

**Conservation and Revitalisation Strategies for Historical and
Ecological Heritages of Grass Island: A Case Study of a More
Than 400 Years of History Island's Sustainability
(Project No. EP86/27/24/11-23)**

Assessment of Setting up Education Centre on Grass Island

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Abstract

This report investigates the geological and cultural significance of Tap Mun (Grass Island), exploring its historical context alongside the feasibility of establishing an educational centre to enhance community engagement and awareness. Located near Sai Kung West Country Park, Tap Mun is characterized by its diverse habitats, predominantly woodland, and an intriguing history that dates back to the Ming Dynasty. Despite its past as a bustling fishing hub, the current population has dwindled to approximately 100 residents, underscoring the need for sustainable development initiatives. Utilizing a comprehensive framework, this study assesses the necessity and potential impact of an educational facility, focusing on stakeholder engagement, community needs, and economic viability. Various educational themes are proposed, such as exhibits on local dinosaur fossils, the Tin Hau Temple, and Hakka fishing traditions, alongside interactive community events. The results indicate that the site is well-positioned for an educational centre, reflected in a favorable score of 69 out of a possible 90 in our assessment framework. The findings advocate for incorporating educational, cultural, and ecological elements into the centre's design to foster sustainable tourism and community development while preserving Tap Mun's rich heritage. This initiative aims not only to revitalize local culture but also to promote long-term ecological stewardship.

1. Introduction

1.1 Background of Tap Mun

Geological information of Tap Mun

Grass Island is an island located at the South Mirs Bay, east of Tolo Channel and north of Long Harbour. It faces the Sai Kung West Country Park and the Hoi Ha Wan Marine Park, with its back to Mirs Bay. The size of the island is 1.69 km², with a height of 129 meters. Grass Island has geological advantage attracting fishermen to fish to gather at there. The waters facing Mirs Bay are deep and with strong wave, however, the waters facing Hoi Ha Wan and Sai Kung West Country Park are an inner waters area which favor for sedimentation and the waters are calm.

70% of the Grass Island habitat is covered by woodland, 8% is covered by shrubland, 5% of grassland and farmland and around 17% are other habitats such as village and coastal. Residential villages of Tap Mun are concentrated on the South-western shoreline of the Island. The South Island was farming field in the old days, only few fields are active in recent years, most of the fields have been abandoned.

History of Grass Island

The written history of Grass Island (“Tap Mun” in Cantonese) can be traced back to 1595, the place “Tap Mun” where known as “Stupa Door” (佛塔門) was listed in the “Coastal Map of Guangdong” in “Yue Da Ji” (粵大記之廣東沿海圖) (Chan, 2020). It was the Ming Dynasty at that time, Grass Island was already a place lived with fishermen. However, the evidence of how Grass Island looked like in or before Ming Dynasty is deficient. In 1661, the Qing government issued the Great Clearance, in order to fight the anti-Qing loyalist movement of the erstwhile Ming Dynasty (Johnson, 1984). The Great Clearance banned the human settlement of some coastal areas including Grass Island. Grass Island was then deserted from 1661 to 1683, making loss of some

of the old buildings, houses, or historical evidences of the Ming Dynasty (Chan, 2020). Therefore, the relatively complete written history of Grass Island started being recorded during the Qing Dynasty.

The concrete history of human living in Grass Island can be traced back to the Tin Hau Temple built in the Qing Dynasty, the time of Kangxi Emperor (1669) (Chan, 2020). The prototype of Tin Hau Temple was built in 1669, and extended to today's scale in 1743 (Chan, 2020). In the temple, there are antiquities that showing the old history of the temple. A copper bell from 1737 was found in the temple, which confirmed that religious activities were frequently conducted in Grass Island at that time (Chan, 2020). Villagers on the island mainly believe in Tin Hau, however, there is a Christian Church on the Island as well.

There are some villages on the island, they are Tap Mun New Fishermen's Village, Yung Shu Village, Hoi Pong Street, Ha Wai, Chung Wai and Sheung Wai. The fishermen colony concentrated in the Tap Mun New Fishermen's Village and Yung Shu Village. The villagers in Hoi Pong Street and Ha Wai, Chung Wai and Sheung Wai are usually Hakka villagers, who did business or farmed on the island in the old days.

In the 1950s, the number of people at Tap Mun reached 2,000 and many fishing boats were gathered at the Tap Mun waters. The peak of the fishing boats reached few hundreds in the 1950s. It was the busiest moment of Grass Island from the 1950s to the 1960s. As the remote of the island, residents moved to the city or oversea, and now only around 100 people living on Grass Island.

Current conservation management of Tap Mun

Currently, Tap Mun is not within the boundaries of a country park, and therefore there is no educational centre operated by the government. However, nearby islands, including Kat O, Ap Chau, Hoi Ha, and Sai Kung Town, all have educational centres focused on ecological education or geoparks. Therefore, in this report, we will develop a framework to explore the feasibility and importance of constructing an educational centre in Tap Mun, to assess the need for such a centre and the benefits it would bring.

1.2 Purpose of the Study

The purpose of this report is to create a framework to assess whether there is a need to build educational centres in remote areas such as Tap Mun, as well as the feasibility of constructing such centres. This report will develop a scoring table using a quantitative and measurable framework, and will explore the feasibility and potential benefits of building an educational centre in remote islands or suburban areas. The goal is to evaluate and provide recommendations to the relevant government departments, so that this framework can be used in the future to assess the need for similar facilities in other locations.

1.3 Research Questions

The framework of this research should cover the below content: the feasibility of setting up an educational centre of island such as Tap Mun. The impact of setting up an educational centre to the community. What level of visitor engagement should be expected at the educational centre? Any cultural and environmental consideration or engagement? What infrastructures and Resources needed for setting up an educational centre? The economic viability of setting up an educational centre of the area. Any similar cases in previous? The long-term sustainability of running the educational centre.

2. Literature Review

We found that education is one of the important indicators of social dimension, in all of the studied cases, there are museums or education centres for educational purpose. In this Chapter, different kinds of museums or educational centres are listed out as a reference for common use of an educational centre in the world.

2.1 Story Rooms

Story room is one of the common form of museum can be found in the sustainable village, such as 2 of the story rooms in Lai Chi Wo Village, and the folk museum in the Samothraki island. The characteristics of story room is to show old story/history of the village. The content of the exhibition mainly comes from oral history interviews with the villagers and the historical materials they generously donated and the exhibition presents the heritage and different lifestyles of the region. Guided tours are usually set in the story room to present exhibition panels or provide tourist information for visiting. Not only in Lai Chi Wo Village, there are few story rooms located in Tap Mun nearby area, such as Kat O Story Room, Ap Chau Story Room. Guided tours are provided in weekends and holidays to provide information. The story room usually hires local villagers as narrators to share information and experiences.

2.2 Scientific and Research Centre

Another type of educational centre usually found in the sustainable village is the scientific research centre, such as the marine research centre in St John's Island is managed by the university and conduct scientific research on the island. Visiting tours also offered for collage or schools for learning marine science. However, marine science and research may not attractive to general public.

There is a similar research centre in Hong Kong as well, which is the Swire Institute of Marine Science, The University of Hong Kong. The research facilities are located in Shek O of Hong Kong, in the 1960s, the site was used to be a typhoon investigate building, and it turned into a marine laboratory in 1989. The marine research centre is an internationally acclaimed centre for innovative research (The Swire Institute of Marine Science, 2023).

2.3 Religious/heritage related Museum

Another type of the educational centre/museum is the religious or heritage related museum, like the Archaeological Museum of Samothraki, it shows the art of sanctuary, and partial reconstructions of the old building of Sanctuary of the Great Gods. The museum exhibits old buildings parts and shows religious related story of the Sanctuary of the Great Gods. Another example of popular on-site heritage museum is the Lei Cheng Uk Han Tomb Museum, it is a heritage museum showing tomb in Eastern Han Dynasty (25–220 AD). It is mainly built for conservation of the tomb and education purpose.

2.4 Tourist information Centre

A Tourist Information Centre (TIC) is a facility or office that provides information and resources to travelers and tourists about a specific location or region. These centres play a crucial role in enhancing the visitor experience and promoting local tourism.

TICs provide information about local attractions, accommodations, dining, transportation, events, and recreational activities. This can often include maps, brochures, and pamphlets. Many TICs offer booking services, allowing tourists to reserve accommodations, tours, and other experiences directly through the centre.

Some TICs provide guided tours or have partnerships with local tour operators to help visitors explore the area.

TICs typically inform visitors about upcoming local events, festivals, and activities, allowing them to engage more fully with the community. To accommodate international tourists, many TICs offer services in multiple languages, making it easier for non-native speakers to access information. Staff at TICs often provide insider tips and personal recommendations, helping tourists discover hidden gems that might not be featured in standard travel guides. TICs can also serve as a hub for local community resources, connecting tourists with local artisans, cultural institutions, and community events.

3. Methodology

3.1 Framework development

Developing an assessment framework for establishing an educational or visitor centre in a suburban village involves multiple steps. These steps can help ensure that the framework is comprehensive, well-structured, and relevant to the specific context of the village (Creswell & Creswell, 2017).

Firstly, define the purpose and objectives of the framework. Clearly outline the goals of establishing the educational or visitor centre. Determine what we want to achieve (Kirkpatrick & Kirkpatrick, 2006). Second, identify and engage relevant stakeholders, including local community members, government bodies, tourism operators, and potential visitors. Involve them in discussions to gather insights and support for the initiative (Freeman, 1984).

Third, analyze existing resources, facilities, and services in the village. Identify gaps in visitor education and services that the centre could address. Assess community interest and needs through surveys or interviews (Fowler, 2014). Then, we should investigate other successful educational or visitor centres in similar tourism contexts. Examine their frameworks, operational models, programs, and lessons learned. Establish specific criteria for feasibility, effectiveness, and sustainability (Dillman et al., 2014). Consider factors such as community impact, visitor engagement, infrastructure, financial viability, and cultural relevance.

3.2 Data Collection Methods

Use qualitative and quantitative methods to gather data on the identified criteria. In this research, it includes surveys from tourists, interviews from villagers, and focus groups such as volunteers, as well as existing tourism data from literature reviews and demographic data (Patton, 2015).

3.3 Analysis Techniques

We are going to create an evaluation framework, which develops a systematic approach to evaluate the feasibility of the centre based on the collected data. This framework should include metrics for success, monitoring protocols, evaluation timelines, and all the research questions that we have suggested. By using a quantitative evaluation table in the framework, we can evaluate whether an educational centre is appropriate to set up in the suburban area (Babbie, 2016).

4. Assessment Framework

4.1 Location Assessment

Location is a very important evaluation factor. We will divide this factor into six items:

visitor currency, the accessibility of the location, the distance to other similar educational centres, the frequency of transportation services, the uniqueness of the location, and the duration of stay at the location. We will score each of these six items individually, with 1 being the lowest and 5 being the highest. Users of this framework will be able to evaluate the location based on the scoring criteria we have established.

4.1.1 Visitor currency

One mark: Visitor currency monthly average <99 per day.

Two marks: Visitor currency monthly average 100-199 per day.

Three marks: Visitor currency monthly average 200-299 per day.

Four marks: Visitor currency monthly average 300-399 per day.

Five marks: Visitor currency monthly average >400 per day.

4.1.2 Accessibility of the location

An accessible location is easier for visitors to reach, whether by public transport, private vehicles, or on foot. This encourages more visitors to attend educational programs, resulting in higher engagement and participation rates.

When an educational centre is easy to reach, visitors are more likely to participate in programs, workshops, and activities. This leads to increased learning opportunities and a better overall educational experience.

The accessibility scoring system would be as below.

One mark: Only accessible by foot and far away from the nearest transportation station more than 1 hour.

Two marks: Only accessible by foot and far away from the nearest transportation station more than 30 minutes but less than 1 hour.

Three marks: Accessible by at least one public transport, such as minibus, ferry, taxi and bus.

Four marks: Accessible by at least 2 public transport, such as minibus, ferry, taxi and bus.

Five marks: Accessible by more than 2 public transport, such as minibus, ferry, taxi and bus.

4.1.3 Distance to other similar education centres

As running an educational centre is costly, therefore to reduce duplication of resources allocation, lower score will be given if there are similar educational centre/tourist information centre nearby.

One mark: There is another visitor centre/ educational centre within 15 minutes walking or public transport travelling time.

Two marks: There is another visitor centre/ educational centre within 16-30 minutes walking or public transport travelling time.

Three marks: There is another visitor centre/ educational centre within 31-60 minutes travelling time. (Assume travelling by public transport)

Four marks: There is another visitor centre/ educational centre within 61-90 minutes travelling time. (Assume travelling by public transport)

Five marks: There is another visitor centre/ educational centre more than 90 minutes travelling time. (Assume travelling by public transport)

4.1.4 The frequency of transportation services

The frequency of transportation services significantly impacts the number of visitors to an educational or visitor centre in several ways. Higher frequency of transportation services means reduced waiting times for visitors. When transportation options are

readily available, it encourages potential visitors to choose public transport or shuttle services, leading to increased overall attendance at the centre. Frequent transportation services can attract a wider range of visitors. For residents and frequent tourists, the availability of regular transportation can encourage repeat visits, as they may be more inclined to return when they know they can easily access the centre.

One mark: Not accessible every day, such as specific public transport in weekends, holidays or by special arrangement.

Two marks: Only two or fewer sessions of transportation services in peak hour (9 am to 6 pm) per day.

Three marks: Services between each session of transportation services in peak hours (9 am to 6 pm) more than 2 hours per day.

Four marks: Services between each session of transportation services in peak hours (9 am to 6 pm) between 1-2 hours

Four marks: Services between each session of transportation services in peak hours (9 am to 6 pm) less than 1 hour per day.

4.1.5 The uniqueness of the location

The uniqueness of the location of a visitor centre is crucial, influencing its appeal, educational value, and overall success. A unique location sets the centre apart from other attractions in the area. This differentiation can entice visitors who are looking for something new and engaging, increasing foot traffic and attendance.

One mark: If the location does not hold any historical buildings/ or less ecological or cultural attractions

Two marks: If the location contains a little bit ecological/ cultural attraction

Three marks: If there is a statutory historical building or with an ecological or cultural attractions.

Four marks: If there is more than one statutory historical building or with more than one ecological or cultural attractions.

Five marks: If there are special attractions that cannot be found in other locations or contain a level 1 statutory historical building in this location.

4.1.6 The duration of stay at the location

The duration of stay at the location or attraction is important for a variety of reasons that can significantly impact the overall visitor experience, operational success, and economic benefits to the surrounding community. The longer the staying time, the higher the chance that the visitors may need more information or seek help in the educational centre. The higher the score would be given to a place which people able to spend an extended period of time at the location.

One mark: The average duration of stay at the location is less than 1 hour

Two marks: The average duration of stay at the location is between 1-2 hours

Three marks: The average duration of stay at the location between 2-4 hours

Four marks: The average duration of stay at the location between 4-6 hours

Five marks: The average duration of stay at the location more than 6 hours

4.2 Community Needs Assessment

Impact towards community is the important considerations for setting up educational centre. The impacts we considered include the supportiveness from different stakeholders. The functions of the educational centre can be provided to addressing the gaps in existing services. The centre's capacity for accommodating visitors annually.

4.2.1 Supportiveness from the residents (Score x2 for this category)

Residents who support a centre are more likely to participate in programs, events, and activities. Their involvement can lead to higher attendance and engagement levels.

And a sense of ownership often translates into long-term support, ensuring the centre remains relevant to the community's needs over time. Residents can provide valuable feedback about cultural considerations, ensuring that programs are inclusive and reflective of the community's diversity. Therefore, the higher the level of support from the residents, the higher the score can be obtained from the table. As residents are the major stakeholder from the educational centre, the ratio of the resident support would be 2 times that of support from the other stakeholders.

One mark: Totally not supported by resident

Two marks: Supported by less than 20% of residents

Three marks: Supported by 20-50% of residents

Four marks: Supported by 50-80% of residents

Five marks: Supported by more than 80% of residents

4.2.2 Supportiveness from the public

The public who supports a centre are more likely to participate in programs, events, and activities. Their involvement can lead to higher attendance and engagement levels.

The public including different stakeholders that maybe potentially visit the location.

One mark: Totally not supported by public

Two marks: Supported by less than 20% of public

Three marks: Supported by 20-50% of public

Four marks: Supported by 50-80% of public

Five marks: Supported by more than 80% of public

4.2.3 The function of the Educational Centre

Educational centres provide opportunities for individuals of all ages to engage in learning, regardless of their background or prior education. This promotes a culture of

lifelong learning. They offer programs that help individuals acquire new skills or enhance existing ones, which is vital in today's rapidly changing job market. By fostering education and personal growth, educational centres empower residents, which can lead to enhanced community involvement and improvement in overall quality of life. Educational centres can host programs that celebrate and explore diverse cultures, promoting understanding and appreciation among different community groups. Educational centres can tailor programs to meet the specific needs and interests of the community, addressing local issues, concerns, and cultural contexts. Therefore, if a proposed education centre contains more functions, it would obtain a higher score, as the impacts to society would be increased if the centre with more functional usage.

One mark: Provide only display board, map, and simple tourist information which are not interactive

Two marks: Provide display board, map, and simple tourist information with narrator on providing information

Three marks: Provide display board, map, and simple tourist information with narrator on providing information. Also, provide guided tour for the visitors.

Four marks: Provide display board, map, and simple tourist information with narrator on providing information. Also, provide guided tour, workshop, festivals and special activities to visitors.

Five marks: Other than providing display board, map, and simple tourist information with narrator on providing information. Also, provide guided tour, workshop, festivals and special activities to visitors. It also provides some special function for residents, such as meeting locations, smart village medical site or selling of products.

4.2.4 The Centre capability

The carrying capacity of educational centres is extremely important, especially when the number of visitors and foot traffic at these centres increases. This allows more citizens to access educational information and gain an understanding of the area's historical and cultural significance. Therefore, in this project, we will calculate the average number of visitors for each centre and its carrying capacity. The higher the visitor count, the higher the score will be. The predictions of the currency of the visitors to the education centre, can be predicted by 20% of the average total visitors visiting the location per day.

One mark: The educational centre is not open on weekdays and is predicted to receive less than an average of 30 people per day.

Two marks: The educational centre is not open on weekdays and is predicted to receive not more than an average of 80 people per day.

Three marks: The educational centre is not open on weekdays and weekends, and predicted to receive more than 50 people but less than an average of 100 people per day

Four marks: The educational centre is open on weekdays and weekends, and predicted to receive more than an average of 100 people but less than an average of 200 people per day.

Five marks: The educational centre is open on weekdays and weekends, and predicted to receive more than an average of 200 people per day.

4.3 Economic Viability

Cost analysis involves evaluating all expenses associated with operating an educational centre to effectively manage its budget and resources. These include utilities, maintenance, salaries of staff, educational materials, and marketing expenses. Understanding these costs helps in budgeting and identifying areas where spending

can be reduced. Initial investments such as building infrastructure, technological equipment, and renovations. Assessing these costs is essential for long-term financial planning.

4.3.1 Cost of Building the education centre infrastructure

The cost of building the education centre infrastructure is a critical framework consideration. Understanding and managing these costs is essential for the long-term viability and effectiveness of the centre. The lower the cost needed to build the education centre, the higher the chance to maintain the sustainability of the education centre. By using the other similar construction project to calculate, \$18,000 per square foot is the average construction cost for a similar suburban educational centre. Therefore, the framework will use this amount of construction cost as a benchmark to calculate.

One mark: For the cost of the whole education centre more than \$38,000 per square foot.

Two marks: For the cost of the whole education centre more than \$28,000 but less than \$38,000 per square foot.

Three marks: For the cost of the whole education centre more than \$18,000 but less than \$28,000 per square foot.

Four marks: For the cost of the whole education centre more than \$8,000 but less than \$18,000 per square foot.

Five marks: For the cost of the whole education centre less than \$8,000 per square foot.

4.3.2 Cost of maintenance of the education centre

The maintenance of the education centre including salaries of staff, educational

materials, and marketing expenses. It ensures that sufficient resources are allocated for construction, utilities, equipment, and ongoing maintenance. Proper budget management helps to prevent financial shortfalls and supports the centre's overall financial sustainability. The higher the cost needed to operate the centre the lower the score it can be obtained.

One mark: Average monthly cost of operating the centre is more than \$500,000

Two marks: Average monthly cost of operating the centre is more than \$400,000 but less than \$500,000.

Three marks: Average monthly cost of operating the centre is more than \$300,000 but less than \$400,000.

Four marks: Average monthly cost of operating the centre is more than \$200,000 but less than \$300,000

Five marks: Average monthly cost of operating the centre is less than \$200,000

4.3.3 Construction time of the educational centre

Construction time or project duration, is critically important, the timeline allows for effective allocation of resources, including labor, materials, and equipment, which can reduce costs and improve efficiency. Longer construction times can lead to increased costs due to labor, materials, and overhead. A shorter time duration helps fulfill expectations with stakeholders, as stakeholders can use the facilities earlier. Therefore, shorter construction time for an education centre leading to a higher score could be obtained.

One mark: The construction time is over 8 years.

Two marks: The construction time is between 6-8 years.

Three marks: The construction time is between 4-6 years.

Four marks: The construction time is between 2-4 years.

Five marks: The construction time is less than 2 years.

4.3.4 Funding Sources of the Educational Centre

Funding sources have a significant impact on the operations of an educational centre, affecting everything from program offerings to staffing, infrastructure, and community engagement. Each funding source ultimately influence the centre's sustainability, flexibility, and capacity to innovate. The higher risk of the fund sources, the lower score it could be obtained.

One mark: Operation from loan.

Two marks: Crowdfunding from the public.

Three marks: Fundraising events.

Four marks: Individual donations

Five marks: Corporate sponsorships or government grant

4.3.5 Economic and Financial Sustainability of the Education Centre

Economic and financial sustainability are crucial for the operation of any educational centre. They ensure that the centre can continue to provide quality education event and support to the public over the long term. Economic sustainability generally encompasses the centre's ability to generate adequate revenue while managing costs effectively. Financial sustainability focuses on the centre's financial health, including its ability to cover operational expenses, make investments, and withstand economic fluctuations. The higher the economic and financial sustainability, the higher the score could be obtained. 5 elements would be put in this case, each item valid for 1 score and 5 scores would be the maximum to be obtained.

Element 1: Have a timeline planning for at least 3 years on the centre operation

Element 2: Provide local economic growth, such as hire local residents as staff.

Element 3: The centre should provide ongoing delivery of educational programs and services throughout whole year.

Element 4: The centre should provide a healthy financial statement (with positive amount) every year.

Element 5: Provide a contingency plan of any risk management

4.3.6 Impact on the environment

Assess the environmental impact of a project, such as the establishment of a tourist and education centre, can help in understanding and mitigating potential negative effects. Lower mark will be given to high environmental pollution projects. 5 elements will be used to measure this category, with fulfilled 5 elements mean more impacts on the environment, therefore only 1 mark can be obtained.

Element 1: Significant land disturbance and habitat loss

Element 2: Significant Noise and air pollution from machinery

Element 3: Significant waste generation

Element 4: Water runoff and sedimentation to river/freshwater or ocean directly

Element 5: Significant effects on wildlife

4.4 Stakeholder Engagement

4.4.1 Stakeholder Engagement

Stakeholder engagement is a critical aspect of the operation of an educational centre. Stakeholders can include students, overseas visitors, community members, government agencies, and residents. Effective engagement with these groups can enhance the centre's ability to meet its goals, boost community support, and ensure the alignment of programs with community needs. The more the parties of stakeholder that the education centre could obtain, the higher the score should apply.

One mark: Not open for the public

Two marks: Only open for certain stakeholders upon request/ pre-book

Three marks: Open to all the public upon request/ pre-book

Four marks: Open to all the public and welcome all the stakeholders to visit but only Chinese/Cantonese is provided in the narration

Five marks: Open to all the public and welcome all the stakeholder to visit and provide several languages for the narration

4.4.2 Communication Channel for Stakeholder Engagement

Effective communication channels for stakeholder engagement play a crucial role in the operation of an educational centre. They facilitate information sharing, feedback collection, and relationship building among various stakeholders. Strong communication channels enhance collaboration, increase transparency, and ultimately contribute to a supportive environment.

One mark: No feedback collection channel from the centre.

Two marks: With feedback channel which is single way without instantly reply. (such as email, voicemail or letter only)

Three marks: With only one feedback channel which is two-way reply. (such as hotline)

Four marks: With more than one feedback channel which is two ways instantly reply. (such as hotline, instant message software, instant chatbox)

Five marks: Other than feedback channels which are two-ways instantly reply, face-to-face channel will be provided. (such as meeting with stakeholders or discussion forum for receiving feedback)

	1	2	3	4	5
Visitor currency	Visitor currency monthly average <99 per day.	Visitor currency monthly average 100-199 per day.	Visitor currency monthly average 200-299 per day.	Visitor currency monthly average 300-399 per day.	Visitor currency monthly average >400 per day.
Accessibility of the location	Only accessible by foot and far away from the nearest transportation station more than 1 hour.	Only accessible by foot and far away from the nearest transportation station more than 30 minutes but less than 1 hour.	Accessible by at least one public transport, such as minibus, ferry, taxi and bus.	Accessible by at least 2 public transport, such as minibus, ferry, taxi and bus.	Accessible by more than 2 public transport, such as minibus, ferry, taxi and bus.
Distance to other similar education centres	There is another visitor centre/ educational centre within 15 minutes walking or public transport travelling time.	There is another visitor centre/ educational centre within 16-30 minutes walking or public transport travelling time.	There is another visitor centre/ educational centre within 31-60 minutes travelling time. (Assume travelling by public transport)	There is another visitor centre/ educational centre within 61-90 minutes travelling time. (Assume travelling by public transport)	There is another visitor centre/ educational centre more than 90 minutes travelling time. (Assume travelling by public transport)
The frequency of transportation services	Not accessible every day, such as specific public transport in weekends, holidays or by special arrangement.	Only two or fewer sessions of transportation services in peak hours (9 am to 6 pm) per day.	Services between each session of transportation services in peak hours (9 am to 6 pm) more than 2 hours per day.	Services between each session of transportation services in peak hours (9 am to 6 pm) between 1-2 hours	Services between each session of transportation services in peak hours (9 am to 6 pm) less than 1 hour per day.
The uniqueness of the location The duration of stay at the location	If the location does not hold any historical buildings/ or	If the location contain a little bit ecological/ cultural	If there is a statutory historical building or with	If there is more than one statutory historical building or with more than one	If there are special attractions that cannot be found

	less ecological or cultural attractions	attraction	an ecological or cultural attractions.	ecological or cultural attractions.	in other locations or contain a level 1 statutory historical building in this location.
The duration of stay at the location	The average duration of stay at the location less than 1 hour	The average duration of stay at the location between 1-2 hours	The average duration of stay at the location between 2-4 hours	The average duration of stay at the location between 4-6 hours	The average duration of stay at the location more than 6 hours
Supportiveness from the residents (Score x2 for this category)	Totally not supported by resident	Supported by less than 20% of residents	Supported by 20-50% of residents	Supported by 50-80% of residents	Supported by more than 80% of residents
Supportiveness from the public	Totally not supported by public	Supported by less than 20% of public	Supported by 20-50% of public	Supported by 50-80% of public	Supported by more than 80% of public
The function of the educational Centre	Provide only display board, map, and simple tourist information which do not have interactive	Provide display board, map, and simple tourist information with narrator on providing information	Provide display board, map, and simple tourist information with narrator on providing information. Also, provide guided tour for the visitors.	Provide display board, map, and simple tourist information with narrator on providing information. Also, provide guided tour, workshop, festivals and special activities to visitors.	Other than provide display board, map, and simple tourist information with narrator on providing information. Also, provide guided tour, workshop, festivals and special activities to visitors. It also provides some special function for residents, such as meeting

					locations, smart village medical site or scientific lab.
The Centre capability	The educational centre is not open on weekdays and predicted to receive less than an average of 30 people per day.	The educational centre is not open on weekdays and predicted to receive not more than an average of 80 people per day.	The educational centre is open on weekdays and weekends, and predicted to receive more than 50 people but less than an average of 100 people per day	The educational centre is open on weekdays and weekends, and predicted to receive more than average 100 people but less than an average of 200 people per day	The educational centre is open on weekdays and weekends, and predicted to receive more than an average of 200 people per day.
Cost of Building the education centre infrastructure	For the cost of the whole education centre more than \$38,000 per square foot.	For the cost of the whole education centre more than \$28,000 but less than \$38,000 per square foot.	For the cost of the whole education centre more than \$18,000 but less than \$28,000 per square foot.	For the cost of the whole education centre more than \$8,000 but less than \$18,000 per square foot.	For the cost of the whole education centre less than \$8,000 per square foot.
Cost of maintenance of the education centre	Average monthly cost of operating the centre more than \$500,000	Average monthly cost of operating the centre more than \$400,000 but less than \$500,000.	Average monthly cost of operating the centre more than \$300,000 but less than \$400,000.	Average monthly cost of operating the centre more than \$200,000 but less than \$300,000	Average monthly cost of operating the centre less than \$200,000
Construction time of the educational centre	The construction time is over 8 years.	The construction time is between 6-8 years.	The construction time is between 4-6 years.	The construction time is between 2-4 years.	The construction time is less than 2 years.
Funding sources of the educational centre	Operation from loan	Crowdfunding from the public	Fundraising events	Individual donations	Corporate sponsorships or government grant
Economic and	Fulfilled 1	Fulfilled 2	Fulfilled 3	Fulfilled 4 elements	Fulfilled 5

financial sustainability of the education centre	element	elements	elements		elements
Impact to the environment	Fulfilled 5 elements	Fulfilled 4 elements	Fulfilled 3 elements	Fulfilled 2 elements	Fulfilled 1 element
Stakeholder Engagement	Not open for the public	Only open for certain stakeholders upon request/ pre-book	Open to all the public upon request/ pre-book	Open to all the public and welcome all the stakeholder to visit but only Chinese/Cantonese is provided in the narration	Open to all the public and welcome all the stakeholders to visit and provide several languages for the narration
Communication channel for Stakeholder Engagement	No feedback collection channel from the centre.	With feedback channel which is single way without instantly reply. (such as email, voicemail or letter only)	With only one feedback channel which is two-way reply. (such as hotline)	With more than one feedback channel which is two ways instantly reply. (such as hotline, instant message software, instant chatbox)	Other than feedback channels which are two-ways instantly reply, face-to-face channel will be provided. (such as meeting with stakeholders or discussion forum for receiving feedback)

Based on the framework outlined above, we can use a scoring system to evaluate whether a location is suitable for building a rural education centre. The minimum score is set at 18 points, while the maximum score is 90 points. We will categorize this scoring range into four levels:

1. **Not Recommended for developing an education centre (18-35 scores)**
2. **Lower Recommended for developing an education centre (36-53 scores)**
3. **Recommended for developing an education centre (54-72 scores)**

4. Highly Recommended for developing an education centre (73-90 scores)

These categories will help in making an informed decision about the feasibility of establishing a rural education centre in the area.

5. Application of the Framework

5.1 Testing the framework in Tap Mun case

Based on the framework mentioned, we will use Tap Mun as an example to assess whether it is suitable to build a visitor and education centre on the island.

	1	2	3	4	5
Visitor currency		Tap Mun is predicted to have currency monthly average 150 per day.			
Accessibility of the location			Accessible by ferry only		
Distance to other similar education centres				The nearest education centre from Tap Mun is Pak Tam Chung country park visitor centre (through public transport), it needs around 60 minutes to reach there.	
The frequency of transportation services				There are ferry to Wong Shek pier or Ma Liu Shui from 1-2 hours	
The uniqueness of the location The duration of stay at the location				There are 2 historical buildings in Tap Mun, including Tin Hau Temple and King Lam	

				School.	
The duration of stay at the location			Usually visitors would spend 2-4 hours at Tap Mun. Including hiking and eating		
Supportiveness from the residents (Score x2 for this category)					More than 80% of the residents support building an education centre.
Supportiveness from the public					According to the survey we have done, more than 80% of visitors support to build an education centre at Tap Mun.
The function of the educational Centre					Other than provide display board, map, and simple tourist information with narrator on providing information. Also, provide guided tour, workshop, festivals and special activities to visitors. It also provides some special
The Centre capability				The educational centre open in	

				weekdays and weekends, and predicted to receive more than average 100 people but less than average 200 people per day	
Cost of Building the education centre infrastructure	The estimated cost of the education centre is more than \$38,000 per square meter				
Cost of maintainance of the education centre					Average monthly cost of operating the centre less than \$200,000
Construction time of the educational centre			The estimated construction time is 4 years		
Funding sources of the educational centre					We applying Government grant from Development Bureau as funding source.
Economic and financial sustainability of the education centre					Fulfilled all 5 elements
Impact to the environment		Possible noise and waste			

		generation will be generated			
Stakeholder Engagement					The centre will be opened to public in weekends and weekdays, also provides bilingual educational panels
Communication channel for Stakeholder Engagement				The centre will provide 2-way communication channels, such as hotline and facebook page.	
Total numbers of counts	1	2	3	5	7
Total score of each column	1	4	9	20	35
Total score					69

Based on the assessment framework applied to evaluate the suitability of developing an education centre on Tap mun Island, the total score is 69 points. This score falls within the category suggesting that developing an education centre on Tap Mun is recommended.

6. Other suggestions on Tap Mun Education Centre

6.1 Theme of Tap Mun Education Centre

Tap Mun, as an offshore island, has rich cultural history and ecological value. Therefore, the Tap Mun Education Centre can host various themed exhibits and halls. Here are some suggestions for the types of exhibitions we can establish:

- Dinosaur Fossil-Themed Exhibit

We recommend constructing an educational exhibition hall focused on dinosaur

fossils. Tap Mun is located close to Port Island, which is known as the first place in Hong Kong to discover dinosaur fossils (Chan, 2019). The speed boat ride from Tap Mun to Port Island takes approximately 15 minutes, making it highly suitable to build a dinosaur fossil-themed education exhibit here. This could complement tourism activities in Port Island and enhance public understanding of Tap Mun geology and the related information about dinosaur fossils (Lee, 2021).

- Tin Hau Temple-Related Exhibit

Another suggestion is to create an exhibition hall related to the Tin Hau Temple in Tap Mun, which has a history of about 300 years and is an important historical building in the northeastern waters (Wong, 2020). Historically, local fishermen would gather in Tap Mun to pay tribute to Tin Hau and participate in the Tai Ping Qing Jiao festival, which is considered an intangible cultural heritage (Yip, 2018). This educational exhibit could showcase the history and culture surrounding the Tai Ping Qing Jiao festival and the Tin Hau Temple, thereby educating the public about this intangible cultural heritage.

- Hakka and Fishing Community Wisdom Exhibit

Lastly, we could establish an educational exhibition hall dedicated to the traditional wisdom of the Hakka and fishing communities, as Tap Mun has a rich history of both cultures (Zhang, 2022). This exhibit could highlight various traditional practices, knowledge, and skills passed down through generations, providing deeper insights into the cultural heritage of Tap Mun to the public.

By developing these thematic exhibition halls, the Tap Mun Education Centre can play a vital role in promoting cultural education, enhancing community engagement, and fostering a greater appreciation of Tap Mun's unique cultural and ecological heritage. These initiatives can also serve to attract visitors,

generating interest and understanding of the island's historical significance and natural resources (Chen, 2019).

6.2 Functions of Tap Mun Education Centre

In addition to serving as a conventional education centre with exhibition halls, the Tap Mun Education Centre can also host a variety of educational activities. Here are some ideas to enhance its function and community engagement.

Butterfly Garden

Establishing a butterfly garden can provide hands-on educational opportunities for visitors (Lam, 2021). This space can serve to educate the public about local flora and fauna, the butterfly lifecycle, and the importance of biodiversity. Workshops and guided tours can enhance learning experiences.

Outdoor Activities

The centre can open up its basketball courts for outdoor activities, encouraging sports and physical fitness among residents and visitors (Cheng, 2020). This space could also be utilized for other recreational activities, such as yoga classes or fitness boot camps.

Regular Markets

Hosting regular markets can foster community engagement and support local fishermen and farmers. These markets can be themed, promoting local products, crafts, and cuisine, and providing a platform for cultural exchange (Ng, 2019).

Community Events and Meetings

The centre can offer its facilities for villagers to hold community meetings and events. This would strengthen community ties and provide a space for civic engagement (Pang, 2020).

Marine Research Base

Given Tap Mun's location surrounded by water, we can draw inspiration from Singapore's St. John's Island by establishing a marine research base at the centre (Tan, 2018). This facility could allow universities and high schools to conduct water sampling, perform simple experiments, and engage in marine studies. Additionally, we can collaborate with local fish farms to conduct marine experiments, enhancing understanding of local marine ecology and sustainable practices (Ho, 2021).

By diversifying the activities and functions of the Tap Mun Education Centre, we can create a vibrant hub for education, community engagement, and marine research. This approach not only enriches the educational experiences available to visitors and residents but also promotes conservation efforts and fosters a sense of community pride and responsibility towards Tap Mun's unique ecological and cultural heritage.

6.3 Proposed Events in Tap Mun Education Centre

Once the Tap Mun Education Centre is established, we can regularly host a variety of festivals and public activities. These events not only attract tourists but also strengthen community ties. Here are some specific activity suggestions.

Tern Festival

During the migratory season of the terns, we can organize a Tern Festival, inviting experts to lead birdwatching tours. Participants can learn about the ecology, behaviors, and conservation of terns (Wang, 2021). Workshops could be set up for attendees to create art related to terns, enhancing public awareness and appreciation of these birds.

Photography Exhibitions

We could regularly hold photography exhibitions showcasing Tap Mun's natural beauty, cultural history, and community events. Local photographers and tourists can be encouraged to participate by displaying their works, fostering a deeper emotional connection to the area (Kwan, 2022).

Guided Hiking Tours

Regularly organizing guided hiking tours could provide participants with an opportunity to explore the natural surroundings of Tap Mun. These tours can be led by professional guides or ecologists to educate attendees about local flora, fauna, and ecosystems while raising awareness of environmental conservation (Liu, 2020).

Engaging Foreign Tourists

We can arrange special programs for engaging foreign tourists, including cultural exchange activities like local food experiences or traditional craft workshops. This will allow visitors to gain deeper insights into Tap Mun's culture (Hu, 2019).

Engaging School Students

We could collaborate with schools to organize special events, offering students various educational programs and hands-on learning experiences. Activities might include environmental science classes, outdoor education, or cultural workshops, aimed at fostering students' interest in learning and their sense of social responsibility (Mak, 2021).

By implementing these diverse activities, we can transform the Tap Mun Education Centre into a vibrant hub for culture and education, bridging the gap between community residents, seniors, and youth while attracting external attention to Tap Mun. Such a dynamic environment will contribute to enhancing Tap Mun's profile and

promoting the community's sustainable development.

6.4 Budget Plan

The outline of the construction budget for the education centre (Not included the manpower budget)

Items	Estimated Cost
Demolition and site clearance	2,000,000
Foundation works	3,000,000
Building works	10,000,000
Slope upgrading works	4,200,000
Building services	6,500,000
External drainage works (e.g. drainage connections to public mains)	2,500,000
External works	2,000,000
Consultancy fee (excluding project management personnel)	6,000,000
Insurance	1,000,000
Educational Centre Internal Design	1,000,000
Total	\$38,200,000

6.5 Operational Plan

1. Hiring Consultants and Project Managers (Months 1 to 2)

During this phase, suitable consultants and project managers will be identified and hired to provide professional guidance for the project.

2. Tender Documentation and Analysis (Months 3 to 4)

Preparation of tender documents will take place, followed by the analysis of received bids to select the most suitable contractors and suppliers.

3. Demolition and Site Clearance Work (Months 5 to 13)

Demolition work will commence, along with site clearance activities to prepare for the subsequent construction phase.

4. Foundation and Construction Work (Months 5 to 17)

Work on the foundation and the main structure will begin, ensuring the stability and safety of the building.

5. Slope Stabilization Work (Months 5 to 21)

6. Responsibilities will include slope stabilization to prevent soil erosion and landslides, ensuring the long-term stability of the building.

7. Building Services Installation (Months 6 to 23)

Necessary building services will be installed, including electrical, ventilation, and air conditioning systems to ensure the building's functionality.

8. Outdoor Drainage Works (Months 6 to 23)

Installation of outdoor drainage systems will take place to ensure proper water flow and maintain the cleanliness of the surrounding environment.

9. Education Centre Internal Design and Installation (Months 12 to 24)

The internal design of the Education Centre will be developed during this period, focusing on layout, furnishings, and overall aesthetics to create a conducive learning environment.

10. Education Centre Operates (Months 25 to 60)

Following the completion of construction and internal design, the Education Centre will begin operations. This phase will encompass the establishment of programs, recruitment of staff, and initiation of educational activities.

References

1. Babbie, E. (2016). *The practice of social research* (14th ed.). Cengage Learning.
2. Chan, A. (2019). *Dinosaur fossils of Hong Kong: A historical exploration*. Hong Kong University Press.
3. Chan, T.-K. (2020). *Temple story of Tap Mun*.
4. Cheng, B. (2020). *Community sports development in rural areas*. *Journal of Sports Studies*, 15(2), 203-215.
5. Chen, L. (2019). *Cultural heritage tourism in Hong Kong: Opportunities and challenges*. *Tourism Management Perspectives*, 30, 100-110.
6. Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.
7. Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method* (4th ed.). Wiley.
8. Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
9. Fowler, F. J. (2014). *Survey research methods* (5th ed.). Sage Publications.
10. Ho, M. (2021). *Marine ecology and sustainable practices: A guide for practitioners*. *Marine Conservation Journal*, 12(3), 113-125.
11. Hu, H. (2019). *Cultural exchange through tourism: The case of Hong Kong islands*. *Journal of Tourism and Cultural Change*, 18(4), 382-397.
12. Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating training programs: The four levels* (3rd ed.). Berrett-Koehler Publishers.
13. Kwan, D. (2022). *The impact of local photography on community engagement*. *Visual Culture Review*, 8(1), 45-64.
14. Lam, J. (2021). *Creating educational gardens: A guide for public spaces*. *Environmental Education Research*, 27(5), 703-720.
15. Lee, T. (2021). *Geology of Hong Kong: An overview of significant sites*. Hong Kong Geological Society.
16. Liu, F. (2020). *Guided nature tours: Education and conservation benefits*. *International Journal of Environmental Education*, 22(1), 1-16.
17. Mak, R. (2021). *Rural education programs in Hong Kong: A case study*. *Journal of Educational Research*, 34(2), 90-105.
18. Ng, Y. (2019). *Crafting community: The role of local markets in rural areas*. *Journal of Rural Studies*, 68, 101-110.
19. Pang, C. (2020). *Building community ties through civic engagement*. *Community Development Journal*, 55(3), 334-340.
20. Patton, M. Q. (2015). *Qualitative research & evaluation methods* (4th ed.). Sage Publications.
21. Tan, J. (2018). *Marine research and conservation: Lessons from Singapore*.

Coastal Management, 46(6), 649-663.

22. The Swire Institute of Marine Science. (2023). About SWIMS. Retrieved from <https://www.swims.hku.hk/about>
23. Wang, S. (2021). *Biodiversity awareness through festivals: The Tern Festival case study*. *Ecological Education Journal*, 15(2), 87-102.
24. Wong, E. (2020). *The heritage of Tin Hau Temple in Tap Mun*. *Journal of Hong Kong History*, 24(3), 45-60.
25. Yip, S. (2018). *Intangible cultural heritage: The case of Tai Ping Qing Jiao festival*. *Cultural Heritage Studies*, 11(4), 322-337.
26. Zhang, L. (2022). *Hakka culture and fishing traditions in Hong Kong*. *Journal of Cultural Studies*, 30(1), 120-135.