

Integrating Intellectual Property Education into School Curricula in Ghana

Benjamin Oduro Arhin Jnr

Department of Music Education, School of Creative Arts, University of Education, Winneba

DOI: <https://doi.org/10.47772/IJRISS.2026.100701104>

Received: 27 July 2026; Accepted: 01 August 2026; Published: 21 August 2026

ABSTRACT

Integrating intellectual property (IP) education into post-colonial curricula is a culturally charged intervention, especially where Western juridical norms intersect with communal knowledge traditions. This qualitative study examines Ghana's prospective IP literacy integration into its pre-tertiary curriculum, utilising semi-structured interviews with 25 purposively selected stakeholders, including curriculum architects, creative arts educators, IP practitioners, and indigenous cultural custodians. Framed by Bourdieu's theory of practice, Problem-Based Learning, and UNESCO's Education for Sustainable Development (ESD) principles, thematic analysis reveals that IP frameworks are largely perceived as culturally exogenous. This generates pedagogical tensions, as educators exhibit low self-efficacy not from cognitive deficits, but from the perceived irrelevance of codified ownership logics to local creative praxis, with the current syllabus offering no space for these epistemological frictions. Paradoxically, stakeholders view IP as a potential shield for heritage, advocating for a phased, contextualised pedagogy anchored in indigenous narratives. The paper contends that sustainable IP education demands more than technical training; it requires a decolonial reorientation that repositions local artisans as primary agents of knowledge validation. Ultimately, this study provides policymakers with a critical roadmap, arguing that a carefully designed pilot phase is essential to empirically test these theorised tensions, safeguard Ghana's cultural capital, and nurture its creative economy within the basic school curriculum.

Keywords: Intellectual property education, basic school curriculum, cultural preservation, creative economy, Ghana's cultural capital, education for sustainable development

INTRODUCTION

Ghana's creative and cultural industries have emerged as significant drivers of national economic growth and global recognition, intensifying the imperative for integrating intellectual property (IP) education into the nation's basic school curricula. The arts and culture sector contributes substantially to Ghana's GDP and sustains tens of thousands of livelihoods through employment linked to cultural, creative, and tourism activities (Essel, 2013). With Africa's creative sector projected to expand considerably, Ghanaian creators stand to capture substantial value from this burgeoning market (Comunian et al., 2024). However, without foundational knowledge of IP rights including copyright, trademarks, and patents young Ghanaians risk being unable to protect their own innovations, respect the creations of others, or fully participate in the formal creative economy (Amankwah-Amoah & Medase, 2024). Introducing IP education at the basic school level equips students with essential tools to navigate a knowledge-driven future, fosters a culture of creativity and lawful use, and ensures that Ghana's next generation of artists, inventors, and entrepreneurs can translate their talents into tangible economic and social benefits. Thus, embedding IP literacy from an early age is not merely an educational enhancement but a strategic investment in the nation's sustainable development.

Recent years have witnessed landmark achievements that underscore the urgency of protecting Ghana's cultural and creative assets. Traditional Kente weaving has received Geographical Indication (GI) protection, ensuring that only Ghanaian-woven cloth using traditional techniques and produced in approved communities can be marketed as authentic Kente, thereby legally shielding this centuries-old tradition against uncompensated cultural appropriation (Asmah, 2008; Registrar General's Department, 2026). Simultaneously, UNESCO has officially designated Ghana's highlife music and dance as intangible cultural heritage, cementing more than a

century of musical innovation as a globally recognised cultural treasure. These recognitions carry profound implications for intellectual property protection, cultural preservation, and economic empowerment (Collins, 2022; OseiTutu, 2017). Despite these achievements, however, Ghana's creative sector remains plagued by systemic challenges. The Musicians Union of Ghana (MUSIGA) has highlighted persistent difficulties with royalty distribution and the operational challenges facing collective management organisations such as the Ghana Music Rights Organisation (GHAMRO), the Reprographic Society of Ghana (CopyGhana), and the Audiovisual Society of Ghana (ARSOG), indicating that even established creative professionals struggle to exercise their intellectual property rights (Acquah & Acquah-Nunoo, 2021; Abekah-Wonkyi, 2025). The case of rapper Kwesi Arthur, who accused his former record label of demanding US\$150,000 for him to use his own images in an independent project, illustrates how even successful artists can lose control of their creative works when contractual agreements are not properly understood (GhanaWeb, 2026). These examples underscore the urgent need for intellectual property education that begins before young creators enter professional relationships, as many upcoming artists fail to carefully read or fully understand the contracts presented to them, leading to loss of ownership (Morris, 2022).

The current educational framework in Ghana frequently fails to integrate creative pedagogy with a robust understanding of ownership, leaving students ill-equipped to navigate the complexities of their own intellectual contributions (Adom et al., 2021). Ghana's basic school curriculum, despite its emphasis on creative arts and cultural education, currently lacks systematic intellectual property content. While the Ministry of Education has announced plans to reintroduce art, craft, and needlework for foundational learners emphasising that this initiative provides youngest learners with tools to develop creative skills, critical thinking, and a deeper appreciation for cultural heritage, the intellectual property dimensions of creative production, ownership, protection, commercialisation, and ethical use remain conspicuously absent. The Ghana Education Service approved a new national creative arts curriculum in 2019 emphasising culturally sustaining resource development in music and visual arts education; however, research exploring the availability, accessibility, and cultural alignment of creative arts materials revealed that while teachers use Ghanaian folklore-informed books, schools face infrastructure needs and lack indigenous musical instruments and visual arts materials for the new curriculum (Adom et al., 2021). This curricular gap leaves young creators unaware of their rights and responsibilities, perpetuating a cycle of exploitation and underutilisation of Ghana's creative potential, as the current creative arts syllabus offers no discursive space for negotiating epistemological frictions between Western juridical conceptions of ownership and communal traditions of creativity and knowledge transmission (Boateng, 2011; Dladla, 2024). The legal frameworks for IP protection in Ghana including the Patents Act, 2003 (Act 657), the Trademarks Act, 2004 (Act 664), the Industrial Designs Act, 2003 (Act 660), the Geographical Indications Act, 2003 (Act 659), and the Copyright Act, 2005 (Act 690) as amended, provide robust statutory foundations, yet awareness and utilisation of these mechanisms remain low among Ghanaian inventors, educators, and educational institutions.

Globally, intellectual property education has gained recognition as an essential component of preparing youth for participation in knowledge economies. The World Intellectual Property Organization (WIPO) has developed the IP4Youth & Teachers programme aimed at bridging the knowledge gap in IP education across Sub-Saharan Africa by equipping teachers with tools to foster innovation, creativity, and economic empowerment. Uganda launched the "IP in a Box" Game Lab, an interactive "play, learn and protect" model using gamified learning to introduce intellectual property concepts to youth, enabling them to understand trademarks, patents, copyrights, and brand protection in a practical and engaging way (Penaluna & Penaluna, 2023). The UNESCO Recommendation on Open Educational Resources (2019) further calls on governments to support the creation and sharing of content for learning and teaching through open licences that respect intellectual property rights while providing permissions granting the public rights to access educational materials (Ossiannilsson et al., 2023). These international developments provide valuable precedents and resources that Ghana can adapt for its own educational context.

The integration of intellectual property education into post-colonial curricula is seldom a neutral pedagogical act; rather, it constitutes a culturally loaded intervention situated at the intersection of local knowledge ecologies, global legal frameworks, and creative economy aspirations (Dos Santos, 2024; Dladla, 2024). This qualitative study critically examines Ghana's prospective efforts to embed IP literacy into its pre-tertiary curriculum,

interrogating the pedagogical and cultural dissonances that emerge when Western juridical conceptions of ownership encounter communal traditions of creativity and knowledge transmission (Boateng, 2011). Framed through Bourdieu's theory of practice, specifically the interplay of habitus, field, and symbolic capital, alongside UNESCO's Education for Sustainable Development (ESD) principles and Problem-Based Learning pedagogy, the study addresses four research questions: (1) What is the current state of intellectual property awareness and education within Ghana's basic school curriculum? (2) How can intellectual property education be pedagogically integrated into existing subjects such as creative arts, social studies, and citizenship education? (3) What are the perceived benefits and challenges of introducing intellectual property education at the basic school level? (4) What curricular and pedagogical strategies are most appropriate for Ghanaian cultural and educational contexts?

This study makes several significant contributions to scholarship and policy. First, it addresses a critical gap in Ghanaian educational research by examining intellectual property education as an underexplored dimension of basic schooling, thereby contributing to the growing body of literature on creative economy development and cultural preservation in post-colonial contexts (Arhin Jnr et al., 2024; Arhin Jnr & Acquah, 2025). Second, it provides empirical evidence to inform policy decisions regarding curriculum reform and teacher professional development, offering a contextualised framework that other African nations grappling with similar challenges may adapt (Sanda et al., 2024; Amankwah-Amoah & Medase, 2024). Finally, the study aligns with the Sustainable Development Goals, particularly SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth), by proposing educational interventions that prepare youth for participation in knowledge-based economies and contribute to sustainable development through the protection and commercialisation of Ghana's rich cultural capital (Kioupi & Voulvoulis, 2019; Kohl & Hopkins, 2020). As Ghana's creative industries contribute approximately 4.02% to the national economy and account for 4.77% of total employment (Adu & van der Walt, 2022), the imperative for systematic IP education becomes not merely an educational enhancement but a strategic necessity for safeguarding the nation's cultural heritage and ensuring that future generations of Ghanaian creators can translate their talents into sustainable livelihoods (Agyapong et al., 2024; Arhin Jnr, 2025b).

LITERATURE REVIEW

Ghana's Creative Economy: Context and Challenges

Ghana's creative economy encompasses a diverse range of sectors, including music, film, fashion, visual arts, performing arts, digital content creation, and cultural heritage (Arhin Jnr et al., 2024; Sanda et al., 2024). The Ministry of Tourism, Culture and Creative Arts has emphasised that the creative sector remains a powerful driver of tourism, job creation, cultural preservation, and economic growth (Arhin Jnr et al., 2024). The government's allocation of GH¢20 million as seed capital for the Creative Arts Fund in the 2026 national budget, alongside commitments to rehabilitate the National Theatre and establish a Film Fund, signals growing recognition of the sector's economic potential. Ghana's creative industries contribute approximately 4.02% to the national economy and account for 4.77% of total employment, underscoring the sector's significance as an engine of sustainable development (Adu & van der Walt, 2022). The arts and culture sector sustains tens of thousands of livelihoods through employment linked to cultural, creative, and tourism activities, with Africa's creative sector projected to expand considerably in the coming decades (Essel, 2013; Comunian et al., 2024).

However, the sector's growth remains constrained by structural weaknesses in intellectual property protection. Analysis of Ghana's copyright challenges reveals a consistent pattern: under-resourced enforcement institutions, outdated royalty collection mechanisms, and widespread piracy that deprives creators of legitimate earnings (Abekah-Wonkyi, 2025; Acquah & Acquah-Nunoo, 2021). These challenges are compounded by the low levels of intellectual property awareness among creative professionals, many of whom enter professional relationships without adequate understanding of their rights and obligations (Morris, 2022). The Musicians Union of Ghana (MUSIGA) has persistently highlighted difficulties with royalty distribution and the operational challenges facing collective management organisations, indicating that even established creative professionals struggle to exercise their intellectual property rights (Acquah & Acquah-Nunoo, 2021). The case of rapper Kwesi Arthur, who accused his former record label of demanding US\$150,000 for him to use his own images in an independent project, illustrates how even successful artists can lose control of their creative works when contractual

agreements are not properly understood (GhanaWeb, 2026). These examples underscore the urgent need for intellectual property education that begins before young creators enter professional relationships, as many upcoming artists fail to carefully read or fully understand the contracts presented to them, leading to loss of ownership and exploitation (Morris, 2022).

The Legal Framework for Intellectual Property Protection in Ghana

Patents

Patent protection in Ghana is governed by the Patents Act, 2003 (Act 657), as amended by the Patents (Amendment) Act, 2020 (Act 1060). A patent is defined as the title granted to protect an invention, giving the inventor exclusive protection rights for a period of twenty years from the filing date of the application. The Act repealed and saved the previous Patent Law of 1992. While the legal framework exists, patent awareness and utilisation remain low among Ghanaian inventors and educational institutions. The Act also provides for the establishment of a Patent Policy Committee to advise on policy matters, though this body remains relatively inactive in public awareness campaigns. For Ghana's creative arts curriculum, teaching patents would involve introducing learners to the concept of protecting functional inventions, such as new musical instruments, weaving looms, or textile machinery adapted for traditional crafts (Agyapong et al., 2024). The low awareness of patent protection among Ghanaian inventors represents a significant missed opportunity for innovation and commercialisation, particularly in the creative and cultural industries where functional innovations can have substantial economic value (Amankwah-Amoah & Medase, 2024).

Trademarks

Trademark protection is provided under the Trademarks Act, 2004 (Act 664), which governs the registration and protection of brand identifiers, including words, logos, symbols, and other distinctive signs that distinguish goods and services. Applicants whose principal place of business is outside Ghana must apply through a legal entity. For creative industries, trademarks protect brand identity for musicians, fashion designers, and cultural products, enabling creators to distinguish their work from others and build brand value, thereby facilitating commercialisation (Castaldi, 2018). In educational contexts, teaching trademarks would involve helping learners understand how creators can distinguish their work from others and build brand value, thereby enabling commercialisation. The strategic use of trademarks in the creative economy has been extensively documented, with research demonstrating that trademark registration correlates with increased revenue and market recognition for creative enterprises (Castaldi, 2018). For Ghanaian creators, understanding trademark protection is essential for building sustainable creative careers in an increasingly competitive global marketplace.

Industrial Designs

Industrial designs are protected under the Industrial Designs Act, 2003 (Act 660), which safeguards the ornamental or aesthetic aspects of a product, including the composition of lines or colours applied to any industrial product or handicraft. Design rights are particularly relevant to Ghana's cultural industries because handicrafts, textile patterns, and product packaging all constitute protectable designs (Amankwah-Amoah & Medase, 2024). For basic school students engaged in craft production, understanding industrial design protection provides a pathway to commercialising their creative outputs. The Act allows creators to register unique products or handicrafts, preventing unauthorised reproduction and enabling enforcement against copying (Nugroho et al., 2021). The protection of industrial designs is particularly significant in the Ghanaian context given the country's rich tradition of textile design, pottery, woodcarving, and other handicrafts that have substantial commercial potential both domestically and internationally (Boateng, 2011; Sonda & Shifotoka, 2021).

Geographical Indications

Geographical indications are protected under the Geographical Indications Act, 2003 (Act 659), which makes provision for the registration and protection of geographical indications and the use of marks for products in Ghana. The Kente GI protection, planned to be finalised in September 2025 with support from WIPO, represents a significant step towards ensuring that only Ghanaian-woven cloth using traditional techniques can be marketed

as authentic Kente (Registrar General's Department, 2026). This landmark achievement demonstrates the potential of GI protection to shield Ghana's heritage against uncompensated cultural appropriation (Asmah, 2008; Ghose & Ali, 2023). Under the GI status, only kente cloth woven using traditional techniques and in approved Ghanaian communities is allowed to use the name, as the law protects Kente as Ghana's intellectual property. This protection has profound implications for cultural preservation and economic empowerment, enabling Ghanaian weavers to capture the full value of their traditional knowledge and skills (Asmah, 2008). The Kente GI protection serves as a powerful educational case study for demonstrating to learners how intellectual property law can protect cultural heritage against exploitation.

Copyright

Copyright protection is governed by the Copyright Act, 2005 (Act 690), as amended by the Copyright (Amendment) Act, 2009 (Act 788), which replaced the Copyright Law of 1985 (Bynum, 2012). The Act grants authors exclusive economic rights over their works, including reproduction, distribution, public performance, and communication to the public (Bynum, 2012). The Act also vests rights in folklore in the President on behalf of and in trust for the people of the Republic (Amponsah, 2023). It establishes the Copyright Office as a governing body and provides for collective administration societies such as GHAMRO (Abekah-Wonkyi, 2025). The duration of copyright protection extends to seventy years after the author's death for most works, providing substantial protection for creators and their estates (Bynum, 2012). Despite this robust legal framework, enforcement remains challenging, with widespread piracy and unauthorised use of copyrighted works depriving creators of legitimate earnings (Acquah & Acquah-Nunoo, 2021). The Copyright Act also provides for exceptions and limitations, including fair dealing provisions for educational and research purposes, which are essential considerations for integrating IP education into school curricula (Bynum, 2012).

Trade Secrets

A trade secret is any confidential business information that provides a competitive advantage to its holder, including manufacturing processes, formulas, customer lists, marketing strategies, or technical data, provided that it is not generally known or readily ascertainable and that reasonable steps have been taken to maintain its secrecy. Ghana does not have a standalone statute specifically dedicated to trade secrets (Ragavan, 2017). However, under the Protection Against Unfair Competition Act, 2000 (Act 589), trade secrets are explicitly protected against unauthorised disclosure, acquisition, or use in commercial activities. The Act prohibits obtaining secret information through industrial espionage, breach of contract, or inducement, with protection only applying if the information holds commercial value due to its secrecy and is subject to reasonable safeguarding measures by the holder (Ragavan, 2017). Notably, Ghana's alignment with the WTO's TRIPS Agreement (Article 39) further obligates the protection of undisclosed information against unfair commercial use, integrating global standards within the local framework (Gurgula & McDonagh, 2023). For creative professionals, understanding trade secret protection is particularly relevant in contexts such as recipe development, manufacturing processes, and proprietary business methods that may not qualify for patent protection but nonetheless have substantial commercial value.

Intellectual Property Protection of Ghana's Cultural Heritage

The intersection of intellectual property law and cultural heritage protection has gained renewed significance following Ghana's recent UNESCO designations (Collins, 2022; OseiTutu, 2017). UNESCO has officially designated Ghana's highlife music and dance as intangible cultural heritage, cementing more than a century of musical innovation as a globally recognised cultural treasure. The Kente Geographical Indication protection, developed with support from the WIPO, legally mandates that only Ghanaian-woven cloth can be marketed as authentic, directly shielding this centuries-old tradition against uncompensated cultural appropriation (Asmah, 2008; Collins, 2022). These recognitions carry profound implications for intellectual property protection, cultural preservation, and economic empowerment. The protection of traditional knowledge and cultural expressions has emerged as a critical issue in international intellectual property discourse, with developing countries increasingly seeking legal mechanisms to protect their cultural heritage against misappropriation (Dladla, 2024; Dos Santos, 2024). Ghana's experience with Kente GI protection provides a valuable case study

for understanding how intellectual property law can be leveraged to protect and commercialise cultural heritage (Asmah, 2008). However, scholars have also raised concerns about the limitations of Western intellectual property frameworks in adequately protecting communal and intergenerational knowledge systems, suggesting that *sui generis* protection mechanisms may be necessary (Boateng, 2011; Dladla, 2024).

Ghana's Basic School Curriculum and Creative Arts Education

The Ghana Education Service (GES) approved a new national creative arts curriculum in 2019, emphasising culturally sustaining resource development in music and visual arts education (Adom et al., 2021). Research exploring the availability, accessibility, and cultural alignment of creative arts materials revealed that while teachers use Ghanaian folklore-informed books, schools face infrastructure needs and lack indigenous musical instruments and visual arts materials for the new curriculum (Adom et al., 2021). Their study highlighted the importance of optimising community human and material resources and engaging education research professionals and classroom teachers in dialogue. Educationists have called for integrating creative arts meaningfully into education curricula as core disciplines, emphasising cultural literacy as fundamental (Samiya, 2025). Despite this emphasis on creative arts education, the intellectual property dimensions of creative production, ownership, protection, commercialisation, and ethical use remain conspicuously absent from the curriculum (Adom et al., 2021). The current creative arts syllabus offers no discursive space for negotiating epistemological frictions between Western juridical conceptions of ownership and communal traditions of creativity and knowledge transmission (Boateng, 2011). This curricular gap leaves young creators unaware of their rights and responsibilities, perpetuating a cycle of exploitation and underutilisation of Ghana's creative potential. The Ministry of Education's announcement of plans to reintroduce art, craft, and needlework for foundational learners, emphasising that "by reintroducing art, craft, and needlework, we are providing our youngest learners with the tools to develop their creative skills, critical thinking, and a deeper appreciation for our cultural heritage," represents a positive development, yet the intellectual property dimensions remain conspicuously absent from these initiatives.

International Perspectives on Intellectual Property Education

Globally, intellectual property education has gained recognition as an essential component of preparing youth for participation in knowledge economies (Penaluna & Penaluna, 2023; Smith & Adrian, 2012). The WIPO has developed the IP4Youth & Teachers programme, aimed at bridging the knowledge gap in IP education across Sub-Saharan Africa by equipping teachers with tools to foster innovation, creativity, and economic empowerment (Penaluna & Penaluna, 2023). Uganda launched the "IP in a Box" Game Lab, an interactive "play, learn and protect" model using gamified learning to introduce intellectual property concepts to youth, enabling them to understand trademarks, patents, copyrights, and brand protection in a practical and engaging way (Arinaitwe & Reddy, 2025). Research on IP education in various international contexts has demonstrated that experiential and problem-based approaches are particularly effective in engaging learners with complex legal concepts (Smith & Adrian, 2012; Valenzuela-Valdés & Aragon-Romero, 2012). The UNESCO Recommendation on Open Educational Resources (2019) represents another international normative instrument relevant to intellectual property education, calling on governments to support the creation and sharing of content for learning and teaching through open licences that respect the intellectual property rights of copyright owners while providing permissions granting the public rights to access educational materials (Ossiannilsson et al., 2023). These international developments provide valuable precedents and resources that Ghana can adapt for its own educational context, though scholars emphasise that content must be locally contextualised rather than imported wholesale (Penaluna & Penaluna, 2023; Boateng, 2011).

Intellectual Property Challenges Specific to Ghana's Creative Sector

A significant body of evidence documents the pervasive nature of intellectual property challenges facing Ghana's creative professionals (Abekah-Wonkyi, 2025; Acquah & Acquah-Nunoo, 2021; Sanda et al., 2024). The Ghana Copyright Act (2005) confirms that authors hold exclusive economic rights over their works, including reproduction, distribution, public performance, and communication to the public (Bynum, 2012). However, creators can transfer, assign, or license their rights to others through contracts, and many upcoming artists fail

to carefully read or fully understand the contracts presented to them before signing, leading to loss of ownership (Morris, 2022). This contract literacy deficit is compounded by the complexity of legal language, the power imbalance between emerging artists and established industry players, and the absence of structured educational opportunities to develop contract negotiation skills (Morris, 2022). The case of rapper Kwesi Arthur, who accused his former record label of demanding US\$150,000 for him to use his own images in an independent project, illustrates how even successful artists can lose control of their creative works when contractual agreements are not properly understood (GhanaWeb, 2026). These examples underscore the urgent need for intellectual property education that begins before young creators enter professional relationships. As one observer noted, “Young creatives entering the entertainment space must learn to involve a lawyer before signing anything” (GhanaWeb, 2026). The challenges facing Ghana’s creative professionals are not unique to the music industry; similar patterns of exploitation have been documented in the visual arts, fashion, film, and digital content creation sectors (Sanda et al., 2024; Amankwah-Amoah & Medase, 2024). Research has demonstrated that intellectual property education is a critical intervention for breaking cycles of exploitation, enabling creators to capture the value of their creative labour, and contributing to sustainable development (Agyapong et al., 2024; Denoncourt, 2023).

THEORETICAL FRAMEWORK

This study is anchored on a tripartite theoretical framework that integrates three complementary perspectives: Bourdieu’s theory of practice, UNESCO’s Education for Sustainable Development (ESD) framework, and Problem-Based Learning (PBL) pedagogy (Breinholt & Jæger, 2020; Kioupi & Voulvoulis, 2019; Jonassen & Hung, 2008). Each theoretical lens contributes distinct insights that together provide a robust foundation for understanding and implementing intellectual property education in Ghana’s basic schools.

Bourdieu’s Cultural Capital Theory

Pierre Bourdieu’s concept of cultural capital refers to the non-financial social assets that promote social mobility beyond economic means, including education, knowledge, aesthetic preferences, and credentials (Breinholt & Jæger, 2020; Jæger & Breen, 2016). Bourdieu distinguished three forms of cultural capital: embodied (long-lasting dispositions of mind and body), objectified (cultural goods such as books, instruments, and artworks), and institutionalised (academic credentials and qualifications) (Burton & Paragahawewa, 2010). Cultural capital is transmitted through socialisation within families and educational institutions, with Bourdieu arguing that educational systems tend to reproduce existing social hierarchies by legitimising the cultural capital of dominant classes (Jæger & Breen, 2016; Jæger & Karlson, 2018).

Applying cultural capital theory to intellectual property education in Ghana yields powerful insights. First, intellectual property literacy itself constitutes a form of cultural capital that enables creators to convert their creative works (objectified cultural capital) into economic value (Košutić, 2017). Second, the absence of intellectual property education in basic schooling perpetuates inequitable distribution of this capital, disadvantaging young creators from less privileged backgrounds who lack informal exposure to IP concepts through family networks (Jæger & Karlson, 2018). Third, the institutionalisation of intellectual property credentials through formal education could democratise access to this form of capital, enabling all learners, regardless of socioeconomic background, to develop the knowledge necessary to protect and commercialise their creative outputs (Breinholt & Jæger, 2020). Furthermore, Bourdieu’s concept of “conversion” of cultural capital into economic capital illuminates the economic imperative of IP education (Carter & Spence, 2013; Košutić, 2017). Educational institutions act as processors that consume material wealth to produce intellectual wealth. By equipping learners with intellectual property knowledge, schools enable the conversion of cultural heritage and creative skills into legally protected economic assets, breaking cycles of exploitation where creators produce value but fail to capture it (Hashim et al., 2023; Kharisma, 2023).

UNESCO’s Education for Sustainable Development Framework

The Education for Sustainable Development (ESD) framework empowers learners with the knowledge, skills,

values, and agency needed to address interconnected global challenges, including economic inequality, cultural loss, and unsustainable development patterns (Kioupi & Voulvoulis, 2019; Sharma, 2020). ESD is recognised as an integral element of Agenda 2030, particularly SDG 4 (Quality Education), and as a key enabler of all other SDGs (Kohl & Hopkins, 2020). Integrating sustainability awareness into intellectual property education is highly relevant to foster the holistic integration of economic, social, cultural, and environmental dimensions of sustainability (Denoncourt, 2023). Intellectual property education addresses multiple ESD learning objectives, contributing to economic, social, cultural, and institutional sustainability, including fostering an appreciation for creative value and protecting traditional knowledge (Bulat, 2025; Denoncourt, 2023). UNESCO's recognition that heritage education must increasingly address uncertainty, diversity of perspectives, and interconnected challenges such as globalisation and cultural transformations provides a guiding framework for curriculum development (Conti, 2025). Intellectual property education within an ESD framework moves beyond mere legal instruction to encompass ethical considerations, cultural respect, and the development of responsible innovation consciousness among learners (Holfelder, 2019; Kioupi & Voulvoulis, 2019). This framework is particularly relevant in the Ghanaian context, where intellectual property education must address multiple interconnected challenges: economic inequality, cultural preservation, and sustainable development (Mohanty et al., 2024).

Problem-Based Learning Pedagogy

Problem-Based Learning (PBL) is a student-centred pedagogy in which learners acquire knowledge and skills through the investigation of complex, real-world problems (Grabinger et al., 2011; Jonassen & Hung, 2008). Drawing on pedagogical literature from law and other disciplines, researchers have argued that PBL is theoretically an effective method for teaching intellectual property, as it can address the need for students to engage with IP as an interdisciplinary and continuously evolving subject matter (Jonassen & Hung, 2008; Smith & Adrian, 2012). PBL is particularly appropriate for IP education because copyright, trademark, and patent issues emerge naturally from authentic creative practice, with real-life scenarios proving effective for engagement (Valenzuela-Valdés & Aragon-Romero, 2012). In the Ghanaian context, PBL enables learners to engage with intellectual property concepts through culturally relevant scenarios, such as those involving musicians or Kente weavers, which address issues emerging from authentic creative practice and indigenous knowledge systems (Boateng, 2011; Boakye-Yiadom et al., 2024). By investigating these problems, learners develop not only declarative knowledge of IP law but also procedural knowledge of how to assert rights, negotiate contracts, and seek appropriate remedies (Brestnichka et al., 2023; Novick, 2015). PBL's emphasis on collaborative learning aligns with African educational philosophies emphasising community and collective problem-solving (Vandeyar & Mohale, 2022). It also accommodates the reality that many Ghanaian teachers lack specialised legal training; PBL scenarios can be designed to facilitate discovery learning where teachers act as facilitators rather than experts (Pon & Schendel, 2020).

Synthesis: An Integrated Theoretical Model

The integration of cultural capital theory, education for sustainable development, and problem-based learning yields a coherent theoretical framework for intellectual property education in Ghana. Cultural capital theory provides the "why", demonstrating how IP literacy democratises access to economic opportunities from creative work (Agyapong et al., 2024; Arhin Jnr & Acquah, 2025). ESD provides the "what", articulating the cognitive, socio-emotional, and behavioural learning objectives for sustainable development (Mohanty et al., 2024; Vázquez et al., 2021). PBL provides the "how", offering a pedagogical methodology that engages learners through authentic, contextualised problems (Rehmat et al., 2022; Nguyen et al., 2024). This integrated framework guides the study's methodology, data analysis, and curriculum recommendations. Its application is evident in the interview protocol design, which explores participants' perceptions of IP literacy as a form of cultural capital; in the analysis of how IP education contributes to sustainable development goals; and in the curriculum recommendations that emphasise authentic, problem-based learning experiences (Nguyen et al., 2024; Penaluna & Penaluna, 2023). By integrating these three theoretical perspectives, the study provides a comprehensive framework for understanding the cultural, economic, and pedagogical dimensions of intellectual property education in Ghana's basic schools, contributing to both scholarly understanding and practical policy development (Dladla, 2024; Dos Santos, 2024).

METHODS

Research Design

This study employs a qualitative research design, specifically a descriptive multiple-case study approach. The qualitative paradigm is appropriate given the study's aim to understand complex social phenomena curriculum integration, cultural preservation, and educational change from the perspectives of diverse stakeholders (Creswell & Poth, 2018). As Yin (2014) defines it, a case study constitutes an empirical inquiry that investigates a contemporary phenomenon within its real-life context, particularly when the boundaries between phenomenon and context are not clearly evident. Descriptive case study methodology enables in-depth exploration of intellectual property education as a phenomenon situated within Ghana's specific cultural, legal, and educational context. The multiple-case design was selected to allow for comparative analysis across different institutional settings public and private schools, urban and peri-urban locations thereby enhancing the robustness and transferability of findings (Yin, 2014). Each participating school was treated as a bounded case, with the unit of analysis being the perceptions, experiences, and recommendations of stakeholders regarding IP education integration.

Study Area and Population

The study was conducted in the Greater Accra and Ashanti Regions of Ghana. These regions were purposively selected for their concentration of creative industries, cultural heritage sites including Kente weaving centres in Bonwire, Adanwomase, and educational institutions implementing the national creative arts curriculum. The Greater Accra Region, as the national capital and hub of Ghana's music, film, and digital content industries, offers access to key policy institutions and creative industry associations. The Ashanti Region, as the heartland of traditional craftsmanship and cultural heritage, provides access to master Kente weavers, folklore custodians, and indigenous knowledge practitioners whose perspectives are essential for understanding the intersection of IP law and traditional cultural expressions (Boateng, 2011; Asmah, 2008). The target population comprised curriculum developers, creative arts educators, intellectual property practitioners, cultural heritage custodians, and basic school teachers with experience in creative arts or cultural education.

Sampling and Participants

Purposive sampling was employed to select participants who could provide rich, relevant data on intellectual property education integration (Patton, 2015). Inclusion criteria required participants to have either professional experience with Ghana's creative or cultural sectors, direct involvement in basic school curriculum development or implementation, or expertise in intellectual property law or cultural heritage protection. Snowball sampling was also used to identify additional participants through professional networks, a strategy particularly effective for accessing hard-to-reach populations such as cultural custodians and IP practitioners who may not be readily identifiable through institutional directories. To mitigate potential network biases inherent in snowball sampling, seed diversification was employed by initiating recruitment through multiple independent entry points including the Ghana Education Service, the National Council for Curriculum and Assessment (NaCCA), the Copyright Office, the National Folklore Board, and MUSIGA thereby reducing the risk of over-sampling from a single professional network.

A total of 25 participants were recruited, comprising:

- 5 curriculum developers from the Ghana Education Service and NaCCA
- 6 creative arts teachers from basic schools (3 public, 3 private)
- 4 intellectual property practitioners (2 copyright specialists, 2 industrial property specialists)
- 5 cultural heritage custodians (including master Kente weavers, folklore board representatives, and MUSIGA officials)

- 5 basic school headteachers

This sample size is consistent with qualitative research norms, where data saturation—the point at which no new information emerges from additional interviews—typically guides sample adequacy (Guest et al., 2006). The diversity of participant categories ensured multiple perspectives on the research phenomenon, enabling triangulation across stakeholder groups.

Data Collection Instruments

Data were collected using three primary instruments, allowing for methodological triangulation (Denzin, 1978).

Semi-structured interview guide: A thematic interview protocol was developed based on the theoretical framework and research questions. The semi-structured format was selected for its flexibility, enabling the researcher to pursue emergent themes while ensuring that key topics were covered consistently across all participants. The guide included open-ended questions exploring participants' understanding of intellectual property concepts, perceptions of current curriculum provisions, perceived benefits and challenges of IP education, and recommendations for integration strategies. Probes were used to elicit detailed responses and illustrative examples, allowing participants to elaborate on their experiences and perspectives.

Document analysis checklist: A systematic checklist was developed to analyse relevant policy documents, including the National Creative Arts Curriculum (2019), the Copyright Act (2005, Act 690), the proposed GHIPO Bill, UNESCO intangible cultural heritage nomination files, and Ministry of Education circulars. Document analysis served as a complementary data source, providing contextual information about the official curriculum and policy landscape against which interview and observational data could be interpreted (Bowen, 2009).

Observation protocol: Classroom observations were conducted in participating schools (two per region) to observe current creative arts lessons, document pedagogical practices, and assess existing coverage of intellectual property-related content, however implicit. Observations were recorded using structured field notes that captured instructional activities, teacher-student interactions, and any references explicit or implicit to ownership, creativity, or cultural protection.

All interviews were audio-recorded with participants' informed consent. Observations were recorded using field notes. Interviews were conducted in English, with Twi used where participants expressed preference; back-translation was employed to ensure accuracy.

Data Collection Procedure

Data collection occurred over a six-month period (January to June 2026). Initial contact was established with gatekeepers at the Ghana Education Service, NaCCA, the Copyright Office, the National Folklore Board, MUSIGA, and participating schools. Following ethical approval and institutional permissions, participants were recruited and scheduled for interviews lasting 45 to 90 minutes. Interviews were conducted at locations convenient to participants typically their workplaces or neutral venues to maximise comfort and willingness to share candid perspectives. Classroom observations occurred on multiple occasions to capture typical instructional practices rather than one-off performances. Policy documents were accessed through official channels and online repositories. Throughout the data collection period, reflexive journaling was maintained to document the researcher's positionality, emerging interpretations, and methodological decisions, thereby supporting the confirmability of findings (Lincoln & Guba, 1985).

Data Analysis

Data analysis followed the six phases of thematic analysis proposed by Braun and Clarke (2006): familiarisation with data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Thematic analysis was selected for its theoretical flexibility and accessibility, making it particularly suitable for applied educational research where findings are intended to inform policy and practice. Audio recordings were transcribed verbatim and, where necessary, translated. NVivo 14 software was used to

facilitate systematic coding and theme development. Codes were generated inductively from interview data and deductively from the theoretical framework of Bourdieu's cultural capital theory, UNESCO's ESD framework, and Problem-Based Learning pedagogy. This hybrid inductive-deductive approach enabled the identification of both emergent themes grounded in participant narratives and theory-driven themes derived from the conceptual framework (Fereday & Muir-Cochrane, 2006). Themes were reviewed for internal homogeneity and external heterogeneity, then refined and named to capture their essential meaning. Member checking was employed with a subset of participants to verify the accuracy and credibility of findings, a process in which preliminary interpretations and themes were shared with participants to confirm that they resonated with their experiences and perspectives.

Ethical Considerations

Ethical approval was obtained from the Institutional Review Board of the University of Ghana. All participants provided written informed consent after receiving detailed information about the study's purpose, procedures, risks, and benefits. Participants were assured of confidentiality and anonymity; pseudonyms are used throughout reporting. Special care was taken when interviewing cultural heritage custodians and teachers to respect traditional authority structures and avoid creating perceptions of institutional criticism. Given the sensitive nature of discussions around intellectual property enforcement and the performance of collective management organisations, participants were assured that their individual responses would not be attributed to them or their institutions. Data are stored securely on password-protected devices, and access is restricted to the research team, in accordance with data protection protocols.

Trustworthiness and Rigour

Trustworthiness was established through multiple strategies aligned with Lincoln and Guba's (1985) framework for ensuring rigour in qualitative research.

Credibility: the confidence in the truth of the findings was enhanced through triangulation of data sources (interviews, observations, documents), member checking, and prolonged engagement in the research setting. Triangulation across multiple stakeholder groups and data collection methods enabled cross-verification of findings, reducing the risk of bias inherent in any single source or method.

Transferability: the extent to which findings can be applied to other contexts was supported through thick description of the research context and participants, enabling readers to assess applicability to other settings. Detailed accounts of the study's setting, participant characteristics, and methodological decisions provide readers with sufficient information to judge the relevance of findings to their own contexts.

Dependability: the consistency and stability of findings over time was addressed through an audit trail documenting all research decisions and procedures. This comprehensive record includes interview transcripts, coding frameworks, analytical memos, and reflexive journal entries, enabling external scrutiny of the research process.

Confirmability: the extent to which findings are shaped by participants rather than researcher bias was achieved through reflexive journaling, acknowledging the researcher's positionality and potential biases, and through maintaining clear linkages between data and interpretations. The researcher's background in educational policy and creative arts was acknowledged and critically reflected upon throughout the research process to minimise its influence on data collection and analysis.

Collectively, these strategies ensure that the study's findings are credible, transferable, dependable, and confirmable, thereby providing a rigorous evidentiary foundation for the study's conclusions and policy recommendations.

DISCUSSIONS AND FINDINGS

The thematic analysis of interview, observational, and documentary data revealed four major themes, each with associated sub-themes. These findings are organised around the four research questions, integrated with existing

literature and theoretical frameworks.

Current State of Intellectual Property Awareness and Education

The first research question sought to establish the baseline of intellectual property awareness and education within Ghana's basic school curriculum. Analysis revealed a significant knowledge deficit and substantial curricular gaps.

Low Awareness Among Educators

All six creative arts teachers interviewed demonstrated only superficial familiarity with intellectual property concepts. While most could articulate that copyright "protects someone's work" or prevents "stealing", none could explain the specific rights conferred by Ghana's Copyright Act, the duration of protection, exceptions for educational use, or procedures for registering industrial designs. When probed on their understanding of copyright enforcement, teachers revealed a significant gap between principle and practice. One remarked,

"I know we shouldn't copy music without permission, but the exact law, its penalties, and what constitutes infringement remain unclear to me."

This lack of legal literacy was echoed by a colleague who noted,

"We instil respect for others' creations in our students, yet I honestly cannot say what legal recourse exists if someone misuses a child's drawing."

These findings align with international research on IP literacy among educators, which consistently identifies low levels of formal IP knowledge across many educational systems. Bourdieu's cultural capital theory illuminates this finding: intellectual property knowledge constitutes a form of cultural capital that is unevenly distributed, with educators lacking the institutionalised forms of this capital that would enable them to transmit it to learners.

Absence of Systematic IP Content in Curriculum

Document analysis of the National Creative Arts Curriculum (2019) and Ministry of Education policy documents revealed that intellectual property concepts are not explicitly mentioned in learning objectives, content standards, or assessment criteria. While the curriculum emphasises respect for cultural heritage, creativity, and innovation, the legal and economic dimensions of creative ownership are entirely absent. One curriculum developer acknowledged this gap:

"The creative arts curriculum focuses on developing skills and appreciating culture. The intellectual property aspect of how to protect what you create is something we haven't formally addressed."

Observational data confirmed this curricular omission. Across twelve observed creative arts lessons (six per region), no teacher mentioned copyright, trademarks, patents, or traditional knowledge protection. Lessons focused on practical skill development skills such as drawing, singing, pattern-making, and cultural appreciation, but never addressed what learners could do to protect their creative outputs or respect the IP rights of others.

Incidental Learning and Informal Transmission

Despite the absence of formal instruction, some learners gained incidental exposure to IP concepts through family connections to creative industries. One teacher noted,

"Some of my students whose parents are musicians or artists know about royalties and contracts because they hear it at home. But for most children, these are completely new ideas."

This observation supports Bourdieu's thesis that cultural capital is transmitted through socialisation within families, creating inequitable distribution of IP literacy based on socioeconomic and occupational background.

Alignment with Theoretical Framework

From the ESD perspective, the current absence of systematic IP education represents a failure to address economic sustainability learning objectives. Learners are being equipped with creative skills but not with the knowledge to transform those skills into sustainable livelihoods. The PBL lens suggests that without authentic problems to investigate, IP remains abstract and disconnected from learners lived experiences.

Pedagogical Integration of Intellectual Property Education

The second research question explored how intellectual property education might be integrated into existing subjects. Participants articulated several viable strategies grounded in the Ghanaian educational context.

Integration into Creative Arts Education

All participants agreed that creative arts provided the most natural home for intellectual property education. As one intellectual property practitioner explained,

“When children create something like a drawing, a song, a dance that’s the perfect moment to ask, ‘Who owns this? What can you do with it? What if someone copies it?’”

The National Folklore Board official similarly suggested:

“When we teach children about Kente patterns or Adinkra symbols, we should also teach them that these are protected cultural expressions. They are not free for anyone to use however they want.”

Integration strategies proposed included embedding IP concepts within existing creative arts units (e.g., a drawing unit culminating in discussion of copyright for visual artworks), using Ghanaian case studies of IP disputes as teaching examples (e.g., the Kente GI protection story), and having learners create simple “copyright statements” or “design registration mock-ups” for their artworks.

Integration into Social Studies and Citizenship Education

Several participants suggested that social studies and citizenship education provided complementary opportunities for IP education. One curriculum developer proposed,

“In social studies, when we teach about rights and responsibilities of citizens, intellectual property is a natural extension. Citizens have the right to benefit from their creative work and the responsibility to respect others’ creative rights.”

This aligns with ESD’s emphasis on developing responsible citizenship competencies.

Specific integration points identified included units on Ghana’s legal system (introducing the Copyright Act), economic activities (discussing how creative industries contribute to GDP and employment), and cultural diversity (exploring how IP protects traditional knowledge and expressions). One teacher noted,

“When we teach about festivals and cultural celebrations, we could discuss who ‘owns’ a festival. Is it the community? The chief? How are cultural performances protected?”

Integration into the “By the Fireside” Storytelling Initiative

The National Folklore Board’s “By the Fire Side” storytelling series, which aims to preserve oral traditions and make Ghanaian folktales digitally accessible, was identified as a powerful vehicle for IP education. One folklore board representative explained,

“These stories belong to the communities that created them. When we make them digitally accessible, we need to teach children that these stories have owners not individuals necessarily, but communities. Using a story respectfully means acknowledging where it comes from.”

The initiative's plans to establish folklore clubs in schools provide a structured setting for IP education outside formal classroom hours. Students could learn about community ownership of intangible cultural heritage, appropriate attribution, and the distinction between use for educational purposes versus commercial exploitation.

Age-Appropriate Progressive Sequencing

All stakeholders emphasised that intellectual property education must be age-appropriate, with concepts introduced progressively across grade levels. A proposed progression emerged from participant discussions: for early grades (1-3), foundational concepts of ownership ("This is my drawing"), sharing with permission, and giving credit to others; for middle grades (4-6), introduction of copyright as a legal concept, distinguishing between types of creative works, and understanding that copying without permission is wrong; for upper grades (7-9), more detailed understanding of Ghana's Copyright Act, introduction of trademarks and industrial designs, basic contract awareness for creative professionals, and the concept of traditional knowledge protection.

This progressive structure aligns with PBL pedagogy, where authentic problems can be scaled in complexity as learners develop foundational knowledge.

Curriculum Differentiation and Pedagogical Adaptation

The integration of IP education into basic school curricula must account for the diverse learning needs of students with disabilities through appropriate curriculum differentiation and pedagogical adaptation. Research on inclusive education in Ghana indicates that while the Inclusive Education Policy promotes access to education for all learners, the daily application of disability-inclusive pedagogies has not yet been fully explored, particularly in low-resourced contexts.

For IP education, this means:

- **For learners with visual impairments:** Teaching materials on copyright, trademarks, patents, and creative works must be made available in Braille, large print, and audio formats. The Creative Arts curriculum, which is a natural entry point for IP education given its focus on design, visual arts, music, dance, and drama, must be adapted to ensure that learners with visual impairments can fully participate in understanding and protecting their creative expressions.
- **For learners with hearing impairments:** IP education content must be delivered with appropriate sign language interpretation. The development of a sign language curriculum for basic schools, as announced by NaCCA, provides a foundation for ensuring that Deaf learners can access IP education. Notably, the Creative Arts subject is already dedicatedly taught in schools for the Deaf by art specialist teachers, indicating existing capacity that can be extended to include IP concepts.
- **For learners with intellectual disabilities:** IP education must be presented in simplified, concrete terms with a focus on practical, vocational applications. Curricula for learners with intellectual disabilities in Ghana have been developed around skill areas including daily living skills, social and personal skills, and pre-vocational skills. IP education can be integrated into these skill areas by teaching learners about the value of their creative work and the importance of protecting it, linking IP concepts to tangible outcomes such as crafts, artwork, and other products they create.

Teacher Preparation and Professional Development

The success of inclusive IP education depends critically on teacher preparedness. Ghana has 48 Colleges of Education responsible for preparing teachers to teach at the basic school level. The Bachelor of Education Curriculum introduced in 2018 was designed to reform education and the school curriculum, but questions remain about how prepared student teachers are to use the curriculum to promote inclusive education.

For IP education to be effectively delivered to learners with disabilities, teacher training must include:

- Understanding the basic concepts of IP (copyright, patents, trademarks, trade secrets) and their relevance to creative and cultural industries
- Pedagogical strategies for teaching IP concepts to learners with diverse disabilities
- Knowledge of assistive technologies and differentiated instructional methods
- Awareness of the social model of disability and its implications for curriculum design

Without this targeted preparation, IP education risks becoming another curriculum area where learners with disabilities are inadvertently excluded.

Alignment with Creative Economy and Cultural Preservation Goals

IP education is essential for promoting innovation, creativity, and entrepreneurship. Ghana's creative industries contribute significantly to the national economy and account for a substantial share of total employment. The WIPO has emphasised that IP is a powerful tool for unlocking the potential of youth, enabling them to transform ideas into sustainable businesses. The Government of Ghana and WIPO are actively building synergies to advance youth development through IP education.

Learners with disabilities must not be excluded from these opportunities. As President Mahama stated at the launch of free tertiary education for persons with disabilities, "Each student supported under this policy becomes an asset to our nation. A potential engineer, a teacher, an entrepreneur, a farmer or an innovator. Their success will strengthen Ghana's economy and enrich our collective humanity" (Petetsi, 2025). The President further noted that "a nation's soul is measured by how it treats its most vulnerable citizens" (Petetsi, 2025). Including learners with disabilities in IP education ensures that they can participate in and benefit from Ghana's creative economy, contribute to cultural preservation through their creative works, and become innovators and entrepreneurs in their own right.

Perceived Benefits and Challenges of IP Education

The third research question examined stakeholders' perceptions of the benefits and challenges associated with introducing intellectual property education at the basic school level.

Benefits: Cultural Preservation and Economic Empowerment

Cultural preservation emerged as the most frequently cited benefit. Participants recognised that IP education could help protect Ghana's cultural heritage against appropriation and commercial exploitation. A master Kente weaver from Bonwire articulated this passionately:

"Our grandparents taught us that Kente is sacred. But today, anyone with a machine can print our patterns and sell them. If children learn from a young age that Kente belongs to us, that it has value, they will protect it when they grow up. When the planned started in 2025 to have Geographical Indication (GI) recognition of Kente cloth, lots of people saw it as a powerful entry point. We have these global recognitions now. Children should know what they mean and why they matter."

Economic empowerment was the second major benefit identified. Intellectual property practitioners emphasised that IP education could enable young creators to capture value from their work rather than being exploited. As one IP practitioner stated:

"We see musicians signing bad contracts because they don't know their rights. We see artists whose work is used without payment. If we teach these concepts in school, we can break this cycle. Students can create a mock business, a small record label or a fashion brand and learn how to protect their intellectual property assets."

Societal innovation such as the UNESCO Aschberg Programme on training artists and cultural professionals in Ghana was identified as a benefit that shed light on IP, contracts, and their creative economy implications. Several participants argued that IP awareness would foster an innovation culture:

“When people know their ideas will be protected, they are more willing to invest time and resources into developing them. Education creates this confidence.”

Challenges: Teacher Training and Resource Limitations

The most significant challenge identified was the lack of teacher preparation. All six creative arts teachers expressed low confidence in their ability to teach IP concepts, even if added to the curriculum. One teacher admitted,

“I would need training myself. I don’t feel I know enough to teach children about copyright law. Teacher professional development would be essential. We cannot simply add IP content to the curriculum without also training teachers to deliver it effectively.”

Resource limitations were the second major challenge. Participants noted shortages of indigenous music instruments, visual arts materials, and reference materials, which would be exacerbated by adding new content requirements. Some teachers candidly articulated a pragmatic concern: while they acknowledged the merits of integrating IP education into the syllabus, they stressed that the initiative would amount to little more than tokenism without dedicated resource allocation. Having already struggled to secure basic art supplies and general Teaching and Learning Resources, their foremost anxiety centred on funding constraints. For this educator, the viability of IP education hinges squarely on whether sufficient resources are made available to support it.

“We already struggle to provide even basic art supplies. Introducing IP education without dedicating specific resources to support it would be purely tokenistic. We are grappling with acquiring Teaching and Learning Resources, and while I genuinely believe adding IP education to the syllabus is a good idea, my primary concern is the lack of funds. Ultimately, everything depends on the availability of resources to make it work,” one Headteacher participant noted.

The digital divide was also noted: many schools lack reliable internet access or computing devices, and this has been a perennial concern among schools in Ghana.

An overcrowded curriculum was cited as a constraint by all five headteachers. One explained,

“The basic school curriculum is already very full. Teachers complain they don’t have time to cover everything they are supposed to teach. Adding something new means removing something else or integrating so deeply that no new time is allocated.”

This suggests that successful integration would require careful curriculum mapping and possibly the reduction or consolidation of existing content, availability of funds, and internet access if possible.

Perceived Risks and Mitigations

Some participants expressed concerns about introducing IP education prematurely. One intellectual property specialist warned:

“We must be careful not to create a culture of excessive restriction. Children should understand that some uses of creative works are permitted—educational use, fair dealing, criticism and review. If we only teach ‘don’t copy’, we might discourage the very creativity we want to encourage.”

This concern aligns with the broader principle of balancing IP protection with access to knowledge. This concern is widely examined in scholarly literature which critically analyses the clash between Western IP models and indigenous/African cultural heritage.

Another participant raised the risk of cultural imposition:

“IP law is a Western legal framework. Traditional knowledge protection is still developing. We need to ensure that when we teach IP, we are not undermining communal ownership concepts with individualistic Western models.”

This observation highlights the importance of culturally responsive pedagogy that respects Ghanaian communal property traditions while introducing individual ownership concepts where appropriate.

Curricular and Pedagogical Strategies for Integration

The fourth research question explored stakeholders' recommendations for curricular and pedagogical strategies appropriate for Ghanaian contexts.

Phased Implementation Approach

All stakeholders supported a phased implementation approach, beginning with pilot schools before nationwide rollout. One curriculum developer proposed,

"Start with a small number of schools in each region, provide intensive training for teachers, evaluate what works, then scale up gradually."

This approach would enable iterative refinement based on evidence and would manage resource constraints.

A recommended timeline emerged: Phase 1 (2027-2029): Pilot in 20-30 schools across Ghana's sixteen regions; develop and test age-appropriate learning modules; train pilot teachers. Phase 2 (2029-2030): Evaluate pilot outcomes; revise curriculum materials; expand to additional schools; develop teacher training modules for nationwide rollout. Phase 3 (2030 onwards): Nationwide integration; ongoing professional development; establishment of school-industry partnerships.

Stakeholder Collaboration and Partnerships

Strong emphasis was placed on multi-stakeholder collaboration. Participants specifically identified the need for partnerships between the Ghana Education Service, NaCCA, the Copyright Office, the National Folklore Board, MUSIGA, the proposed GHIPO, WIPO, and creative industry professional associations. As one intellectual property practitioner noted:

"This cannot be just an education ministry initiative. You need IP experts to design accurate content, creative professionals to provide authentic case studies, and cultural institutions to ensure respect for traditional knowledge."

The WIPO IP4Youth & Teachers programme was cited as a useful model for partnership, though participants emphasised that content must be Ghanaian-specific rather than generic. Similarly, Uganda's "IP in a Box" game lab approach using gamified learning was mentioned as an innovative pedagogical strategy that could be adapted.

Problem-Based Learning as Primary Pedagogy

Participants strongly endorsed problem-based learning as the most appropriate pedagogy for IP education. One teacher explained:

"Children learn best when they see why something matters. If you just tell them 'copyright is important', they won't remember. But if you give them a problem 'Someone used your song on TV without asking. What can you do?' they will engage."

The PBL approach aligns with the observation that upcoming artists often fail to understand contracts due to factors like low legal literacy, complex contract language, and a lack of structured learning environments to address these issues.

Specific PBL scenarios proposed included: a scenario where a student artist's drawing is used on a school T-shirt without permission; a scenario where a student musician's song is uploaded to social media by someone else; a scenario where a community festival performance is recorded and sold without community consent; and a scenario where a traditional craft design is copied by a factory. Each scenario would require students to research IP concepts, consult with stakeholders, and propose appropriate responses.

Development of Local Learning Resources

Participants stressed the need for locally developed learning resources rather than imported materials. The interviewee emphatically rejected the use of foreign textbooks, arguing that they fail to represent Ghana's unique cultural heritage, citing Kente, highlife, and festivals as glaring omissions. They advocated for locally-produced resources tailored to Ghanaian children's realities, specifically highlighting the need for illustrated storybooks with relatable child protagonists, simplified legal texts in local languages, and digital resources hosted on the National Folklore Board's platform. Underpinning this recommendation was a deeply personal sense of urgency; they lamented that their own generation only encountered IP concepts in adulthood, rendering the knowledge belated and largely inaccessible. By equipping young learners with these culturally grounded tools, they argued, we can prevent this generational delay and foster early, intuitive IP literacy.

A cultural heritage custodian argued,

"Books from other countries won't include Kente, highlife, or our festivals. We need resources that reflect Ghanaian children's own experiences. Specifically, we should develop illustrated storybooks featuring Ghanaian child content creators navigating IP; simplified versions of the Copyright Act, 2005, in animation both English and our major languages; and if possible, digital resources hosted on the National Folklore Board's platform or National Commission on Culture's platform. With these, young learners will understand IP much better than we did. I grew old before I ever knew what IP meant and to me, that was already too late."

The UNESCO OER Recommendation's emphasis on creating openly licensed educational content was relevant here. One participant suggested:

"Ghana government should start creating IP education resources as Open Educational Resources; we ensure they are freely accessible to every school and easily customizable for Ghana's varied linguistic and cultural landscapes. This investment will empower the next generation of leaders at MUSIGA, GHAMRO, and ARSOG to handle IP issues with a level of expertise and foresight that far surpasses our current standards."

This would help address resource constraints while promoting equitable access.

Integration with School-Industry Linkages

Several participants suggested that IP education could be strengthened through direct linkages with creative industries. Proposed activities included visits to the Copyright Office or Ghana Intellectual Property Office (GHIPO) (once established); guest lectures by musicians, filmmakers, or fashion designers; participation in "IP Days" where students could register mock copyrights or design applications; and internships for older students with creative businesses to observe IP management in practice. One MUSIGA representative offered,

"We would be happy to send musicians to talk to students about their experiences with copyright and royalties. Seeing real people who have dealt with these issues makes it concrete."

CONCLUSION

Ghana's creative and cultural industries stand at a pivotal moment, driving economic growth and earning global recognition, yet their full potential remains dangerously undermined by widespread copyright infringement, trademark violations, and a pervasive lack of legal awareness among creators. It is against this backdrop that this qualitative study set out to conduct a foundational diagnostic inquiry. It is a conceptual exploratory investigation into whether and how intellectual property education might be integrated into Ghana's basic school curriculum as a pedagogical strategy for cultural preservation, societal innovation, and cultivating future creative economy leaders (Arhin Jnr et al., 2024; Sanda et al., 2024). What emerged from this investigation is a stark and eye-opening picture of profound contradiction: while Ghana's creative economy swells in economic and cultural significance, its basic schooling system operates in near-total absence of systematic intellectual property literacy. Educators demonstrate remarkably low awareness of even foundational IP concepts, the existing creative arts and social studies syllabi contain no explicit IP content, and learners who do encounter these ideas do so entirely by chance, leaving knowledge inequitably distributed and largely incidental (Adom et al., 2021; Boateng, 2011).

Critically, it must be underscored that no formal intellectual property education programme or pilot currently exists within Ghanaian basic schools. This research is therefore not an evaluation of an ongoing intervention, but rather a preliminary evidentiary foundation—a critical needs assessment designed to illuminate a glaring policy gap and to provide the empirical justification for immediate, deliberate action (Bowen, 2009).

Despite these glaring gaps, however, there was remarkable unanimity among all stakeholder groups consulted: curriculum developers, teachers, IP practitioners, cultural custodians, and school leaders. Every participant recognised the urgent potential of IP education, particularly in light of Ghana's recent UNESCO designations for Kente and highlife music and dance, viewing it as a vital tool for safeguarding intangible heritage, economically empowering young creators, and fostering a genuine culture of innovation (Collins, 2022; OseiTutu, 2017). Yet this shared vision is accompanied by a sobering recognition that any national rollout cannot be undertaken hastily or blindly. Consequently, the central and overriding recommendation of this study to the Ministry of Education, NaCCA, and all relevant stakeholders is the immediate design and implementation of a carefully structured, evidence-based pilot project in a select number of schools across diverse settings: urban, rural, regular, and special. This proposed pilot is not a secondary suggestion buried among other policy options; it is the indispensable and non-negotiable first step that must precede any broader financial commitment, curriculum revision, or national scaling (Patton, 2015). This research serves as the eye-opener that reveals why such a pilot is urgently needed, and the pilot, in turn, will serve as the mechanism that generates the granular, contextualised data required to genuinely inform policymakers about age-appropriate pacing, pedagogical viability, resource localisation, and realistic costing.

The study grounds this urgent recommendation for a pilot in a robust theoretical scaffolding that combines Bourdieu's theory of practice, particularly his concepts of cultural capital, habitus, and symbolic capital, with UNESCO's Education for Sustainable Development (ESD) framework and Problem-Based Learning pedagogy (Breinholt & Jæger, 2020; Jæger & Breen, 2016; Kioupi & Voulvoulis, 2019). This theoretical lens reveals that IP literacy functions as a form of cultural capital that is currently hoarded among legal and economic elites, and that formal schooling, if intentionally designed, can democratise access to this capital. As Bourdieu argued, education is the most effective way of broadening access to culture and thus economic opportunities via the democratisation and dispersal of cultural capital to all strata of society. Extending the ESD framework, the research further argues that intellectual property constitutes a conspicuously neglected dimension of economic and cultural sustainability, while validating PBL as a particularly appropriate pedagogy for African contexts, especially given its capacity to address the contract literacy deficits that render creative workers vulnerable to exploitation (Denoncourt, 2023; Jonassen & Hung, 2008). These theoretical insights, however, remain abstract unless tested through the crucible of a pilot programme. The proposed pilot would therefore serve as a living laboratory to translate these theories into practice, allowing educators and curriculum designers to collaboratively develop culturally responsive teaching materials that speak directly to Ghanaian artistic traditions rather than importing foreign legal concepts wholesale (Boateng, 2011; Penaluna & Penaluna, 2023). It would also provide the ideal context for assessing the viability of extracurricular intellectual property clubs and for gauging the scale of teacher professional development required before any national implementation.

Crucially, this study insists that the recommended pilot and any eventual scale-up must be explicitly and systematically inclusive of learners with disabilities, whether they attend regular schools or special institutions. Ghana's existing inclusive education framework, which envisions special schools working collaboratively with regular schools, provides a strong operational foundation for this inclusion. The pilot must deliberately include special schools as centres of pedagogical expertise for teaching abstract legal concepts to learners with specific disabilities, while regular schools within the pilot can learn to adapt these specialised approaches for their own inclusive classrooms. Resource teachers attached to mainstream schools, alongside NaCCA's Inclusive Education Expert Advisory Panel established in December 2023, must ensure that IP education is part of their active deliberations from the very inception of the pilot. Furthermore, this commitment to inclusion must be matched by a robust monitoring and evaluation framework embedded within the pilot itself, one that continuously assesses the accessibility of content, the effectiveness of differentiated pedagogies, the participation rates of learners with disabilities, and the feedback of their families and teachers, incorporating alternate assessment methods for those with intellectual disabilities, much as NaCCA has already pioneered in its mathematics and sign language curricula.

No study, however, is without its boundaries, and this research acknowledges several important limitations that paradoxically strengthen the case for the recommended pilot. The sample, though purposively selected, draws primarily from two regions and may not capture the diverse perspectives of all sixteen regions, particularly those in rural and remote areas where internet access and formal legal institutions are scarce—a gap that a geographically diverse pilot is expressly designed to address (Patton, 2015). The most significant limitation is the notable absence of student voices from this initial inquiry; future pilot research must actively include children's own understandings of creativity, ownership, and fairness, as their perspectives are indispensable for designing genuinely engaging and age-appropriate curricula (Creswell & Poth, 2018). Moreover, the reliance on self-reported educator data does not always align with observed classroom practice, pointing to a clear need for extended observational studies within the pilot schools to capture authentic pedagogical dynamics (Lincoln & Guba, 1985). It is precisely these unresolved questions and methodological gaps that underscore why a controlled, evaluable pilot programme is not merely advisable but absolutely essential before any national policy commitment is made. The limitations of this eye-opening study are, in effect, the very research questions that the proposed pilot must be structured to answer.

Looking beyond the immediate policy decisions, this study offers a final reflection on the deeper cultural and human significance of its recommendations. Ghana possesses an extraordinary wealth of creative and cultural resources, from the intricate rhythms of highlife to the geometric precision of Kente weaving, from its rich oral storytelling traditions to the vibrant digital innovation of its young content creators (Asmah, 2008; Boateng, 2011). These are not merely artefacts of the past but living economic assets capable of sustaining livelihoods and enhancing Ghana's global standing. Yet these assets remain chronically under-protected and undermanaged, largely because intellectual property literacy begins too late in life, if it begins at all. This study does not naively suggest that embedding IP education into the curriculum will single-handedly solve the structural challenges facing the creative economy; institutional reforms, enforcement mechanisms, and industry professionalisation remain equally essential (Acquah & Acquah-Nunoo, 2021; Abekah-Wonkyi, 2025). Nevertheless, without foundational education that starts in childhood, generation after generation of Ghanaian creators will continue to enter professional relationships blind to their rights, vulnerable to exploitation, and unable to capture the full value of their own creative labour (Morris, 2022). It is precisely to break this cycle that this research issues its primary call: policymakers must resist the temptation to rush into national reform based on good intentions alone. Instead, they must first commission a thoughtfully designed, rigorously evaluated, and inclusively constructed pilot project, one that converts the eye-opening diagnostic insights of this study into actionable, context-specific evidence. When children eventually learn that the patterns they weave, the stories they tell, the songs they sing, and the images they draw have owners who deserve recognition and fair compensation, they will acquire not only legal literacy but a profound appreciation for their cultural heritage and a sophisticated understanding of how creativity can sustain livelihoods (Palfrey et al., 2009). In this sense, intellectual property education transcends technical legal training; it becomes education for human flourishing, preparing Ghana's children not merely to participate in the creative economy, but to lead it with knowledge, confidence, and integrity. The journey toward that future, however, begins not with a grand national mandate, but with the humble, deliberate, and evidence-driven step of a pilot programme and this study urges policymakers to take that step without further delay.

Conflict of Interests

The author declares no competing interests.

Funding Statement

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

REFERENCES

1. Abekah-Wonkyi, K. (2025). From colonial emancipation into the fourth republic: Lessons for Ghana's collective management for musicians and their works. *The Journal of World Intellectual Property*, 28(3), 914-934. <https://doi.org/10.1111/jwip.12362>

2. Acquah, E.O., & Acquah-Nunoo, M.O. (2021). The state of royalties in the music industry in Ghana. *Quantum Journal of Social Sciences and Humanities*, 2(2), 65-73. <https://doi.org/10.55197/qjssh.v2i2.67>
3. Adom, D., Sharma, E., Sharma, S., & Agyei, I. (2021). Teaching strategies, school environment, and culture: Drivers of creative pedagogy in Ghanaian schools. *Studies in Learning and Teaching*, 2(2), 12-25. <https://doi.org/10.46627/silet.v2i2.68>
4. Adu, T.L., & van der Walt, T.B. (2022). Copyright law and academic libraries: From theory to practice. *portal: Libraries and the Academy*, 22(3), 725-744.
5. Agormedah, E., Henaku, E., AYITE, D., & Ansah, E. (2020). Online learning in higher education during COVID-19 pandemic: A case of Ghana. *Journal of Educational Technology and Online Learning*, 3(3), 183-210. <https://doi.org/10.31681/jetol.726441>
6. Agyapong, D., Arthur, K., & Nketsiah, I. (2024). A review of intellectual property laws in Ghana in the context of small enterprises' innovations and inventions. *Edward Elgar Publishing eBooks*, 95-105. <https://doi.org/10.4337/9781803925417.00018>
7. Amankwah-Amoah, J., & Medase, S.K. (2024). Extracting innovation value from intellectual property: Evidence from sub-Saharan Africa. *Journal of Knowledge Economy*, 15(2), 8933-8967. <https://doi.org/10.1007/s13132-023-01225-9>
8. Amponsah, S. (2023). Akan folklore as a philosophical framework for education in Ghana. *International Review of Education*, 69, 125-142. <https://doi.org/10.1007/s11159-023-09993-x>
9. Arhin Jnr, B. O. (2026). Capacity building and policy support: A critical analysis of the UNESCO-Aschberg Programme for emerging artists and cultural professionals in Ghana. *British Journal of Humanities and Social Sciences*, 3(1), 21-49. <https://doi.org/10.61424/bjhss.v3i1.498>
10. Arhin Jnr, B.O. (2025a). Intellectual property rights and Ghanaian church music: A critical examination of royalty payment and collections. *International Journal of Research Innovation and Social Science*, 9(10), 8202-8220. <https://doi.org/10.47772/IJRISS.2025.91>
11. Arhin Jnr, B.O. (2025b). Participant-Centred analysis of transformative learning outcomes in the creative arts business and intellectual property workshops in Ghana. *British Journal of Humanities and Social Sciences*, 2(1), 62-78. <https://doi.org/10.61424/bjhss.v2.i1.539>
12. Arhin Jnr, B.O., & Acquah, E.O. (2025). Researcher-Performer perspectives in Ghanaian indigenous musical expressions. *British Journal of Humanities and Social Sciences*, 2(1), 42-50. <http://doi.org/10.61424/bjhss.v2.i1.449>
13. Arhin Jnr, B.O., Acquah, E.O., Amponsah, E.K., Addaquay, A.P., Bamongya, A.Y., & Commeyfio, R. (2024). The role of creative artists in promoting traditional cultural tourism in Ghana. *Journal of African Arts and Culture*, 7(3), 27-57.
14. Arinaitwe, J., & Reddy, J. K. (2025). Strategic implementation of gamification in education: Enhancing learner engagement amid curriculum reforms in Uganda. *Journal of Curriculum Development, Evaluation, and Education (JCDEE)*, 1(2), 1-14
15. Asmah, A. (2008). *Historical Threads: Intellectual Property Protection of Traditional Textile Designs in Ghana*. University of Ghana.
16. Boakye-Yiadom, F., Donkor, E., & Mensah, R. (2024). Toward indigenous knowledge systems: The role of project-based learning in higher education: Insights into sculpture students' projects on Ghanaian Adinkra symbols. *Research Square*. <https://doi.org/10.21203/rs.3.rs-5180598/v1>
17. Boateng, B. (2011). *The Copyright Thing Doesn't Work Here: Adinkra and Kente Cloth and Intellectual Property in Ghana*. University of Minnesota Press. <https://doi.org/10.5749/minnesota/9780816670024.001.0001>
18. Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40. <https://doi.org/10.3316/QRJ0902027>
19. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
20. Breinholt, A., & Jæger, M. (2020). How does cultural capital affect educational performance: Signals or skills? *British Journal of Sociology*, 71(1), 28-46. <https://doi.org/10.1111/1468-4446.12711>
21. Brestnichka, R., Koleva, F., & Molhova, M. (2023). Interdisciplinary teaching through a combination of methods: IP licensing for non-law students. *Edward Elgar Publishing eBooks* (pp. 117-127). Edward Elgar Publishing. <https://doi.org/10.4337/9781800881006.00016>

22. Bulat, N. (2025). Teaching intellectual property for students of mathematics, and information and communication technologies. *TEM Journal*, 2504-2513. <https://doi.org/10.18421/tem143-54>
23. Burton, R., & Paragahawewa, U. (2010). Creating culturally sustainable agri-environmental schemes. *Journal of Rural Studies*, 27(1), 95-104. <https://doi.org/10.1016/j.jrurstud.2010.11.001>
24. Bynum, L. (2012). Access to knowledge in Africa: The role of copyright. *Canadian Journal of African Studies / Revue canadienne des études africaines*, 46(3), 454-456. <https://doi.org/10.1080/00083968.2012.741287>
25. Carter, C., & Spence, C. (2013). Being a successful professional: An exploration of who makes partner in the Big 4. *Contemporary Accounting Research*, 31(4), 949-981. <https://doi.org/10.1111/1911-3846.12059>
26. Castaldi, C. (2018). To trademark or not to trademark: The case of the creative and cultural industries. *Research Policy*, 47(3), 606-616. <https://doi.org/10.1016/j.respol.2018.01.006>
27. Collins, A. (2022). Copyright and folklore in Ghana: A question of national treatment. *Journal of Intellectual Property Law*, 29(2), 112-134.
28. Comunian, R., Ikpe, E., & Oni, D. (2024). Supporting Africa-Europe collaborations on creative economies: An equitable research agenda. *African Journal of Creative Economy.*, 1(1). <https://doi.org/10.4102/ajce.v1i1.20>
29. Conti, L. (2025). Intercultural education: Recalibrating meanings, objectives, and practices. *Intercultural Education*, 36(4), 418-436.
30. Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). SAGE Publications.
31. Darku, S., & Lubisi, R. (2020). Interrogating design pirating on the Ghanaian textiles market. *Journal of African Cultural Studies*, 32(3), 245-260.
32. Denoncourt, J. (2023). Integrating sustainable development awareness in intellectual property law education. *Edward Elgar Publishing eBooks* (pp. 154–175). Edward Elgar Publishing. <https://doi.org/10.4337/9781800881006.00019>
33. Denzin, N. K. (1978). *The Research Act: A Theoretical Introduction to Sociological Methods* (2nd ed.). McGraw-Hill.
34. Dladla, N. (2024). Copyright law and the ruse of culture: ‘Traditional cultural expressions and expressions of folklore’ as a conception of racial difference. *Phronimon*. <https://doi.org/10.25159/2413-3086/14898>
35. Dolmans, D. (2019). How theory and design-based research can mature PBL practice and research. *Advances in Health Sciences Education*, 24(5), 879-891. <https://doi.org/10.1007/s10459-019-09940-2>
36. Dos Santos, F. (2024). *Innovation in Africa: Levelling the Playing Field to Promote Technology Transfer*. Oxford University Press.
37. Essel, O.Q. (2013). Our Arts: Our wealth and health, *Journal of African Arts and Culture*, 1(1), 83-92.
38. Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80-92. <https://doi.org/10.1177/160940690600500107>
39. GhanaWeb, (2026). At what point do creative artistes lose rights to their work? GhanaWeb Online <https://www.ghanaweb.com/GhanaHomePage/entertainment/EXPLAINER-At-what-point-do-creative-artistes-lose-rights-to-their-work-2018343> Online News Accessed on July 16, 2026.
40. Ghose, A., & Ali, S. (2023). Protection and preservation of traditional cultural expressions & traditional knowledge in handicraft trade: Advocating the need for a global cultural policy framework. *Revista de Direito Internacional*, 20(2). <https://doi.org/10.5102/rdi.v20i2.9109>
41. Grabinger, S., Dunlap, J., & Duffield, J. (2011). Rich environments for active learning in action: problem-based learning. *Research in Learning Technology*, 5(2). <https://doi.org/10.3402/rlt.v5i2.10558>
42. Guðmundsdóttir, G., Gassó, H., Rubio, J., & Hatlevik, O. (2020). Student teachers’ responsible use of ICT: Examining two samples in Spain and Norway. *Computers & Education*, 152, 103877-103877. <https://doi.org/10.1016/j.compedu.2020.103877>
43. Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1), 59-82.
44. Gurgula, O., & McDonagh, L. (2023). Access Denied: the Role of Trade Secrets in Preventing Global Equitable Access to COVID-19 Tools. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4484507>

45. Hashim, H., Isa, F., & Khair, M. (2023). Designing intellectual property law and creative industry course syllabus for creative arts undergraduate students. *International Journal of Academic Research in Progressive Education and Development*, 12(1). <https://doi.org/10.6007/ijarped/v12-i1/16550>
46. Holfelder, A. (2019). Towards a sustainable future with education? *Sustainability Science*, 14(4), 943-952. <https://doi.org/10.1007/s11625-019-00682-z>
47. Jæger, M. M., & Breen, R. (2016). A dynamic model of cultural reproduction. *American Journal of Sociology*, 121(4), 1079-1115. <https://doi.org/10.1086/684012>
48. Jæger, M., & Karlson, K. (2018). Cultural capital and educational inequality: A counterfactual Analysis. *Sociological Science*, 5, 775-795. <https://doi.org/10.15195/v5.a33>
49. Jonassen, D., & Hung, W. (2008). All problems are not equal: Implications for problem-based learning. *Interdisciplinary Journal of Problem-Based Learning*, 2(2), 6-28.
50. Kharisma, D. B. (2023). Intellectual property rights education as a general compulsory subject in higher education. *Jurnal Penelitian Pendidikan IPA*, 9(7), 5725-5730. <https://doi.org/10.29303/jppipa.v9i7.4579>
51. Kioupi, V., & Voulvoulis, N. (2019). Education for sustainable development: A systemic framework for connecting the SDGs to educational outcomes. *Sustainability*, 11(21), 6104.
52. Kohl, K., & Hopkins, C. (2020). Education, sustainable development and resource management. In *Routledge eBooks* (pp. 90-99). Informa. <https://doi.org/10.4324/9781003000365-9>
53. Košutić, I. (2017). The role of cultural capital in higher education access and institutional choice. *Center for Educational Policy Studies Journal*, 7(1), 149-169. <https://doi.org/10.26529/cepsj.20>
54. Kwakwa, E., & Chicu, I. (2025). The World Intellectual Property Organization's New Strategic Direction: Serving Underserved Communities and Helping Transform IP into a Tool That Works for Building a More Sustainable Future. In *Unity in Diversity: Perspectives on the Law of International Organizations* (pp. 310-323). Brill Nijhoff.
55. Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. SAGE Publications.
56. Mohanty, A., Alam, A., & Mohanty, A. (2024). Education for sustainable development (ESD) and global citizenship for India. *Journal of Education for Sustainable Development Studies*, 1(2), 134-159.
57. Morris, R. (2022). Selling Out for a Song: "Artist Abuse" and Saving Creatives from Servitude and Economic Disadvantage in the Entertainment Industry. *SMU Science and Technology Law Review*, 25(2), 145-145. <https://doi.org/10.25172/smustr.25.2.3>
58. Naami, A., & Mort, K.S.T. (2023). Inclusive education in Ghana: How prepared are the teachers?. In *Frontiers in Education* (Vol. 8, p. 1056630). Frontiers Media SA.
59. Nguyen, L.T.V., Cleveland, D., Nguyen, C.T.M., & Joyce, C. (2024). Problem-based learning and the integration of sustainable development goals. *Journal of Work-Applied Management*, 16(2), 218-234.
60. Novick, D. (2015). An Undergraduate Course in Intellectual Property Law. <https://doi.org/10.18260/p.23546>
61. Nugroho, S., Praptirahayu, D., & Sari, M. (2021). Fairness in fair dealing on the industrial design protection. *Yuridika*, 36(2), 445. <https://doi.org/10.20473/ydk.v36i2.26009>
62. OseiTutu, J.A. (2017). Harmonizing cultural IP across borders. *Journal of Intellectual Property Law*, 24(1), 45-78.
63. Ossiannilsson, E., Leonor Ulloa Cazarez, R., Martins Gomes de Gusmão, C., Zhang, X., Blomgren, C., Chaplin-Cheyne, T., & Burgos, D. (2023). The UNESCO OER Recommendation: Some observations from the ICDE OER Advocacy Committee. *The International Review of Research in Open and Distributed Learning*, 24(2), 229-240. <https://doi.org/10.19173/irrodl.v24i2.7138>
64. Palfrey, J., Gasser, U., Simun, M., & Barnes, R. (2009). Youth, creativity, and copyright in the digital age. *International Journal of Learning and Media*, 1(2), 79-97. <https://doi.org/10.1162/ijlm.2009.0022>
65. Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods* (4th ed.). SAGE Publications.
66. Penaluna, K., & Penaluna, A. (2023). Developing twenty-first century skills for creativity and innovation: the case of the entrepreneurial educator in raising learner awareness of intellectual property. In *Teaching Intellectual Property Law* (pp. 46-59). Edward Elgar Publishing.
67. Petetsi, J.Y. (2025). Ghanaian Times. <https://ghanaianimes.com.gh/free-tertiary-education-for-pwds-starts-next-academic-year-president/> Accessed on July 15, 2026
68. Pon, C., & Schendel, R. (2020). Exploring processes of teaching and learning in African university contexts: The case of education for critical thinking in Ghana, Kenya and Botswana. *International Journal of African Higher Education*, 7(1).

69. Pounds, A., & Bostock, J. (2019). Open educational resources (OER) in higher education courses in aquaculture and fisheries: Opportunities, barriers, and future perspectives. *Aquaculture International*, 27(3), 695-710. <https://doi.org/10.1007/s10499-019-00355-9>
70. Ragavan, S. (2017). The (re)newed barrier to access to medication: Data exclusivity. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3187345>
71. Registrar General's Department. (2026). Geographical Indications: Protecting the Identity of Unique Artisanal Products in Ghana. Ministry of Justice and Attorney General's Department, Ghana. <https://rgd.gov.gh/gi.html>
72. Rehmat, A., Glazewski, K., & Hmelo-Silver, C. (2022). Contextualizing Problem-Based Learning. In *Oxford University Press eBooks* (pp. 493-510). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199841332.013.24>
73. Samiya, R. (2025). Education through the cultural dimension: Integration of knowledge with traditions and arts. *Studies in Education Sciences*, 6(3). <https://doi.org/10.54019/sesv6n3-009>
74. Sanda, M., Kilu, R., & Alačovska, A. (2024). Understanding creative enterprise creation, functionality and sustainability from the lenses of Ghanaian creative entrepreneurs. *Cogent Business & Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2336271>
75. Sarpong, S., Dwomoh, G., Boakye, E., & Ofosua-Adjei, I. (2021). Online teaching and learning under COVID-19 pandemic; Perception of university students in Ghana. *European Journal of Interactive Multimedia and Education*, 3(1). <https://doi.org/10.30935/ejimed/11438>
76. Sharma, S. (2020). Education for sustainable development: Approaches and challenges. In *REDSHINE Publication eBooks*. <https://doi.org/10.25215/1300103310.19>
77. Smith, T., & Adrian, A. (2012). Intellectual property education - thinking outside the box meets colouring within the lines. *International Journal of Learning and Intellectual Capital*, 9(3), 337. <https://doi.org/10.1504/ijlic.2012.047292>
78. Sonda, H., & Shifotoka, F. (2021). The protection of three-dimensional works as a means of promoting innovation: A comparative basis of Namibia and Burkina Faso. *Indonesian Journal of International Law*, 18(3). <https://doi.org/10.17304/ijil.vol18.3.816>
79. Valenzuela-Valdés, J., & Aragon-Romero, M. (2012). Patented! Problem based learning. *International Conference on Education and E-Learning Innovations*, 1-3. <https://doi.org/10.1109/iceeli.2012.6360611>
80. Vandeyar, S., & Mohale, M. (2022). Philosophy of ubuntu and collaborative project-based learning. *South African Journal of Education*, 42(2), 1-10.
81. Vázquez, D., Torruella, M., & Íñiguez-Gracia, D. (2021). The teaching of historical memory as a tool for achieving SDG 16 and teachers' views on the Exile Memorial Museum (MUME) routes. *Sustainability*, 13(24), 13637. <https://doi.org/10.3390/su1324136370>
82. Yin, R. K. (2014). *Case Study Research: Design and Methods* (5th ed.). SAGE Publications.