DEVELOPING HERITAGE CORNERS

a guide

National Heritage Board

Table of Contents

A | *Developing a heritage corner- an overview* 2

B | *Set objectives of the heritage corner* 4

C | *Plan the resources* 6

D | *Choosing the space* 10

E | *Develop content* 12

F | *Design the corner* 16

G | *Construct and fabricate* 22

H | *Post-installation* 26

I | *Ethics* 28

J | *Case study: Huamin Primary School* 32

K | *Case Study: Tanjong Katong Secondary School* 38

L | *Checklist, forms and resources* 44

A

Developing a heritage corner – an overview

Process

The development of a heritage corner can be divided into distinct stages as listed below. Each stage will be covered in further detail in the guidebook.

a. Set the objectives of the heritage corner

Before starting the project, the school should identify the key objectives and functions of the heritage corner. These shape the direction and scope of the project.

b. Plan the resources

To develop a heritage corner, resources are needed, and their availability largely determines the scale and scope of the project. The main groups of resources are manpower, budget, availability of space, and records and artefacts for content development.

c. Choose the space

Depending on the defined objectives and functions of the heritage corner, the school needs to identify the space to be used, such as classrooms, corridors, empty walls and common areas.

d. Develop content

Developing content for the heritage corner requires research, acquiring images and artefacts, conceptualising a storyline and copywriting.

e. Design the corner

With the space in mind and storylines in place, the school can start on planning and design.

f. Construct and fabricate

Once the design is confirmed, construction works for the corner and fabrication of showcases, stations, panels etc. can begin.

g. Post-installation

Post-installation works include regular maintenance and updating of content.

Project Management

Effective project management is critical as the development of a heritage corner involves multiple stakeholders, vendors and distinct stages requiring specific resources. Here are some fundamental aspects of managing the project:

1. Appointing the project manager(s) and team

The size of the project team depends on the scale of the heritage corner. Generally, the team should comprise an experienced project manager and members dedicated to specific duties.

The key responsibilities of the project manager include:

- Liaising with stakeholders (staff members, students, community, vendors etc) to ensure needs are met and goals accomplished
- Delegating duties to team members and managing the team
- Drawing up the project works schedule and ensuring milestones are achieved on time
- Managing the project budget

2. Defining job scopes

Developing the heritage corner involves multiple processes and tasks varying in complexity. Clearly defined job scopes for team members create clarity and reduce duplication of roles. For instance, if research work is to be divided between two team members, the scope can be defined as follows:

Member 1	Member 2
• Collate and review records housed at National Archives and National Library	• Collate and review records from the school, staff members and alumni
• Plan and execute interview project	• Source for relevant artefacts

3. Timeline and scheduling

A project timeline with clear milestones is essential to tracking progress. Some key things to note for a project timeline are:

- Clear milestones with dates to indicate progress
- Realistic time frame for each stage of the project
- Regular review of progress

B

Setting objectives of the heritage corner

Setting the objectives and functions of the heritage corner is essential to the direction and development of the project. The following may be considered for adoption by the school.

Objectives

1. Document and disseminate history and heritage of the school

This is a basic objective of a school's heritage corner – to document and tell the story of the school's development and milestones.

2. Platform to cultivate a sense of identity and belonging

Through documenting and disseminating the heritage of the school, its wider community and Singapore, heritage corners can help students gain a wider perspective and understanding of history. It also enables students to see themselves as part of a larger, continuous story and develop appreciation for the present.

3. Focal point for community heritage

Heritage corners can play a role in bridging the school and the community it serves. Besides documentation, schools can also train students to be guides for visitors and residents of the community. The students may also work with residents to enhance and develop content and activities for the heritage corner, hence building connections between the school and residents.

4. Complement curriculum and learning outcomes

Character and Citizenship Education (CCE) and humanities subjects can be complemented by the school's heritage corner. Schools may consider incorporating

learning points in the corner's content and activities. Some examples of salient lessons are racial and cultural diversity in Singapore, Singapore's journey from colony to nation and nation-building stories. The corner may also be used to help students develop important skills such as research and critical thinking, interview methods, project management and communication skills.

5. Nurture heritage enthusiasts

By exposing students to heritage and history at a young age, the corner plays an important part in nurturing Singapore's next generation of heritage enthusiasts. There are various ways in which students may participate in the heritage corner, from content development, research and curating to guiding and organising events. Schools may wish to consider involving its alumni in the continual development of the corner so that it stays relevant to the community and connects the alumni, current students and residents.

Functions

1. Repository of heritage and memories

Heritage corners can act as repositories of heritage and memories of the school and the community. Schools may also look into regular collections of relevant artefacts and mementos from its alumni, students and community and conduct regular interview projects.

2. Platform for heritage activities

Besides acting as a gallery, the corner may also be used as a platform or space to launch and organise heritage activities such as interview projects, heritage hunts, quizzes and guided tours.

Peranakan themed staircase landing of the Huamin Primary School Heritage Corner

C

Planning the resources

Good resource planning is essential to ensure that the heritage corner can be delivered on time while achieving the desired objectives and functions. There are three main groups of resources required in developing a heritage corner:

1. Manpower

The school needs to identify the various manpower resources within its ranks to drive and manage the project. Generally, the following manpower resources are considered:

a) Project committee or panel: This non-executive committee or panel helps to oversee the development and progress of the heritage corner. It maintains an overview of the project's direction and advises the executive team. The school may wish to consider inviting its board members or experienced curators, historians and project managers to sit on the committee.

b) Project team: The project team is at the core of the works. The size of the team depends on the scale and scope of the heritage corner. Generally, the team would comprise a project manager and three to five members to take on delegated tasks. Some factors that affect the team's profile include the teachers' daily commitment and workload, experience in project management, knowledge and experience in research and heritage work, and technical or engineering background.

c) Researchers, runners and guides: For this category, the school may consider tapping on its students and alumni to play an active role in developing content. Members of the community may also be roped in through parent support groups, community clubs and residents' committees.

d) Vendors: If manpower resources are less than ideal, the school may wish to consider engaging vendors and external specialists to assist in the project.

This is a general list of skills required for the development of the project. The school may use this to profile its manpower resources at hand:

a) Project management
b) Administration
c) Budget control
d) Research and content development
e) Curatorial expertise
f) Design - Spatial layout and graphic works
g) Technical knowledge of building and construction works

2. Budget

The budget is a critical factor in determining the scale and complexity of the heritage corner. Depending on how extensive or sophisticated the corner is, the budget can vary to a large degree. This is a general list of items that may incur expenses. For actual costs, the school should consult potential vendors and specialists.

a) Content Development:

- Conceptualisation and story development
- Research and copywriting
- Copyright fees for third-party images, footage and other materials
- Curation

b) Design:

- Spatial layout and planning
- Interior design and concept
- Furniture design (e.g. showcases, display units)
- Graphic design

c) Construction and fabrication:

- Permits and endorsements such as the Professional Engineer's Certification
- Building works relevant to heritage corner (e.g. wall display panels)
- Fabrication of furniture, artefacts and props
- Lighting and electrical works
- Equipment (e.g. audio-visual equipment, screens, computers)
- Post-installation maintenance

Working with a low budget?

Building a heritage corner can be a costly affair. If the available budget is limited, here are some tips:

- Keep corner simple and fuss-free. It means less design and construction works. For instance, instead of commissioning structural works to create a physical corner, the school can utilise walls to serve as the backdrop for graphic prints.
- Engage teachers, students, alumni and the community to develop the corner, especially in content development and design.
- Choose areas that are already well-lit to cut down having to install extensive lighting.
- Build the corner in view of future maintenance. This affects the design of the corner, furniture such as showcases and the types of materials used for fabrication. For example, multimedia stations require regular update, maintenance and replacement of equipment, which means recurring costs in the upkeep of the corner.

3. Records and artefacts for content development

The richness of content in the heritage corner depends on how much historical and heritage materials are available. The school should do a scan of resources as early as possible so as to have an indication of what it has at hand for the project.

If artefacts and records are not readily available, the school may wish to consider organising a drive to call for materials relevant to its heritage from its alumni, staff, community and students. The school may also wish to consider fabricating or reproducing artefacts if needed.

D

Choosing the space

In a school compound, possibilities abound when it comes to selecting the right space for a heritage corner. Here are some preliminary considerations in choosing the space:

a) Size: What is the available surface area for display? How many people can it hold at one time (after furniture and other structures are installed)?
b) Accessibility: How accessible is the space? Is it located in an area with existing high traffic or is it in an isolated area? This influences visitorship and use of the corner.
c) Lighting and ventilation: Is the area well-lit? If not, is the school ready to invest in lighting works? Is the area well-ventilated or air-conditioned? Can the ventilation handle a group visit? Will mould growth be an issue?
d) Construction: Is the shape and layout of the space simple or irregular? This may have impact on building and construction works.
e) Construction: Are there any safety or infrastructural features in or around the space that have to be taken into consideration? E.g. sprinklers, fire exits, fireman access panels, pipes, electric cables etc. Would construction works affect school routines?
f) Maintenance: Is the area indoor or outdoor? Do weather elements such as sunshine, wind or rain affect the space and exhibits?
g) Safety: Would the exhibits hinder any evacuation routes during emergencies? Are there safety precautions/ procedures prepared for the space chosen?

There are different spaces that hold potential for heritage corner development:

a) Rooms – Function rooms, classrooms, library etc. can be easily converted into heritage corners. The advantage is that the rooms are already designed to be well-lit and well-ventilated, and the simple layout facilitates design.
b) Common areas - These areas usually have higher traffic and are well-lit. However, exposure to weather elements has to be noted in using break-out spaces.
c) Corridors - Walls along corridors can be used as a lead-in to the heritage corner, or as displays in themselves.
d) Pillars - Pillars can be used to support showcases, graphic displays and design elements relevant to heritage themes.
e) Stairways, spaces under stairways - Stairways offer interesting possibilities to engage students and visitors on heritage-themed displays. Spaces under stairways can also be creatively used for heritage niches.
f) Other spaces - The heritage corner doesn't always have to be conceptualised as a wall-only display space. Areas such as floors and ceilings can also be used creatively for an impactful design.

The Huamin Primary School Heritage Corner's timeline wall

E

Developing content

Content is the heart of the heritage corner. To develop interesting content, there must be sound research and creative storytelling. These are the main elements of this stage:

1. Develop a research plan

Before embarking on the research, always draw up a research plan. The plan should cover a number of things:

a) Types of records/information to be collated, including school records, Ministry of Education records, official and private archival records, publications, newspapers and interviews.
b) List of sources such as the school library, alumni and staff, the National Archives of Singapore, Singapore Press Holdings Information Resource Centre, the university libraries, museums and the National Library.
c) Detailed listing of materials to be reviewed and researcher's comments upon review
d) Timeline

2. Interview project

In the case where primary materials are not sufficient, the school may wish to consider planning and implementing an interview project.

Things to note in planning an interview project:

a) Identify potential interviewees: Depending on the content the school has in mind, different groups of interviewees have to be identified. Some common groups are long-time staff, alumni, current students and parents and members of the community.

b) Develop questionnaires: Detailed questionnaires should be developed to frame the interview and give direction. Questions should cover different aspects of the school's heritage and its development over the years, and allow for personal memories as well. For instance, in a discussion about the school's facilities, the following questions can be asked:

- Do you remember the facilities the school used to have in the 19XXs? Can you describe some of them?
- How would you compare the facilities of the school then and now?
- What are some of your favourite memories of these facilities?

3. Images, artefacts and other materials

A good image is worth a thousand words. And so are artefacts, records and such. The research plan should allocate resources to track, solicit and acquire relevant images and artefacts for purpose of display in the heritage corner. In acquiring images and artefacts, take note of the following:

a) Document and record: Create forms to trace and document the acquisition, loan and return of images and artefacts. These forms should include the source of the materials, contact details of donors, relevant dates and description of items. If the artefact is not owned by the school, the record should state if the item is on permanent or period loan
b) Reference system: A referencing system where every item is tagged is needed for acquired images and artefacts to ensure that every item is tracked at all times.
c) Handling and storage: The school should identify a dedicated space to house all such materials in a safe and clean environment. Proper and careful handling and storage of images, records and artefacts is important, especially if the items are fragile. For instance, photographs should be kept in archival quality albums to prevent damage and materials should be handled with gloves.

Artefacts for consideration include:

- School uniforms
- Badges and collar pins
- Student cards
- Commemorative souvenirs issued by school
- Awards and trophies
- Records such as publications, record books, registers and attendance books.

If an artefact is not available or in an unsuitable condition for display the fabrication of replica artefacts may be considered.

4. Develop a storyline

a) Approach:

There are many ways to tell a story in a heritage corner. Here are two standard approaches:

- Chronological: The chronological approach highlights milestones in the history of an institution, community or nation and provides an accessible and clear overview.

- Thematic: Drawing on themes to help the storytelling can be an effective way to bring across CCE-related lessons, learning points and specific interpretations of history. Some themes to consider: pioneers, noteworthy educators and the comparison of past and present for topics such as school facilities, classrooms and education.
  The school may also wish to use artefacts, images or records as the focal points in storytelling. Example: Display of a box of chalks and duster. Using this artefact, questions such as the following can be posed to students:

- Do you how these chalks and duster are used?
- What do they tell us about the classroom in the past?
- How do you think teachers and students communicate in the past without the help of computers or e-learning?

b) Messages and learning takeaways:

In developing a storyline, the school should also hold a brainstorming session on key messages in its heritage corner. Some common takeaways are:

- Appreciation for pioneering educators and staff
- Pride in the achievements and milestones of the school
- Appreciation of the present through understanding the school's and Singapore's development

5. Copywriting

Once the research is complete, copywriting for exhibition panels, captions etc. can begin. However, it is highly recommended that copywriting should start while the design is being conceptualised or after the design of the corner is confirmed as it determines how much display area is available for the text. It should be noted that the heritage corner's design should take into consideration text display needs.

The style and language should accommodate the learning abilities of the target audience.

In general, copywriting for a heritage corner can be guided by the following:

a) Keep sentences short: Visitors are standing and walking while reading the exhibition text. The attention span is limited, so keeping sentences short makes it easier for the content to be assimilated.
b) Break up content into short paragraphs: Using the same rationale, breaking up the text into digestible bits makes the corner more visitor-friendly.
c) Use catchy or interesting headlines: Attention-grabbing headlines help to capture the interest of readers.

F

Designing the corner

Before the school sets about appointing a designer, there are some preliminary questions to consider:

a) What are the realistic expectations of what can be built with the given budget?
   Generally, the budget determines the type of materials that can be used in the construction and the types of furniture and equipment that may be commissioned. If the school is not experienced in gauging the limits of the budget, we recommend that it draws up a wish list and confer with a few vendors to get an idea of market prices.

b) Does the school wish to invest in customised building works for its heritage corner, or would off-the-shelf exhibition panels and display units suffice?
   The advantage of having a built-up heritage corner is that it becomes a permanent part of the school's landscape and differentiates the school. On the other hand, using ready-made exhibition panels and display units means that the school has more flexibility in changing and relocating the exhibits.

There are a few key elements when it comes to designing the heritage corner. It is recommended that the design of the heritage corner be carried out with technical advice from the vendor appointed for the building works.

1. Spatial planning

The first step in designing the heritage corner is to plan the use of space. These are some of the main considerations. To plan the space effectively, the floor plan or blueprint of the area in concern should be made available to the designer.

a) Storytelling: The layout of the space should be such that visitors can follow the story with ease. This could be achieved by having a controlled flow where visitors intuitively understand which sections come first and which follow. However, this potentially limits the experience of visitors and discourages exploration. Another way to approach layout is to have multiple self-contained sections which are not contingent on information from other sections. This way, visitors can explore at will while retaining a sense of fun.

b) Flow of traffic: In planning the layout, the school should consider the maximum number of visitors it wishes to hold in the space at any one time. The layout should allow for this number of visitors to use the space comfortably.

c) Entrance and exit: The entrance and exit of the heritage corner should be clearly marked and easily accessible, in case of emergencies.

d) Activity space: Depending on the defined objectives and functions, the school may wish to incorporate activity space in the corner, such as room for students to gather, perform or take quizzes.

2. Look and feel

Before appointing a designer, it is important that the school has an idea of the look and feel it wants for its heritage corner, as this shapes the final creative concept. For instance, if the corner is meant to be child-friendly and approachable, bright colours and primary shapes should be incorporated. A heritage corner that focuses on racial and cultural diversity will require more design elements that bring across the idea of diversity.

3. Use of graphics

There are a number of sources that can be used as graphic elements in a heritage corner – photographs, images of records and artefacts, newspaper cuttings, stock images etc. When choosing images to use, consider the following:

a) Copyright issues

- Check on the sources of images used and ensure that they are clearly documented. Common image sources include private owners, libraries, government agencies such as the National Archives of Singapore and newspaper publishers such as Singapore Press Holdings.
- The source of the images may not necessarily be the copyright owner. For instance, a private owner may deposit newspaper cuttings that have images relevant to the corner. However, the copyright owner of the images on the cuttings would be the publisher of the papers. It is crucial to ensure that you have the permission of the copyright owner before you proceed to use the images.
- Crediting both the copyright owner and source of the images is important. Certain agencies may have specific credit lines that they require for use of the image. An example of a credit line is 'Copyright of [copyright owner], courtesy of [source]'
- In the case of some images, there may be license or usage fees associated with the use. The school needs to acquire copyright clearance and pay the necessary fees before using the images.

b) Content

- Is there a balance in racial and cultural representation in the images used?
- Do the images convey any meaningful messages?
- Are the images relevant to the content?

c) Technical

- What is the resolution of the image? Is it high enough to allow large-format prints?
- What is the source medium of the image? Is it a hard or digital copy? If the former, is the scan performed at 300 dpi and above? If the latter, does the format allow for high-resolution prints?

4. Integrating artefacts

The space layout of the heritage corner should factor in the display of artefacts collected. In allocating space for the artefacts, the school should consider if it wishes to place the artefacts in the open or in an enclosed unit or space. If the former, the design needs to incorporate barrier features to prevent damage of the artefacts from touch. If the latter, thought would need to be put into designing the right furniture to showcase the artefacts. The furniture should also allow for future updating or rotation of artefacts.

A section of the Tanjong Katong Secondary School Heritage Corner featuring significant awards won and earlier Principals of the school.

A section of the Tanjong Katong Secondary School Heritage Corner featuring significant awards won and earlier Principals of the school.

5. Integrating interactive features

Depending on the budget, the school may wish to integrate interactive features in its heritage corner. Some examples include:

a) Models, games or replicas of artefacts for students to touch, see and play with
b) Computer terminals with various programmes and activities related to the heritage corner, such as quizzes and puzzles
c) Listening booths for oral history interviews
d) Projector and screen for film or footage presentation

If electrical appliances are to be used in the heritage gallery, the design needs to incorporate location of power points. This may also require electrical works.

6. Lighting

Well-designed lighting can enhance the aesthetics of the heritage corner considerably. In commissioning lighting works for the corner, here are some factors to think about:

a) Types of lighting: This impacts utility bills in the long run as well as maintenance costs. For instance, halogen lights are more attractive and create more dramatic highlights, but they utilise more electricity, create more heat and require more frequent maintenance than LEDs. Mass-market LEDs on the other hand, are not quite able to create the same sense of drama as halogen lights.
b) Day versus night: If the heritage corner is located in a natural-lit corner, it may not require an extensive lighting system installed. However, if the school intends to open the corner for night events and functions, the lighting needs to support visits by night.
c) Control: Instead of having an on/off switch for lighting, the school may also wish to install dimmers, which grants a greater degree of control over the lighting.

7. Materials

In choosing the right materials to construct the heritage corner and fabricate its furnishings, the following factors are relevant:

a) Weather-resistance: This is important if the heritage corner is located where it is exposed to weather elements.
b) Resistance to wear and tear: All materials are prone to wear and tear. However, it is worthwhile checking if the materials used are exceptionally delicate, easy to vandalise or prone to fungal growth.
c) Long-term maintenance: Are the materials easily replaceable? What is the lead-time required to replace them? Are repairs easy to carry out? Can the materials be acquired from other vendors? Getting the right materials from the start will help schools save on maintenance later.
d) Look and feel: The materials chosen affect the look and feel of the corner. For example, dark wooden panels tend to convey a sombre atmosphere while colourful graphic prints add an exciting note to the corner.

8. Safety

Safety is a key factor in the design of the corner and its furniture. Here are some things to note:

a) Design of structure

Built structures should not have rough or sharp edges, but should be kept smooth and rounded where possible.

b) Furniture

If the school has commissioned customised furniture for the corner, the furniture should have rounded and smooth edges where possible, so as to prevent injury to users. The dimensions of furniture should also take into consideration the age group of the students.

c) Ceiling decorations

If decorative items are fixed onto the ceiling, they should be placed such that they do not interfere with fan blades. They should also be fixed out of reach of students. The minimum height of the decorations above ground is approximately 2.4 metres.

d) Flooring

The flooring of the heritage corner should be even to prevent tripping and falling.

e) Exits

Exits must be prominently labelled so that visitors may quickly evacuate in case of emergency.

9. Access

The layout of the corner and its design should also cater to users with disabilities. For instance, rather than using steps, ramps should be incorporated instead. Space allocated for visitor navigation should be able to accommodate wheelchairs as well.

10. Future updating

There should be room made for future updating of the heritage corner's content, especially in areas dedicated to the school's milestones and development. The school may also wish to allocate specific sections for regular rotation of themes.

The Tanjong Katong Secondary School Heritage Corner's artefact display cases and pull-out drawers.

G

Constructing and fabricating

Once the design is confirmed, the school is ready to start on construction of the heritage corner.

1. Getting started

To kick off the project, the school needs to appoint a vendor to undertake the building. The general process is as follows:

a) Site briefing

Holding a briefing on the requirements of the project and expectations of the school on site helps vendors to assess the scale and scope of work. The briefing should include design specifications, relevant floor plans and blueprints, schedule of works and a visit to the site.

b) Call for proposals

Following the briefing, the school can proceed to call for proposals from vendors.

c) Assessment

After the proposals are received, they need to be reviewed. Factors for review include:

- Compliance to design specifications
- Types of materials and works proposed
- Cost
- Portfolio of the team
- Schedule of works

d) Appointment

Following the review, the selected vendor is appointed. Where necessary, the school may also wish to appoint the project in parts. For instance, the fabrication of standalone units such as showcases can be separated from the main construction works.

2. Scheduling

Generally, the construction of the heritage corner can take anything from one month to a few months or more, depending on the complexity of the project. Keeping a schedule of works and running regular reviews of the progress is critical to ensuring that the corner is completed on time.

3. Permits and licenses

Before construction commences, the school should check with the vendor if specific permits, approvals and licenses are needed to carry out the works. For instance, certain structures require the Professional Engineer's Certification. Electrical works also need to be carried out by licensed electrical workers.

4. Site Management and Supervision

The project team needs to conduct checks on the site regularly to make sure that the works are in order and that housekeeping needs are seen to. Important areas of supervision:

a) Cleanliness

The work area and its surroundings must be kept clean and a sweep should be carried out at the end of the day. Tools should be kept once the work is done for the time, even for scheduled breaks. Debris must be removed daily. The school also needs to monitor to ensure that the site does not allow for mosquito breeding, especially if the heritage corner is located outdoors.

b) Floor protection

Make sure that the floor is protected during wet works or when works can potentially stain or scratch the flooring. The vendor should lay a layer of canvas before commencing.

c) Vendor management

The school needs to brief the contractors on school etiquette and conduct while on school premises. For instance, contractors should be required to sign in at the guard house and obtain a pass before starting work. The pass should be visible at all times. Contractors should avoid wandering around school premises and interacting with students. Washrooms should be designated for the use of the contractors.

d) Scheduling

Works that are potentially disruptive to classroom lessons and activities should be limited to outside school hours (timings to be advised and agreed upon by the school and contractor).

5. Safety

Keeping the worksite safe for all stakeholders is a top priority. This is a list of safety issues:

a) Equipment handling

- Equipment should be stored in designated enclosed areas such as storerooms. They should not be left lying around such that students have access to them.
- Potentially hazardous equipment such as ladders, machinery, etc. should be switched off or locked besides being stored away.

b) Cordons/ Barricades

Work areas must be clearly cordoned or barricaded so that students do not walk or wander into them.

c) Structures

During construction, structures should not be exposed. Protective wrapping with cardboard or taping around edges and corners should be implemented. This is to prevent accidents on site.

d) Drilling

Schools should consider limit drilling works to after school hours for safety reasons and to prevent disruption to classes.

To manage and limit occupational hazards, the school may look into implementing the following:

i) Assign a safety supervisor

- The safety supervisor manages contractors and ensures that safety requirements are adhered to at all times.
- Conduct daily tool box meetings before commencing work to ensure housekeeping is in order.

All contractors should be equipped with Personal Protective Equipment (PPE) suitable to the nature of their work (to be advised by the safety supervisor). If project team members wish to visit the site while it is being constructed, they should adorn PPE as well.

iii) Insurance

All workmen on site should be insured by the contractor.

iv) Electrical hazards

When using the power points in the school, contractors are required to use an ELCB plug to ensure that the power point will not be affected in the case of a fuse.

v) Working at height

When working at height, the surrounding work area must be effectively cordoned so that students do not have access to these areas.

vi) Self-standing structures

Structures that are self-standing should obtain endorsement from a professional engineer before erection.

Stand-alone entrances to heritage corners are bolted down for security reasons, Riverside Primary School.

6. Inspection

When the works are completed, the school needs to conduct a final inspection to ensure that it is delivered in compliance with the contract. Any defects must be reported and recorded before the school signs off.

H

Post installation

The completion of the heritage corner is only the beginning of an exciting long-term project.

1. Handover

Upon completion, the vendor(s) needs to carry out a handover exercise with the school. These may include:

- User training for equipment, if any, and handing over of user manuals
- User training for software, if any, and handing over of user manuals
- Research materials

2. Maintenance

Regular maintenance of the heritage corner is necessary to make sure that it does not become run-down, or worse, pose a safety hazard. Features that require regular maintenance/ replacement include:

- Lights
- Graphic prints
- Painted areas
- Electronic and electric equipment in use

Half-yearly full inspections of the heritage corner should be carried out to check for damage. worn out features and fittings. Replacements and rectification should be carried out as soon as possible to prevent posing a potential hazard to users.

The school should also monitor guarantee periods for equipment and works if any was granted by the contractors.

3. Resource management

In the course of the project, the school would have accumulated records, research materials, artefacts, publications etc. These materials need to be properly catalogued, archived and kept accessible for future reference.

4. Updating

Updates of the heritage corner's content should be carried out on a regular basis. If the school has sufficient artefacts, it may wish to consider rotation of artefacts as well.

5. Developing activities

The heritage corner presents a wide range of opportunities to create and conduct heritage-themed activities and exercises. Some recommendations:

- Training of heritage guides and champions
- Developing collaterals such as worksheets, quizzes, games, brochures, posters etc
- Heritage hunt
- Community outreach activities

Lessons are conducted using the information displayed at Riverside Primary School.

Ethics

As the buyer of services, the school should also be aware of ethical conduct when it comes to appointing contractors and vendors.

1. Specifications for proposals

While drawing up specifications for tenders or proposals, the school should note that the objective of the exercise is to gather sufficient information about the vendors and their capabilities to make a good decision on award. As such, schools should avoid calling for submissions at tender stage that require considerable investment by vendors and which may lend to abuse or copying. Examples include requests for detailed spatial layout for the corner, technical drawings for building works and technical drawings for furniture designs.

2. Ownership of creative proposals and drawings

It should be noted that when proposals are submitted by vendors, the information submitted is the intellectual property of the vendors. Schools should refrain from sharing details for proposals with other vendors, or appointing a vendor to execute the creative proposal or technical drawings of another vendor who is not awarded.

CASE STUDY

J

Case study – Huamin Primary School

1. Background

As part of its 25th anniversary celebrations in 2014, Huamin Primary School embarked on a project to curate and build a heritage corner. Funded by a grant scheme by the National Heritage Board (NHB), the corner has several objectives:

- To serve as a platform to cultivate a sense of belonging and identity.
- To be a focal point for community heritage.
- To document Huamin Primary School's history and heritage, along with community and national heritage.
- To complement the school's curriculum and learning outcomes.
- To nurture heritage enthusiasts among both teachers and students.

2. Planning in advance

Huamin Primary School began preparations for the heritage corner in September 2013. One of the key things the school did was to define its approach to the project. It envisioned the corner as a platform to engage the students in three aspects – the head, heart and hands. The "head" refers to the acquisition of knowledge and learning, whereby students would gain a better understanding of the history of the school and their neighbourhood, Yishun. The "heart" refers to the emotional connection nurtured when the students learn to better appreciate Singapore's nation-building journey through the corner. By engaging the "hands", students would be encouraged to play a part in building their community and school. With the approach and objectives in place, the school could then plan the development of the heritage corner, in partnership with the NHB.

3. Project management

To effectively manage the project, the school formed a core committee comprising two Heads-of-Department, a senior teacher and school leaders. This core committee worked closely with the vendor to execute the plans. The establishment of the committee ensured that communications between the various stakeholders were streamlined.

Besides the core committee, a Heritage team was formed as well. This team, consisting of long-serving teachers as well as new teachers, was tasked with research and content development for the corner.

4. Content development

The heritage corner features three main themes: the history of the school, the history of Yishun and key milestones in Singapore's history.

a) Research

The school undertook the research and pooled existing archival materials for the content. A curator was engaged to conceptualise the gallery, carry out supplementary research and write the story panels. The outsourcing allowed the school to tap on a professional's expertise while taking the load off its staff members as the project was significant in scale and scope.

b) Artefacts

To further enrich the heritage corner, the school also collected artefacts for display. Old school materials, souvenirs and memorabilia and art pieces by staff and students were integrated with the corner. A time capsule was also put together as part of planning ahead for future commemorative events.

c) Involving the school

The school actively made efforts to include as many stakeholders as it could in the project. Teachers skilled in photography and video production were involved in producing videos of interviews with Huamin Primary School's community, including former teachers, principals and the school's advisory members. Students, mostly from Primary Four to Primary Six, were trained to conduct oral history interviews and to guide visitors around the heritage corner.

5. Design and fabrication

A 132-square metre area was set aside for the development of the heritage corner. One section was a 90-square metre wall space along a flight of stairs and another was a 42-square metre classroom.

The design and fabrication of the heritage corner was outsourced.

a) Choosing the site

An available classroom was identified to be part of the heritage corner. However, the space offered by the room was not sufficient. Inspired by visits to museums and organisations with heritage galleries, the school then decided to include a 90-square metre wall along flights of staircases. This way, the need for more space was met in an optimal and creative way.

b) Design considerations

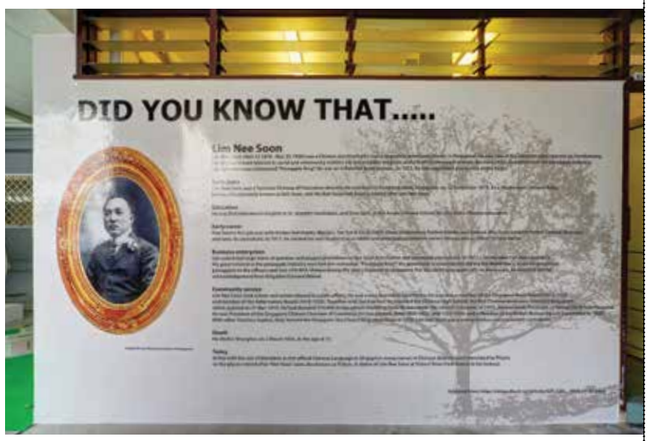
As the main users of the heritage corner are Primary level students, the school also specified a number of design features, such as:

- Reader-friendliness: The information, besides being written in simple English, was to be displayed at an appropriate eye level not just for adults but for students a well.
- Interactivity and fun: Interactive elements were designed to intrigue and capture the students' attention. Some of these elements include pop-up trivia questions and 3D stickers.

c) Practical considerations

The school also made sure to consider practical issues such as maintenance and sustainability of the heritage corner.

- Long-term sustainability: In the section on the school's history, space was marked and set aside for future updating of milestones in the school's development.
- Maintenance: Durable, easily refurbished and replaceable materials such as graphic prints were used in fabrication of the corner. The school also ensured that the materials chosen could easily be cleaned by conventional cleaning solutions.



Heritage Corner of Huamin Primary School.

Tips from Huamin Primary School

1. Have a clear vision of what the gallery should stand for and how it should look like.
2. Put a committed team with a common focus in charge of the project.
3. Be well-prepared for meetings with vendors for greater efficiency.
4. Involve everyone in the project – it is a great time to bond and interact and everyone stands to gain knowledge about the school.
5. Build in enough buffer time in project timeline.
6. Establish a good working relationship with the appointed vendor.

d) Choosing the vendor

The criteria for evaluation included:

- The project design proposal
- Portfolio, past works and reputation of the vendor
- Ability to meet criteria specified by the school and the National Heritage Board.

Challenges and Solutions

Developing a heritage corner from scratch was no easy feat. The school highlighted two main challenges faced in the course of the project:

1. Meeting deadlines

The team operated under a tight timeline of less than eight months. The deadlines were successfully met because of strong cooperation and commitment from both the core committee and Heritage team.

2. Sourcing good quality photographs

Looking for good photographs for the corner's use was a challenge. This was in part overcome by looking for more sources of images, from the National Archives of Singapore and also from personal collections of the school's stakeholders.

Project Summary

Project duration: September 2013 to April 2014

Project management manpower: A core committee and a heritage team

Budget: Approximately $70,000

Size of heritage corner: Approximately 132 square metres

"What made our heritage corner a success were a number of factors – having clear objectives and guiding principles, the support of all our stakeholders and the strategic partnership with the National Heritage Board."

- Ms Kat Quek, Head of Department for Character and Citizenship Education/Pupil Development

The National Heritage Board partnered and funded Huamin Primary School's heritage corner through the Heritage Corner Grant Scheme.

K

Case study – Tanjong Katong Secondary School

1. Background

Tanjong Katong Secondary School had an existing heritage gallery which was set up in 2000. The gallery was showing its age and the school saw an opportunity to refresh the space through NHB's grant scheme. For the new gallery, the school redefined its objectives:

- To serve as a space to engage the school's community, including its advisory committee, parents and alumni, who can partner the school in delivering a richer educational experience.
- To document the school's rich history and heritage, along with community and national heritage.
- To be a heritage laboratory where the learning experiences of students can be enhanced and enriched, and where lessons can be brought to life.

2. Planning in advance

Right from the beginning, the school was clear that the gallery was to function as a 'live' gallery. The vision was that the gallery would be in use and actively enjoyed by students and the school community for years to come. As a result, the idea of turning the space into a 'Heritage Lab' was formed. The laboratory would be equipped with materials, artefacts and tools to aid in delivering a rich learning experience for students. With that in mind, the school involved its Heads of Departments in developing ideas for the gallery, such as how the space could be used to teach different subjects and Character and Citizenship Education. These inputs ensured that the space would be relevant to educators and students. The National Heritage Board also weighed in with advice and suggestions on exhibits and use of technology.

3. Project management

In the spirit of building a gallery which would engender a sense of ownership, the school involved a large number of their staff members in the project. From the higher management including the principal and both vice-principals, to the various Heads of Departments, in particular the Head of Humanities, as well as various staff members. The work was distributed in accordance to individual strengths and areas of expertise. For example, workshop officers were involved in creating replicas to be displayed in the gallery, while the alumni liaison officer as well as school alumni assisted in sourcing for artefacts and photographs.

The school also formed a core team made up of members with diverse experiences ranging from curriculum to design and writing. Many of the members were residents of Katong or had studied or taught in schools in the area. The insider knowledge of these members coupled with their passion and excitement for uncovering Katong's heritage made the project an enjoyable and meaningful endeavour.

4. Content development

The gallery consists of seven sections and three storyboards to bring across three main themes – its history, the nation's history and the history of the community the school is situated in. Section One to Five, and the three storyboards, narrate the history of the school. At the same time, the school's history is contextualised against the backdrop of the nation's progress. Section Six and Seven focus on the community of Katong.

a) Research, curatorial work and writing

The school undertook the research and pooled existing archival materials for the content. A curator was engaged to conceptualise the gallery, carry out supplementary research and write the story panels. The outsourcing allowed the school to tap on a professional's expertise while taking the load off its staff members as the project was significant in scale and scope.

b) Heritage Lab

The gallery was conceptualised as a Heritage Lab. As such, artefacts, audio recordings, video interviews and other interactive materials were collated to support the gallery's function as a learning space. Activities were also created whereby students could work with primary and secondary sources and even create primary sources as they added new materials to the heritage repository. The lab also served as the staging point for students to embark on heritage trails around Katong.

5. Design and fabrication

The total space allocated for the heritage corner was a wall area of approximately 80 square metres, and corridor space of approximately 150 square metres.

Heritage Corner of Tanjong Katong Secondary School

a) Design considerations

To bring the Heritage Lab idea to life, the space had to be designed such that it was configurable to a classroom setting. Tables were fitted with wheels and chairs were made stackable. Every section of the lab could be transformed into a working area where students could engage in history and heritage-related activities.

b) Design inspiration

The overall look and feel of the gallery took inspiration from architectural elements found in Katong. Some of the elements included Peranakan motifs and louvered panels.

c) Practical considerations

The school had several practical considerations that were addressed in the design and building of the gallery.

- Glass display units were chosen over open display units so that artefacts could be better preserved and protected.
- Horizontal ledges of the gallery were deliberately made narrower so that students would not leave objects on them.
- The gallery featured information that was not easily outdated so that updating would not have to be frequent.
- Two multimedia kiosks were included to provide an element of interactivity. This also allowed flexibility in future enhancements and updating of content.

1. Be clear about the objectives of the corner.
2. Consider how the space can support student learning and culture building.
3. Share the vision of the outcome so that the project team may move effectively.
4. Form a team with members of different backgrounds and skillsets that are relevant to the project. Include members who are strong in language, history and research, and who have knowledge of design and building.

Tips from Tanjong Katong Secondary School

"To tell a story, is to own the story. We look forward to having a 'live' heritage corner that will deepen our students' understanding and love for school, community and nation."

- Mdm Haslinda Zamani, Principal

Challenges and Solutions

The school identified two key challenges faced in the course of the project:

1. Tight project timeline

   The gallery was to be completed in four months, which was a tight timeline given the scope and scale. By involving the school leaders in the process, especially the principal, decisions could be made rapidly so that the timeline could be met.

2. Content relevance

   Despite the outsourcing of curatorial and writing services, the material required further vetting and editing to ensure that it was relevant to the objectives of the heritage space as a learning lab. Staff members were involved intensively during the production stage to proof-read, edit, fact-check and vet to optimise the gallery for students' learning. The vetting team also comprised members with strong language skills and a good knowledge of historical material.

Project Summary

Project duration: June to October 2014
Budget: Approximately $70,000
Size of heritage corner: Approximately 150 square metres

The National Heritage Board partnered and funded Tanjong Katong Secondary School's heritage corner through the Heritage Corner Grant Scheme.

CHECKLIST

L

Checklist, forms and resources

Checklist

a. Planning and preparation

S/N	Task	Timeline	Person-in-charge	Status
1.	Set objectives for heritage corner.			
2.	Describe potential uses for heritage corner.			
3.	Identify resources required for the following areas:			
	– Project management and administration – Research and content development – Curatorial work – Design – Fabrication – Planning and executing activities for heritage corner			
4.	List resources available to the school and identify gaps if any.			
5.	Determine budget and attain funds.			
6.	Identify spaces available for development.			
7.	Appoint project manager and team.			
8.	Define job scopes of team members.			
9.	Prepare tender brief, scope and specifications.			
10.	Call for tender.			
11.	Shortlist and appoint vendor/s.			

b. Content development

S/N	Task	Timeline	Person-in-charge	Status
1.	Conceptualise storyline, themes and sections.			
2.	Conduct research for contents.			
3.	Develop storyboards.			
4.	Write cop y for storyboards			
	Exhibits			
5.	Identify and acquire images for use.			
6.	Identify and acquire artefacts for use.			
7.	Identify and acquire audio-visual materials for use.			
8.	Clear copyright if necessary.			
	Interviews			
9.	Identify and confirm interviewees.			
10.	Develop interview direction and questions.			
11.	Conduct interviews.			
12.	Transcribe interviews and prepare write-ups for use.			

c. Design

S/N	Task	Timeline	Person-in-charge	Status
1.	Plan spatial layout of corner and allocate storyboards/ themes to specific sections.			
2.	Conceptualise design of heritage corner.			
3.	Design furniture such as showcases, display units and panels etc.			
4.	Design and develop interactive features if any.			
5.	Conceptualise graphic designs and layouts.			
6.	Design lighting system if any.			

d. Construction and fabrication

S/N	Task	Timeline	Person-in-charge	Status
1.	Develop and implement work safety guidelines.			
2.	Ensure necessary permits and endorsements are in order.			
3.	Demarcate work zone/s.			
4.	Fabrication of corner.			
5.	Fabrication of furniture.			
6.	Fabrication of artefacts and props.			
7.	Undertake lighting and electrical works.			
9.	Purchase and install electrical/ electronic equipment if any.			
10.	Production and installation of graphic prints.			

e. Post-installation

S/N	Task	Timeline	Person-in-charge	Status
1.	Handover by vendor to school.			
2.	Develop maintenance schedule and guidelines.			
3.	Development of schedule/ guidelines on updating the heritage corner.			
4.	Consolidate documents and materials related to the development of the corner for future reference.			
5.	Plan and implement activities for students/ community revolving around heritage corner.			

Resources

Ministry of Education

National Archives of Singapore

National Library Board

National University of Singapore Libraries

Nanyang Technological University Libraries

Singapore Press Holdings - Information Resource Centre

Museums in Singapore (Check www.museums.com.sg for latest list)

Online resources

National Archives of Singapore	http://www.nas.gov.sg/archivesonline/
SPH Photobank	http://www.photobank.com.sg/about.html
National Library eResources	http://eresources.nlb.gov.sg/

Photos courtesy of Riverside Primary School, Huamin Primary School and Tanjong Katong Secondary School, used with permission.

National
Heritage
Board