

Exploring the Interconnectedness of High School and Community: A Naturalistic Inquiry

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Abstract

This qualitative case study examines the reciprocal relationship between Ocean Academy, a secondary school established in 2008, and the community of Caye Caulker, Belize, through the lens of Vygotsky's 1978 Sociocultural Theory. Using naturalistic inquiry and employing semi-structured interviews, observations, and document analysis, this study explores how the school and community mutually influence each other's development. The research reveals four primary themes: cultural vibrancy and engagement, academic style and flexibility, infrastructural and environmental challenges, and community collaboration and support. Findings indicate that while the school faces significant infrastructural and socioeconomic challenges, strong community partnerships and innovative educational approaches have created a resilient educational ecosystem. The school's integration of place-based education and experiential learning has fostered strong connections between academic achievement and local cultural preservation. However, persistent challenges related to infrastructure, resource allocation, and external pressures from tourism highlight the need for systematic support and policy intervention. This study contributes to understanding rural education in developing contexts and demonstrates how schools can serve as catalysts for sustainable development in their immediate community while preserving cultural identity.

Keywords: community collaboration, place-based education, cultural preservation, sociocultural theory, K-12 education

Introduction

Education in geographically isolated or rural communities presents a distinctive set of challenges, often rooted in limited access to resources and economic constraints. These challenges are not new; scholars have long recognized that rural education requires an approach that responds to the community's social, economic, and environmental realities (Sher, 1977). Research has shown that rural schools face significant hurdles, such as difficulties recruiting and retaining teachers,

limited technological access, and pervasive economic disparities (Barley & Beesley, 2007; Durán-Narucki, 2008; McDowell, 2001). However, despite these challenges, rural and isolated schools often possess unique strengths, including strong community ties, opportunities for place-based education, and a deep sense of local identity (Howley, 1997). As a result, many of these rural schools serve as learning centers and vital social hubs deeply embedded in the fabric of daily life. Many of them embrace place-based education, as Smith (2002) described, which integrates the local culture, history, and

environment into the curriculum, fostering a meaningful connection between students and their surroundings.

Furthermore, the geographic isolation of rural communities often necessitates innovative educational solutions. For instance, Mulford (2003) emphasized that rural schools must adopt flexible models of leadership and teaching that can adapt to fluctuating resources and changing community needs. This adaptability is evident in how schools tailor their educational programs to address local challenges, such as limited economic opportunities, and broader educational goals such as preparing students for life beyond their immediate environment. A growing body of literature has focused on the intersection of rural education and sustainability, particularly in coastal or island communities where environmental stewardship is critical (Gruenewald & Smith, 2008). Schools in these areas increasingly integrate environmental education into their curricula, teaching students about sustainable practices and protecting local ecosystems. This is relevant to the student's immediate context and aligns with global movements toward educational sustainability (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2017). By adopting this approach to incorporating sustainability education into their curriculum, schools in coastal or island communities prepare students for future challenges and instill a sense of responsibility towards the environment (Down & Ferguson, 2022).

Community as a Central Hub for Educational Success

Community engagement plays a vital role in fostering student success, particularly in rural settings where schools often serve as central hubs for social and educational development. Epstein's (2001) theory of overlapping spheres of influence highlights the importance of strong connections between families, communities, and schools in promoting student achievement. In this model, schools are not isolated entities but integral components of a broader social

network, including families, local businesses, and community organizations. In rural settings, these relationships are often even more pronounced, with schools becoming as a focal point for community activities and local development (Green, 2013). The literature on community engagement in education emphasizes the role of schools in fostering a sense of belonging and social cohesion (Curry et al., 2023; Egure et al., 2023; Ishimaru, 2014, 2017). Bryk and Schneider (2002) argue that trust is the foundation of solid school-community relationships, and trust is built through ongoing, reciprocal interactions between school staff, students, and community members. In isolated communities, where social networks are often tightly woven, the school's role in building and maintaining these relationships becomes even more critical (Bauch, 2001; Coleman, 1988).

Leadership

Educational leadership in these rural and isolated communities requires unique skills and strategies that prioritize community engagement, adaptability, and ethical decision-making. School leaders in these contexts must navigate the complexities of limited resources, geographic isolation, and the need to integrate local culture and values into the school's operations and curriculum (Mulford, 2003). Research by Starr and White (2008) highlights the importance of distributed leadership in rural schools, where community involvement and shared decision-making are critical to the school's success. In community-oriented schools, leaders must adopt a holistic approach that sees the school as part of a larger ecosystem. This involves fostering strong relationships with community stakeholders, engaging families in the educational process, and ensuring that the school's goals align with the community's needs and aspirations (Harmon & Schafft, 2009). Leaders in these schools often take on roles beyond traditional administrative duties, serving as advocates for the community and facilitators of local development (Sher, 1977).

Research Context

Belize is a culturally diverse nation with a population of approximately 400,000, spread across 7 districts, encompassing a broad spectrum of economic and social conditions. Some regions of the country still lack basic infrastructure such as indoor plumbing and electricity. In contrast, others boast modern amenities such as high-speed internet, creating a significant disparity in access to resources and opportunities (Medina, 2008). The population is an ethnic mosaic, influenced by the diverse cultures of the Kriol, Maya, East Indian, Garinagu, Mestizo, and Mennonite communities. English, as the national language of Belize, serves as a unifying factor amid this rich cultural diversity. However, many Belizeans are multilingual and speak Kriol, Spanish, or indigenous languages daily.

Caye Caulker, a small limestone island located off the coast of mainland Belize, provides a microcosm of the nation's cultural and economic dynamics. With a population of approximately 2,000, the island's history reflects its shift from a primarily fishing-based economy to one centered on tourism, which became the dominant industry in the 1960s. This transformation profoundly affected the island's social and economic structure. Before 2008, educational opportunities for Caye Caulker residents were severely limited, with only a primary school available for students up to age 12. As a result, many island natives lacked the secondary education necessary to pursue higher-paying jobs in the expanding tourism sector. Consequently, expatriates or newcomers often took the more lucrative, influential positions within the island's economy, while native islanders remained in lower-paying service roles.

Ocean Academy

In 2008, the educational landscape of Caye Caulker was transformed with the establishment of Ocean Academy (OA), a secondary school developed by two women, an American and a Canadian, who were driven by the need to provide local students with access to secondary education. Ocean Academy was created to offer

a world-class education to students in Forms 1–4 (grades 8–12), empowering them with the skills needed for employment or to pursue higher education. The school promotes the idea that “you don’t have to leave the island to get a world-class education,” underscoring its commitment to making high-quality education accessible to the local population (Ocean Academy, 2023, p. 1). Ocean Academy’s model of education is distinctive in its integration of global perspectives with local needs. The school leverages the vital tourism industry of Caye Caulker, attracting visitors from around the world to contribute to its educational environment. These visitors, often professionals from diverse fields, are invited to teach classes or lead workshops, exposing students to a wide range of expertise and real-world knowledge. This unique approach aims to enrich student learning through real-world experiences while providing students with valuable networking opportunities, enabling them to “be self-aware, well-rounded, and immersed in the real world” while also equipping them with practical skills relevant to both the island’s economy and the wider world (Ocean Academy, 2023, p. 3). Ocean Academy’s approach reflects a blend of local community engagement with global educational standards, allowing students to remain grounded in their cultural identity while gaining skills and perspectives that extend far beyond the island’s borders. However, the full extent of the interrelatedness of the school and the community, and how this relationship shapes student learning, remains largely unexplored. Understanding these dynamics is crucial, as it could provide valuable insights into how Ocean Academy and the broader community can mutually support one another, to foster educational success and sustainable local development as graduates reintegrate into the island’s economy and society. To examine these interconnections more deeply, this study draws on Sociocultural Theory (Vygotsky, 1978) and aims to explore how social interaction and cultural context influence learning within this unique school-community ecosystem. In particular, the research is guided by the following questions:

Research Questions

How have Ocean Academy and the Caye Caulker community mutually influenced each other?

1. What are stakeholders' (family, community, staff/teacher, and student) perceptions of OA?
2. How do individuals from the school and community interact, and what influence do these interactions have?
3. How have interactions between the school and the community influenced social norms and culture on the island?
4. What challenges and opportunities exist in the school and on the island?

Theoretical Framework

Vygotsky's Sociocultural Theory of Cognitive Development provides a foundational lens for this study, helping to frame the dynamic interplay between Ocean Academy and the Caye Caulker community. Vygotsky's theory emphasizes that cognitive development is not an isolated, individual process but is profoundly shaped by social interactions and the cultural context in which an individual is embedded (Vygotsky, 1978). According to Vygotsky, human cognition develops through engagement with the cultural tools (such as language, symbols, and artifacts) present within a particular society. These tools serve as mediators of thought and shape how individuals perceive and understand the world around them. Thus, cognitive development is profoundly social, evolving first at the interpersonal level through dialogue with others and later at the intrapersonal level as these social interactions are internalized through processes such as inner speech (García-Carrión et al., 2020).

Language plays a critical role in this developmental process. It is not only a tool for communication but also a medium for thinking and learning. Through language, individuals self-regulate, organize their thoughts, and navigate various cognitive tasks such as problem-

solving, memory, and learning. Vygotsky (1978) argued that cognitive development is a process of internalizing culturally mediated social experiences, where learners gradually move from dependence on external support to greater autonomy in their thinking. A key concept in Vygotsky's theory is the Zone of Proximal Development (ZPD), which describes the range of tasks a learner can perform with the help of a more knowledgeable other but cannot complete independently. This guidance, or scaffolding, is crucial for cognitive development as it allows learners to achieve tasks beyond their current capabilities, gradually becoming more proficient and self-sufficient.

The application of Vygotsky's theory to the context of the island of Caye Caulker and Ocean Academy highlights education's role as a mediator of individual development and broader cultural transformations. As a unique educational institution on the island, Ocean Academy serves as a conduit through which students interact with diverse social and cultural experiences, many extending beyond the local community. The exposure to these diverse perspectives — whether through engagement with visiting educators, global visitors, or innovative teaching methods — mirrors the concept of scaffolding in Vygotsky's theory, as students are supported in expanding their cognitive and social capacities. The school's commitment to bringing external knowledge into the local context aligns with the idea that cognitive development is deeply tied to the cultural tools and social interactions that individuals encounter.

Furthermore, the reciprocal nature of this relationship is crucial for understanding how Ocean Academy and the Caye Caulker community influence each other. While the island's unique socio-cultural environment shapes the school, it also significantly reshapes social norms and cultural values within the community. Introducing new ideas and pedagogical practices at Ocean Academy may challenge traditional thinking and foster new social and cultural dynamics on the island. As students internalize these diverse experiences, they may contribute to shifts in the

island's collective identity and social structures, demonstrating the bidirectional influence that Vygotsky described in his theory of cognitive development. Vygotsky's sociocultural theory thus provides a robust framework for analyzing how Ocean Academy functions as both a product and a shaper of the cultural environment on Caye Caulker. By examining the interactions between students, educators, and the community through this lens, we can better understand how cognitive and social development at the individual level interacts with broader societal changes. The school's role in mediating cultural knowledge and fostering cognitive growth positions it as a key agent in the ongoing transformation of the island's social and cultural landscape.

Methodology

This qualitative research employs a naturalistic inquiry framework embedded within a case study design to explore the social dynamics of a rural high school in a community. Naturalistic inquiry emphasizes investigating phenomena in authentic, real-world contexts (Bhandari, 2023; Erlandson et al., 1995). It is particularly well-suited for examining the multifaceted interactions among parents, community stakeholders, and school personnel. Through this approach, this study elucidates the complex web of social interactions, cultural practices, and community participation that underlie the school's operational dynamics. The design facilitates an in-depth, contextually rich examination of how these relational networks generate opportunities and challenges, particularly in fostering student engagement and academic success within the school setting.

Data Collection

Given that naturalistic inquiry emphasizes capturing reality as it unfolds in its natural environment (Bhandari, 2023; Erlandson et al., 1995), the 7-person research team spent 6 consecutive days immersed in the school and the broader community of Caye Caulker,

and the extended observation period included both structured and unstructured observations in diverse settings. In the school context, researchers observed classrooms, school activities, and informal student interactions (e.g., break periods). Observations extended to events such as a prom and a cancer fundraising initiative, which were pivotal in understanding the school's integration into the community. In the broader community, observations focused on local businesses, family gatherings, recreational events, and religious services, all of which provided insights into the patterns of social behavior and the community's cultural fabric.

In addition to observations, semi-structured interviews were conducted with individuals who could provide key insights into the school-community relationship. These included 5 educators from OA and 6 community members, including 2 local business owners, a parent, a hotel staff member, a local musician, and a community leader. The interviews followed a semi-structured interview format to allow participants to express their perceptions and experiences freely, consistent with the open-ended nature of naturalistic inquiry (see Table A1, Appendix A).

The interviews aimed to uncover the influence of the Caye Caulker community on Ocean Academy and the influence of the school on the Caye Caulker community. The interview participants were selected based on convenience sampling, as interviews were conducted with individuals accessible to the researchers during the 6-day data collection period. In addition to the interviews and observations, documents such as the Ocean Academy student handbook, school photographs, lesson notes, and students' written work were collected and analyzed. These documents served as secondary data sources, enriching the researchers' understanding of the school's curriculum, ethos, and day-to-day functioning. Informal conversations with staff, community members, and students further supplemented the formal data collection efforts.

Data Analysis

The data analysis for this study was conducted using a blend of Humble and Radina's (2018) coding style and Merriam's (2015) constant comparative method. The analysis unfolded as a deeply collaborative process, with 5 of the researchers meeting twice in person and twice via Zoom to discuss findings, refine codes, and identify emerging themes. A shared Google Doc facilitated real-time collaboration, allowing for continuous tracking of the evolving analysis. Given the naturalistic inquiry approach, data collection and analysis occurred simultaneously. This aligned with Merriam's (2015) guidance on the constant comparative method, which encourages researchers to engage with data iteratively, allowing them to continually refine their focus and adjust their inquiry as new themes emerge.

The analysis process began with open coding of field notes and interview transcripts (see Table A2, Appendix A). Interviews, averaging 45 minutes each, were transcribed in full and analyzed alongside observational data. The researchers individually reviewed and tagged their data sets during this initial coding phase, using open coding to identify recurring concepts and patterns (Humble & Radina, 2018). Codes ranged from descriptive tags such as "perceived vast opportunity for students" and "environmental consciousness and awareness", to participant-specific phrases like "students create goods to sell" and "the pandemic affected us." This open coding approach facilitated the discovery of emerging patterns by focusing on participants' direct language and behaviors observed in the field. In addition to open coding, axial coding (Humble & Radina, 2018) was employed to link the initial codes into more cohesive categories. This allowed the team to explore relationships between the codes and better understand the underlying dynamics shaping Ocean Academy and its interactions with the Caye Caulker community. Some of the resulting categories

included: "Challenges and Needs," "Skill Development," "Infrastructural Challenges," "Cultural Preservation and Community Values," and "Classroom Challenges and Conditions." These categories were derived from the constant comparison of interview and observational data, ensuring that each data set was cross-referenced and systematically integrated into the analysis.

During team meetings, 5 researchers condensed the codes into these broader categories, using the shared Google Doc as a platform for refinement. As Merriam (2015) suggests, categories were "sorted" and evaluated based on the richness and relevance of the data to the research questions. Researchers compared interview data with observational notes to triangulate findings, cross-checking insights from different data sources to enhance trustworthiness (Lincoln & Guba, 1985). For example, while some interviews revealed insights about "teacher mentorship" and "flexibility in the school resulting in creativity in teachers," these codes were further corroborated by direct observations of classroom dynamics and informal conversations with teachers and community members. One unique aspect of the data collection process was its flexibility. As researchers continued to gather data in the field, they adapted their collection methods based on emerging insights. For example, one researcher deepened her understanding of the island's economic culture by participating in local activities like hair braiding. This added another layer of context to the community's informal economy and social interactions. This approach aligns with Merriam's (2015) constant comparative method, as researchers continuously compared data sources and refined their inquiry based on real-time findings. Ultimately, the categories were synthesized into key themes, which included cultural vibrancy and engagement, academic style and flexibility, infrastructure and environmental challenges, and community collaboration and support. Each theme was developed through a rigorous, iterative process, ensuring that the final

analysis captured the complexities and richness of life on Caye Caulker and the role of Ocean Academy within it.

In line with best practices in qualitative research, the team employed triangulation by incorporating multiple data sources, including interviews, observational notes, and school documents (e.g., student handbooks), to validate the themes and ensure a comprehensive understanding of the phenomenon under study (Lincoln & Guba, 1985). The shared Google Doc served as a critical tool for this collaborative synthesis, allowing for the continual refinement of ideas and contributing to the robustness of the final analysis. Through this iterative process, the research team successfully developed a nuanced and in-depth understanding of the interconnected dynamics between Ocean Academy and the Caye Caulker community, grounded in both sociocultural and naturalistic perspectives.

Findings

The analysis revealed four key themes that captured the complex dynamics between Ocean Academy and the Caye Caulker community. These themes (cultural vibrancy and engagement, academic style and flexibility, infrastructural and environmental challenges, and community collaboration and support) highlighted the unique interplay of educational practices, community values, and environmental factors. Each theme is explored in-depth below.

Cultural Vibrancy and Engagement

Caye Caulker thrives on a deep-rooted commitment to preserving its culture and nurturing a spirit of community support, with Ocean Academy at the heart of this effort. Through our observations, we noted the limited presence of fast-food chain stores on the island. While the reasoning behind this absence is not explicitly clear, it suggests a potential effort to protect local businesses and preserve the island's cultural identity and economic resilience.

The scarcity of fast-food chain stores indicates a community emphasis on maintaining its unique character, whether by conscious design or evolving tradition. By keeping out fast food chain stores, these islanders ensure that money stays within their community, creating jobs for their young people, including Ocean Academy graduates. This shared dedication goes beyond economics. It is about creating a space where traditions are valued, and every gesture supports the island's identity.

Inspired by the island's traditions and customs, local artists create and market handcrafted jewelry, woven baskets, wood-carved objects, and more. These goods, promoted to visitors, highlight the island's creative past and considerably boost the local economy by generating employment and encouraging cross-cultural contact. Music and dancing are an equally significant part of the culture. Traditional Garifuna music, particularly Punta, and other Caribbean influences such as reggae are frequently performed at community events and celebrations. Apart from entertainment value, these musical traditions are also crucial for maintaining the people's cultural narratives and histories handed down through the years. One other rich cultural activity is the Lobster Fest, a respondent said. This activity draws residents and guests to honor the local shellfish.

Equally powerful is the island's sense of compassion, which runs through everyday life like a thread holding the community together. A resident's words speak volumes: "We know the elders on the island, and if there's food insecurity in a home, everyone steps in to help." This natural inclination to care for one another is mirrored in Ocean Academy's approach, where students in need receive education and tangible support such as uniforms and supplies. In this way, the school and the community move as one, embracing a shared mission to uplift each other and create a future that honors their cultural roots and collective well-being.

Academic Style and Flexibility

Our data revealed that Ocean Academy students immersed themselves in the island's culture and economy, creating a seamless blend of education and real-life application. For example, students engage in tourism by leading bicycle and kayak tours, gaining first-hand experience as guides that showcase their island to visitors. By giving tours to tourists, students learn how to monetize their talents and pay for their education. Students also learn financial literacy and are encouraged to make products to sell and take part in internships. A teacher said, "Once a week, students choose workshops," learning skills for working in hospitality and kayaking. With the guidance of local and guest experts in fields like baking, diving, and other trades tied to the island's economy, students acquire vocational skills essential to the local industries. Whether interning at the local bakery or engaging in water-based activities related to the reef system, these experiences prepare them for future employment and instill a deeper connection to their community's way of life. In addition to these skills, students are taught to advertise and create webpages for selling artisan goods, applying their digital knowledge to support local businesses. This exposure became particularly significant during the pandemic, as students leveraged their computer skills to transition smoothly from traditional schooling to online learning environments, illustrating the adaptability and relevance of their training.

The school's emphasis on hands-on learning extends beyond cultural crafts to a broader entrepreneurial focus, where students develop business plans and see them through to execution with the support of the school. Teachers' creativity stood out in most of the observed lessons; as one parent said, "Teachers in the school find unique ways to make class interesting to our kids." Teachers, many former students, and lifelong residents of Caye Caulker enrich this experience by embedding local heritage into the curriculum. One teacher shared, "Learning about

Caye Caulker's heritage in school, like Garifuna music or the Maya language, makes us proud of where we come from and helps students connect with their roots." Integrating cultural elements into entrepreneurial activities enables students to transform their appreciation of local traditions into sustainable business ventures that benefit the economy and their community. Another teacher emphasized this experiential approach: "Instead of teaching them to ride a bike, we show them how to do it." This philosophy reflects a shift from traditional instruction to guiding students through practical, competency-based learning, where they demonstrate skills like using QuickBooks in real-time rather than relying solely on theoretical knowledge. Through these immersive experiences, Ocean Academy fosters a sense of identity, pride, and responsibility in its students, ensuring that their education is not just about academic achievement but also about sustaining the cultural and economic vitality of Caye Caulker.

Infrastructural and Environmental Challenges

This study highlights profound challenges stemming from the physical and socioeconomic conditions at Ocean Academy, significantly hindering the learning environment and student well-being. During the 5-day observation, researchers noted that the school's proximity to residential homes results in constant noise disruptions, impairing classroom focus and teachers' ability to engage students. One teacher remarked, "It can be quite challenging to keep the students' attention with all the external noise and the less-than-ideal classroom conditions." The lack of modern infrastructure, air conditioning, proper windows, and soundproofing, further compounded these distractions, with poor ventilation and ineffective noise control contributing to a physically uncomfortable learning space. These conditions, coupled with frequent water, electricity, and sewer outages, created an environment where basic needs

are unmet, affecting students' concentration, health, and overall engagement in education. Compounding these infrastructural deficiencies, the school and community are burdened by socioeconomic challenges. Observational data revealed that many families face financial hardships, with some unable to provide food and shelter for their children consistently. One respondent noted, "Not all students have enough food; some don't even have a proper place to stay," reflecting the pervasive economic strain that limits students' access to necessities. The school's condition is aggravated by frequent flooding and constant repairs. The combination of unreliable infrastructure and socioeconomic instability disrupted daily school operations, undermining students' ability to succeed academically.

Beyond these physical and economic barriers, Ocean Academy may also be grappling with significant student behavioral problems, many of which are linked to the area's status as a tourist destination. The community's economic vulnerability has left some students susceptible to exploitation by tourists, who lure them into exploitative sexual relationships in exchange for money or goods. "Tourists sometimes take advantage of the kids because they know they are struggling," one respondent observed. These predatory behaviors, alongside growing issues like drug use and inappropriate language, further destabilize the school environment. With limited staffing and inadequate mental health resources, the school is ill-equipped to manage these complex social risks. As one respondent emphasized, "Bad behavior and language spread like cancer here," underscoring the urgency of addressing these challenges. The persistent lack of infrastructure and deep-seated behavioral and socioeconomic issues necessitate immediate intervention. "The government must help with roads, water, and basic things. Without that, we're stuck," one participant noted, calling for systemic change to support the school and its vulnerable student population.

Community Collaboration and Support

The theme of "community collaboration and support" emerged as a foundational element of Ocean Academy, significantly shaping the school's educational environment and the broader social cohesion of the community. Data from interviews and direct observations revealed a profound sense of collective care, where community members actively contributed to one another's well-being. This spirit of compassion was particularly evident in how the community looks after its children, ensuring that they receive support at home and at school. Researchers observed that students often travelled to school in small clusters or peer groups, especially during hazardous weather conditions, providing a sense of safety and solidarity as they navigate flood-prone streets together. Teachers, too, demonstrated a deep concern for their students' welfare beyond academic responsibilities. In one notable example, a teacher was observed providing meals to students in her class, knowing that several students might otherwise go without food. These acts of care are not isolated gestures but rather reflect a deeply embedded communal ethic that prioritizes the nurturing and well-being of the next generation.

This community-driven support is not just limited to immediate acts of care; it is also embedded in the longstanding cultural practices of the area. Generational traditions of helping others have fostered a deeply ingrained ethos of collaboration, ensuring that the needs of individuals are met through collective action. "We help each other," as one respondent put it, encapsulates this shared responsibility, which also extends to educational initiatives. Before the establishment of Ocean Academy, parents faced significant financial and logistical burdens in securing their children's education. With no local high school, families were forced to spend considerable sums on daily boat transportation to the city, which was financially draining and

perilous due to rough weather conditions and unsafe vessels. The community's determination to collaborate and provide educational opportunities for its youth was a driving force behind the creation of Ocean Academy, illustrating the intense awareness of education as a vehicle for upward mobility and communal enrichment. This proactive effort to establish a local school shows the community's recognition that investing in education promotes individual success and preserves the vitality and prospects of the entire community.

In addition to creating the high school, the community's collaboration with the school is evident in its sustained commitment to educational advancement. Parents and local leaders regularly engage in school activities and decision-making processes, reinforcing their belief in the transformative power of education. This sense of ownership is deepened by the fact that all the full-time teachers at Ocean Academy are local community members, with some having graduated from the very school where they now teach. This continuity fosters a strong connection between educators and students, as teachers not only understand the unique challenges faced by the community but are also personally invested in its success. Furthermore, students actively seek internship opportunities within the school, demonstrating their desire to give back and strengthen the institution that has supported their academic journey. During school events and community meetings, parents also express their support and actively participate in fundraising initiatives to improve the school's infrastructure. Such involvement demonstrates a collective understanding that education is a cornerstone for future opportunities and community development. One respondent highlighted the community's investment in education: "We are not just sending our children to school — we are building a future for the whole community." This shared vision of education as a pathway to both individual and communal success underscores the depth of commitment that characterizes the relationships within Ocean Academy, making it a central space where the values of collaboration, mutual care, and social responsibility converge.

Discussion

Family, school, and community engagement are central to students' educational success, particularly in rural settings like Caye Caulker. Research by Epstein (2001) and Sheldon (2003) highlights how schools in such contexts often serve as educational institutions and community hubs, with parental and community involvement as crucial drivers of student success. At Ocean Academy, this dynamic is visible in the collaborative relationships between parents, local businesses, and community members, all contributing to the school's functioning and student development. While shaped by socioeconomic realities, these interactions are fundamentally anchored in a shared commitment to education and the betterment of the island community. For instance, community-wide celebrations, such as the prom event, provide a vivid example of how the island rallies around its students, showcasing a deep collective investment in student achievements. Unlike in more individualistic Western settings, where such events may be limited to student participation, the involvement of parents and community members in these milestones illustrates the community's vital role in shaping the students' educational experiences and personal growth. Beyond celebrations, the active participation of local and international figures (such as retired educators who contribute both in and out of the classroom) reflects how community involvement enhances the school's resources and capacity. One notable example is a retired U.S. teacher who became deeply embedded in Ocean Academy's structure, supporting the school through teaching and joining the Board of Governors (Board of Education) for Ocean Academy and spearheading key initiatives like curriculum development and fundraising. Such contributions align with findings on the importance of community engagement in fostering supportive educational environments (Curry et al., 2023; Egure et al., 2023; Ishimaru, 2014). In Ocean Academy's case, these interactions ensure that students receive academic instruction and broader social and professional experiences critical to their

development. This reciprocal relationship between the school and the community reinforces the evidence that family and community engagement is more than peripheral — it is a cornerstone of student success, enhancing the island's learning environment and social fabric.

Studies have consistently shown that rural schools are more likely to experience resource shortages, affecting their ability to provide quality education (McDowell, 2001). At Ocean Academy, the absence of basic infrastructure like water, electricity, and sanitation systems hampers the daily functioning of the school. However, community cultural practices and values around education counterbalance these deficiencies. The strong community spirit and shared sense of responsibility observed among teachers and students helps to mitigate the impact of material shortages. This aligns with the work of Coleman (1988), who argued that social capital, in the form of strong interpersonal relationships and a shared commitment to educational success, can compensate for the lack of financial or physical capital in under-resourced schools. However, this social capital has limits. As noted in this study, the high poverty levels and limited access to governmental support for infrastructure strain the community's ability to provide consistent aid. The cultural practice of collective support cannot address the systemic issues of limited resource allocation and infrastructural decay. Furthermore, external factors, such as tourist arrivals, introduce cultural tensions that complicate these community efforts. While most tourists contribute positively to the local economy, others exploit the community's poverty, engaging in harmful behaviors that undermine the school's educational mission.

The findings on Ocean Academy's infrastructural challenges are consistent with existing research on rural schools, which identifies physical infrastructure as a critical determinant of educational outcomes (Durán-Narucki, 2008). Persistent flooding, poor road access, and unreliable utilities significantly disrupt the school's functioning. Inadequate

sewer systems and unsafe walking conditions create an environment that is not conducive to learning and places students at risk. In response to these challenges, stakeholders and community members have attempted to adapt by making do with the limited resources available. Teachers must often balance their instructional duties with addressing the immediate physical needs of students, such as providing access to food and drinking water or navigating unsafe roads. This reactive approach to infrastructural problems reflects the broader trend in rural schools, where staff and community members are forced to prioritize short-term survival strategies over long-term infrastructural development (Thapa, 2013). However, these efforts are insufficient in the face of persistent structural problems, as highlighted by multiple respondents who emphasized the need for government intervention to address the most pressing infrastructural needs. The theoretical framework of critical pedagogy (Freire, 1970) suggests that educational spaces should empower students and challenge societal inequities. However, the environmental and infrastructural challenges at Ocean Academy place significant limits on this potential. Without systemic changes that address both the physical conditions of the school and the broader socioeconomic context, the ability of Ocean Academy to function as an empowering space for students remains severely constrained.

Ocean Academy exemplifies the principles of place-based education, an approach that emphasizes integrating students' learning experiences with their local community's cultural, historical, and environmental context. Place-based education proves especially relevant in rural or geographically isolated areas, where local resources shape the community's identity and its students' lived experiences. According to Sobel (2004), students become more deeply engaged when their learning is directly tied to their surroundings, as this connection enhances academic success and fosters a heightened sense of responsibility toward their community and environment. At Ocean Academy, this

philosophy is embedded in the curriculum through partnerships with local eco-tourism businesses and marine conservation initiatives. These real-world learning opportunities enable students to connect their academic knowledge to the island's ecological and economic systems, allowing them to see firsthand how their education helps address local environmental and economic challenges.

This type of experiential learning has been shown to impact student engagement and educational outcomes profoundly. Gruenewald and Smith (2003) argue that place-based education boosts academic performance and nurtures students' sense of civic responsibility and stewardship for their community and environment. Schools like Ocean Academy create more meaningful learning experiences beyond abstract academic concepts by embedding education within the local context. For instance, students at Ocean Academy participate in marine conservation projects, where they can observe the direct impact of their work on both the ecosystem and the economy. These practical experiences help students understand how theoretical knowledge can be applied to solve real-world issues, reinforcing the relevance of their education.

Additionally, experiential learning that involves collaboration with local industries and environmental organizations is crucial for preparing students to face future challenges. Dewey (1938) emphasized that the most impactful learning occurs when students actively engage in their education, rather than passively receiving information. Moreover, Smith (2002) suggests that place-based education can strengthen local economies by equipping students with the knowledge and skills to contribute directly to the community's primary industries. At Ocean Academy, this approach is particularly evident in integrating learning with the island's key economic sectors, such as marine conservation and tourism. Extending these ideas, Down (2010) argues that education for sustainable development (ESD) must go beyond linking curriculum to community. It must reposition the

community at the very center of teaching and learning. Drawing from Caribbean ESD initiatives, Down (2010) emphasizes that meaningful education should be rooted in real community needs and co-created with community members, blending academic and local knowledge through active, service-based engagement. In this view, Ocean Academy's model aligns not only with experiential and place-based learning theories but also reflects the emerging paradigm of ESD, where education actively builds sustainable societies. By embedding community-driven goals into the heart of education, as Down (2010) advocates, Ocean Academy's practices represent a broader shift toward education that prepares students for sustainable futures academically, socially, environmentally, and economically.

Reflexivity and Ethical Considerations

Throughout the research, we remained mindful of our positionality as outsiders to the Caye Caulker community. Reflexivity — an essential aspect of naturalistic inquiry — required us to continually reflect on how our presence and interactions might influence the data we collected. We approached our research with humility and respect, recognizing that the community members were the true experts in their lives and experiences. All participants were fully informed about the purpose of our research and their consent was obtained before any data collection. We also took care to protect the confidentiality of participants, particularly given the small, close-knit nature of the island community.

Conclusion

This study illuminates the complex dynamics between Ocean Academy and the Caye Caulker community, and highlights several significant implications for rural education policy and practice, and education for sustainable development. The success of Ocean Academy's

place-based education model suggests that integrating local cultural knowledge and practical skills into the curriculum enhanced both student engagement and community development. This study also underscores the critical role of community collaboration. However, the findings also reveal that community support alone did not compensate for systematic infrastructural deficiencies and socioeconomic challenges. The persistent issues of inadequate infrastructure, limited resources, and external pressures from tourism indicate a pressing need for policy intervention and systematic support from the government. These challenges threaten not only the school's educational mission, but also the student population's broader well-being. Future research should explore how rural schools like Ocean Academy can better leverage governmental and international resources, while maintaining cultural integrity and a community-centered approach.

This case study contributes to the broader literature on rural education and sustainability education by demonstrating how schools in this isolated community have successfully balanced global educational standards with local cultural preservation. The findings suggest that the future success of this institution depends on strengthening the synergy between community engagement, educational innovation, and systematic support structures. As rural communities worldwide face similar challenges of preserving cultural identity while preparing students for a global future, Ocean Academy's experiences offer valuable insights for educational leaders, policymakers, and researchers in rural education in similar contexts.

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Appendix A

Table A1

Sample of interview guided questions:

Category	Question
Opening Questions	1. Can you please tell me more about yourself; how long have you lived on Caye Caulker, and what is your history on the island?
Exploratory Questions	2. Can you please tell me more about Ocean Academy and your relationship to the school, what opportunities the school provides, and what challenges are involved with having a high school on the island?
Behavior and Experience	3. How, specifically, have you been involved with the school?
Opinion and Values	4. How, if at all, has life on the island changed since this school was created? 5. How do you think the community perceives Ocean Academy?
Community Involvement	6. How is the community involved in Ocean Academy?
Needs Assessment	7. What are the greatest needs on this island? 8. How, if at all, has the school addressed those needs? 9. How do members of the community and families address those needs?
Closing Questions	10. What suggestions would you have to promote well-being on this island, and is there anything else you would like to share?

Appendix A continued

Table A2*First-round coding of a researcher*

Category	Interview 1	Interview 2	Interview 3	Observation 1	Observation 2
Duration	2 Hours	1 Hour	1 Hour	1 Hour	3 Hours
Role	Island Native Business Owner-Fisherman leader	Parent of a student attending HS	Teacher at Ocean Academy	Teacher at Ocean Academy	Walk about the island
Background	Born on the island	Parent born on the island's perspective	Entire life has been on the island	Entire life has been on the island	Focus on structure over beauty
Opportunities	First business on the island	Students work to pay for tuition	Attended school on the island	17 students active engaged learners	Islanders selling their products
Community Value	Traditions of helping others	Happy to have a child in school on the island	The community support the school has grown in size	Safe, welcoming classroom culture extends community	Islanders selling goods, no signs of homeless people
Challenges	Hardship to send students to Belize City expensive	Past, no place to go to school except Belize City	Barrier: road conditions, No clean water	School floods when it rains, students walk to school year-round	No clean drinking water, No public sewer system
School Relationship	Established relationships	No challenge with school	A good relationship with the school	Teacher is active in classroom and community	Very laidback lifestyle, School involvement
Student Engagement	Students create goods to sell promoting tourism	Student internships future island leaders	Competency-based learning Students explore interest	Majority of students engaged in working on tourism interests	Students showing rather than telling. Student giving tours
Behavioral Insights	Behavior of youth is most important	Behavior tied to student success	Behavior tied to academic success	Needed intervention for behavior	Community wants good behavior
Parental Involvement	Parents involved in school and island events	Thankful for a high school on the island	Parents engaged and involved in providing food	Government needs to help with infrastructure	Parents want students to stay on the island

Appendix A continued

Category	Interview 1	Interview 2	Interview 3	Observation 1	Observation 2
Environmental Observations	Island is changing No clean water No sewer system	Rain makes big holes, hardship for students walking	Loud noises from the construction	Chickens clucking, roosters crowing	No fast foods Old power grid No cars/trucks
Cultural Insights	Generational traditions of helping others	Students stay on the island future businessmen	Don't appreciate corporations coming in	Islanders help the elders with food, clothing, and shelter	We need visitors to promote tourism for financial stability