. Rethinking Stabilization Policy. Back to the Future. Washington (US): Peterson Institute for International Economics; 2017.
60. Acemoglu D, Robinson JA. Economics versus politics: Pitfalls of policy advice. *J Econ Perspect*. 2013;27(2):173-92.
61. Dollar D, Kraay A. Institutions, trade, and growth. *J Monet Econ*. 2003;50(1):133-62.
62. Piketty T. Putting distribution back at the center of economics: Reflections on capital in the twenty-first century. *J Econ Perspect*. 2015;29(1):67-88.
63. Kattel R, Mazzucato M, Ryan-Collins J, Sharpe S. The economics of change: Policy appraisal for missions, market shaping and public purpose. London (UK): Institute for Innovation and Public Purpose; 2018. Available from: [https://discovery.ucl.ac.uk/id/eprint/10195745/1/Mazzucato\\_ipp-pb-02-economics-of-change-03-08-2018.pdf](https://discovery.ucl.ac.uk/id/eprint/10195745/1/Mazzucato_ipp-pb-02-economics-of-change-03-08-2018.pdf). Accessed on 20 Feb 2025.
64. Jomo KS, Fine B, editors. The New Development Economics: Post Washington Consensus Neoliberal Thinking. London (UK): Zed Books; 2006.
65. Gomez ET, Jomo KS. Malaysia's Political Economy: Politics, Patronage and Profits. Cambridge (UK): CUP Archive; 1999.
66. Dow S. Economic methodology, the philosophy of economics and the economy: Another turn? *J Econ Methodol*. 2021;28(1):46-53.
67. Lawson T. Essays on: The Nature and State of Modern Economics. London (UK): Routledge; 2015.
68. Peters MA. Classical political economy and the role of universities in the new knowledge economy. *Globalisation Soc Educ*. 2003;1(2):153-68.
69. Paavola J, Adger WN. Institutional ecological economics. *Ecol Econ*. 2005;53(3):353-68.
70. Kregel JA. Economic Development and Financial Instability: Selected Essays. London (UK): Anthem Press; 2014.
71. Prasad BC. Institutional economics and economic development: the theory of property rights, economic development, good governance and the environment. *Int J Soc Econ*. 2003;30(6):741-62.

72. Asutay M. A political economy approach to Islamic economics: Systemic understanding for an alternative economic system. *Kyoto Bull Islam Area Stud.* 2007;1(2):3-18.
73. Iqbal Z, Mirakhor A, editors. *Economic Development and Islamic Finance.* Washington (US): World Bank Publications; 2013.
74. Dusuki AW, Abdullah NI. Maqasid al-Shariah, Maslahah, and corporate social responsibility. *Am J Islam Soc Sci.* 2007;24(1):25.
75. Askari H, Iqbal Z, Mirakhor A. *Introduction to Islamic Economics: Theory and Application.* Hoboken (US): John Wiley & Sons; 2014.
76. Shaikh A. *Capitalism: Competition, Conflict, Crises.* Oxford (UK): Oxford University Press; 2016.
77. Fine B, Saad-Filho A. Marxist Economics. In: Fine B, Saad-Filho A, editors. *Rethinking Economics.* London (UK): Routledge; 2017. p. 19-32.
78. Cammack P. Marx on social reproduction. *Hist Mater.* 2020;28(2):76-106.
79. Seguino S. The global economic crisis, its gender and ethnic implications, and policy responses. *Gend Dev.* 2010;18(2):179-99.
80. Lombardo E, Meier P, Verloo M. Policymaking from a gender+ equality perspective. *J Women Polit Policy.* 2017;38(1):1-19.
81. Benería L, Berik G, Floro M. *Gender, Development and Globalization: Economics as if All People Mattered.* London (UK): Routledge; 2015.
82. Costanza R, Cumberland JH, Daly H, Goodland R, Norgaard RB. *An Introduction to Ecological Economics.* Boca Raton (US): CRC Press; 1997.
83. Martinez-Alier J, O'Connor M. Distributional Issues: An Overview. In: van den Bergh JCJM, editor. *Handbook of Environmental and Resource Economics.* Cheltenham (UK): Edward Elgar; 2002. p. 380-92.
84. Rockström J. Bounding the planetary future: Why we need a great transition. *Great Transition Initiat.* 2015;9:1-13.
85. Mastini R, Kallis G, Hickel J. A green new deal without growth? *Ecol Econ.* 2021;179:106832.
86. Kallis G. Radical dematerialization and degrowth. *Philos Trans R Soc A.* 2017;375(2095):20160383.
87. Stiglitz JE. *The Revolution of Information Economics: The Past and the Future (Working Paper No. w23780).* Cambridge (UK): National Bureau of Economic Research; 2017.
88. Kaufman BE. The Institutional and Neoclassical Schools in Labor Economics. In: Kaufman BE, editor. *The Institutionalist Tradition in Labor Economics.* London (UK): Routledge; 2018. p. 13-38.
89. Fullbrook E. *A Guide to What's Wrong with Economics.* London (UK): Anthem Press; 2004.
90. Denis A. Pluralism in economics education. *Int Rev Econ Educ.* 2009;8(2):6-22.
91. Stilwell F. Teaching a pluralist course in economics: The University of Sydney experience. *Int J Pluralism Econ Educ.* 2011;2(1):39-56.
92. Ren ITY. The neoliberal agenda of the Malaysian education Blueprint 2013-2025: A framework for the development of cosmopolitan nationalism. *J Int Educ.* 2024;6:23-42.

93. Porak L, Reinke R. The contribution of qualitative methods to economic research in an era of polycrisis. *Rev Evol Polit Econ*. 2024;5(1):31-49.
94. Ecim D, Maroun W. A review of integrated thinking research in developed and developing economies. *J Account Emerg Econ*. 2023;13(3):589-612.
95. Ho OTK, Gajanayake A, Iyer-Raniga U. Transitioning to a state-wide circular economy: Major stakeholder interviews. *Resour Conserv Recycl Adv*. 2023;19:200163.
96. Moulaei K, Sheikhtaheri A, Fatehi F, Shanbehzadeh M, Bahaadinbeigy K. Patients' perspectives and preferences toward telemedicine versus in-person visits: A mixed-methods study on 1226 patients. *BMC Med Inform Decis Mak*. 2023;23(1):261.
97. De Paoli S. Performing an inductive thematic analysis of semi-structured interviews with a large language model: An exploration and provocation on the limits of the approach. *Soc Sci Comput Rev*. 2023;42(4):997-1019.
98. Decker S, Elsner W, Flechtner S. *Advancing Pluralism in Teaching Economics*. London (UK): Routledge; 2019.
99. Meyenburg I. Pluralism in economics and the question of ontological pluralism. *J Econ Methodol*. 2024;31(2):106-19.
100. Drachmann N, Haukås Å, Lundberg A. Identifying pluralistic approaches in language subjects in Denmark, Norway, and Sweden-A comparative curriculum analysis. *Lang Cult Curric*. 2023;36(3):327-42.
101. Creswell JW, Poth CN. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Thousand Oaks (US): Sage Publications; 2016.
102. Kim Y. The pilot study in qualitative inquiry: Identifying issues and learning lessons for culturally competent research. *Qual Soc Work*. 2011;10(2):190-206.
103. Malmqvist J, Hellberg K, Möllås G, Rose R, Shevlin M. Conducting the pilot study: A neglected part of the research process? *Int J Qual Methods*. 2019;18:1609406919878341.
104. Jamali D. A stakeholder approach to corporate social responsibility: A fresh perspective into theory and practice. *J Bus Ethics*. 2008;82:213-31.
105. Braun V, Clarke V. One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qual Res Psychol*. 2021;18(3):328-52.
106. Neale J. Iterative categorization (IC): A systematic technique for analysing qualitative data. *Addiction*. 2016;111(6):1096-106.
107. Griffiths CA, Ryan P, Foster JH. Thematic analysis of Antonovsky's sense of coherence theory. *Scand J Psychol*. 2011;52(2):168-73.
108. Ding L, Meng L. A comparative study of thematic mapping and scientific visualization. *Ann GIS*. 2014;20(1):23-37.
109. Nurman, Yusriadi Y, Hamim S. Development of pluralism education in Indonesia. *J Ethn Cult Stud*. 2022;9(3):106-20.
110. Pühringer S, Bäuerle L. What economics education is missing: the real world. *Int J Soc Econ*. 2019;46(8):977-91.
111. Dahm R. Can pluralistic approaches based upon unknown languages enhance learner engagement and lead to active social inclusion? *Int Rev Educ*. 2017;63:521-43.

112. Hassan M, Oueslati W, Rousselière D. Environmental taxes, reforms and economic growth: an empirical analysis of panel data. *Econ Syst.* 2020;44(3):100806.
113. Chapra MU. Islamic economic thought and the new global economy. *Islam Econ Stud.* 2001;9(1):1-16.
114. Michell J. CORE Econ: A Neoclassical Synthesis for the twenty-first century? *Adv Econ Educ.* 2023;2(2):145-62.
115. Thornton TB. *From Economics to Political Economy: The Problems, Promises and Solutions of Pluralist Economics.* London (UK): Routledge; 2016.
116. Fulbrook M. *A History of Germany 1918-2020: The Divided Nation.* Hoboken (US): John Wiley & Sons; 2021.
117. Bernama. Ministry Adopting Fresh Approach for 2027 School Curriculum. *Bernama.com.* Available from: <https://bernama.com/en/news.php?id=2251743>. Accessed on 12 Jan 2025.
118. Hassan MAA, Muda SB. Advancing Education: Malaysia's 2027 Curriculum Focus on Character, Literacy, Numeracy, and Integrated Learning. *ResearchGate:* Available from: <https://www.researchgate.net/publication/378125347>. Accessed on 10 Feb 2025.
119. Islam R, Islam MF, Sultana S, Horaira GA. Interplay of poverty, unemployment, education, and technology: Insights from Malaysia's economic development strategies. *J Infrastruct Policy Dev.* 2024;8(10):6357.

How to cite this article:

Annamalah S, Foroughi A, Wong CH, Aravindan KL, Ahmed S. Advancing economics education: Embracing pluralism and critical realism. *J Sustain Res.* 2025;7(3):e250049. <https://doi.org/10.20900/jsr20250049>.