Mă-Kè Bonsai
Bonsai For Everyone

Beginners Bootcamp:
Growing Bonsai Sustainably

by

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DIPLOMA IN APPLIED PERMACULTURE

DESIGN NO. 2:

Beginners Bootcamp: Growing Bonsai Sustainably

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Contents

Summary

The primary goal of this Design Project is to redevelop the current "Beginners Bonsai Bootcamp" into an eco-friendlier program named "Beginners Bootcamp: Growing Bonsai Sustainably." The updated course introduces bonsai aficionados to sustainable growing techniques that adhere to permaculture tenets. With regular feedback from participants, students and tutors, the aim is to develop a comprehensive strategic approach to integrating sustainable practices into all educational and training offerings at Ma-Be Bonsai.

For the conceptual framework of this project, we have opted for GADIE, an enhanced version of a well-established instructional design framework. To swiftly define our objectives, we ran a SWOC analysis which was instrumental in pinpointing our strengths and weaknesses, while an Input-Output Analysis aided in determining the resources required for our courses and the anticipated outcomes. Pattern Language was utilised to discern patterns in plant growth and bonsai cultivation, which could be applied to promote sustainable practices in bonsai cultivation. Through this process, we aim to foster an active and thriving community dedicated to sustainable bonsai development.

The final output of this Design Project comprises a trio of PowerPoint presentations supplemented by Teacher Notes. These materials will collectively constitute the educational content for the "Beginners Bootcamp: Growing Bonsai Sustainably."

GADIE: A Framework of Choice in Instructional Design

The GADIE framework represents a versatile and well-established approach to instructional design, drawing its lineage from established methodologies such as ADDIE (Annexure 1 for details). It distinguishes itself through its all-encompassing approach, comprising Goal Articulation, Analysis and Assessment, Design, Implementation, and Evaluation. This holistic methodology ensures that instructional designs are effective and sustainable over the long term. GADIE's inherent evaluative nature, characterised by continuous feedback loops and data-driven decision-making, fosters adaptability and continuous improvement. Consequently, this framework is excellently equipped to address instructional design's intricate complexities and subtleties, rendering it a dynamic and flexible tool for creating effective learning experiences.

In the realm of instructional design guided by permaculture principles, GADIE emerges as an optimal choice. Its holistic perspective encourages the cultivation of an ecosystem-oriented mindset, guaranteeing that the design process considers all facets of the project, ranging from land usage to social structures. This approach facilitates the development of harmonious relationships and long-term sustainability, aligning seamlessly with the core principles of permaculture (Figure 1). GADIE's evaluative nature, marked by a strong emphasis on feedback loops and adaptability, harmonises with the ever-evolving nature of ecosystems and communities within permaculture projects. Furthermore, its data-informed decision-making process aids in risk mitigation and enables well-informed choices, effectively addressing the intricate challenges frequently encountered in instructional design driven by permaculture. In summation, GADIE's dynamic and comprehensive approach positions it as the ideal tool for crafting effective and sustainable instructional designs.

Figure 1: GADIE Framework for Permaculture-Driven Instructional Design

Survey of Client Needs

Mǎ-Kè Bonsai, the Design Project Client, offers a variety of courses, including a detailed Bonsai Care Bootcamp, an intensive two-year course for Bonsai Experts, and a comprehensive five-year programme for Masters Students. Several additional workshops focus on core, expert and specialist skills.

These workshops are held at the bonsai nursery, where participants can work with and experience a wide range of bonsai trees from all over the world and at different stages of growth. More experienced students get to work directly in the nursery with expert bonsai growers, gaining practical experience caring for a diverse bonsai collection. Theoretical lessons in on-site classrooms complement this practical work.

Currently, the fundamental objective of Mǎ-Kè Bonsai lies in providing education and essential skills to the upcoming generation of Bonsai enthusiasts, apprentices, and entrepreneurs. The institution is dedicated to teaching the Art and Science of cultivating Bonsai while maintaining a commitment to sustainable and restorative practices that align with Permaculture's core values and principles.

The Mǎ-Kè Bonsai Way currently includes over 30 modules, each with a full set of learning materials, including video tutorials, instructor notes, discussion forums, care guides for different species, and guides to specialist techniques. These resources are designed to ensure a rich and rewarding learning experience.

The project aims to develop a new "Beginners Bootcamp: Growing Bonsai Sustainably," which will incorporate Permaculture Ethics and Principles into bonsai care, replacing the current "Beginners Bonsai Bootcamp." The knowledge from this updated bootcamp will then be used to revise Mǎ-Kè Bonsai's other 30 modules.

Goals

The Beginners Bonsai Bootcamp, originally a full-day event encompassing three modules, is set to be rejuvenated in the "Beginners Bootcamp: Growing Bonsai Sustainably" programme. This revision aims to retain the tripartite structure whilst enhancing the focus on sustainable practices, as advocated by "The Mǎ-Kè Bonsai Way", see Project Design 1. The revised modules, "Bonsai Culture & Sustainable Care Programme," "Styling with Intent - Pruning Bonsai," and "Stress-Free Bonsai Repotting," are meticulously designed to immerse participants in the principles of permaculture, applied specifically to bonsai cultivation.

Participants are expected to acquire foundational knowledge and practical skills in bonsai care and repotting, integrating permaculture principles seamlessly into their practice. By allocating a full nine-hour day, six teaching hours, 1-hour for breaks, one hour of feedback and communal time to cover all three modules, the programme ensures comprehensive learning and hands-on experience, fostering a holistic understanding of sustainable bonsai cultivation. This structured yet adaptable approach aims to offer a thorough and enriching educational journey in sustainable bonsai practices, laying down solid groundwork for all attendees.

Module 1: Bonsai Culture & Sustainable Care
This initial module offers novices a thorough and stimulating introduction to the art and culture of bonsai and its care principles. The module's structure is designed to facilitate an effective and engaging educational experience.

Participants will start by understanding the essence of bonsai, including its role in art and culture, with interactive discussions and quizzes to establish a strong base of understanding.

Then, the module will journey through bonsai's rich historical heritage, helping participants understand its importance. This leads to learning about bonsai's different styles and sizes, which will help them pick the right bonsai for themselves. They'll also get familiar with common types of bonsai and practice using bonsai care tools through practical activities.

The module presents the "Mă-Kè Bonsai Nine Point Bonsai Care Programme," a detailed plan for maintaining healthy and attractive bonsai using sustainable methods. It wraps up with a hands-on session where participants can apply their knowledge with expert guidance to improve their bonsai care techniques.

Module 2: Styling with Intent - Pruning Bonsai

The module begins with a session on understanding the purpose of pruning in bonsai, highlighting its ecological significance and alignment with permaculture principles. Subsequently, a segment is dedicated to recognising and utilising different tree parts, viewed through a permaculture lens, ensuring participants understand their ecological roles and contribution to balance.

Participants' comprehension is evaluated to ensure they grasp the sustainable aspects of bonsai pruning. This is followed by a discussion on the timing and frequency of pruning, focusing on ecological and critically following natural rhythms, cycles, and patterns to allow for effective and productive pruning, helping participants develop sustainable pruning habits through a balanced and informed approach.

The module concludes with a summary, reinforcing the ecological approach as integral to bonsai mastery and encouraging participants to view their bonsai as ecological masterpieces. The module ensures a comprehensive and ecologically mindful journey in bonsai pruning through this structured approach, aligning participants' practices with sustainability and ecological balance principles.

Module 3: Stress-Free Bonsai Repotting

They are designed to advance participants' skills in bonsai repotting with a particular focus on permaculture integration to ensure an effective learning experience. The initial part of the module is dedicated to imparting bonsai repotting techniques meticulously integrated with permaculture principles. Participants are expected to independently perform each step of the repotting process, articulating the influence of permaculture on their actions. The curriculum provides detailed, step-by-step instructions, emphasising ecological considerations and sustainable practices aligned with permaculture.

Following this, the module transitions to a segment aimed at fostering a holistic understanding of post-repotting care, which is crucial for the well-being of the bonsai.

Participants must thoroughly comprehend post-repotting care practices, such as appropriate watering, adequate sunlight exposure, and soil health. This module section reiterates the importance of a holistic approach to bonsai care, in line with permaculture's sustainable and ecologically conscious Ethics.

These goals for Module 3 aim to equip participants with advanced bonsai repotting skills and ensure that these skills are ingrained with a strong sense of ecological responsibility and sustainability.

In summary

The exercises, teaching methods, and feedback goals designed for the Bootcamp are structured to enable ongoing enhancement, solicit participant feedback, and adapt to permaculture developments. This ensures that the module stays up-to-date and effective.

Permaculture Design Perspective

Looking at the Bonsai Bootcamp from a Permaculture Perspective, there is a strong alignment between each of its modules and Permaculture Ethics and Principles:

Module 1: Bonsai Culture & Sustainable Care

❖ *Ethics*
  ➢ *Earth Care:* Teaches sustainable care practices.
  ➢ *People Care*: Engages people in a mindful and nurturing occupation that connects them with nature.
  ➢ *Fair Share:* Encourages sharing knowledge and possibly plant material.
❖ *Principles*
  ➢ *Observe and Interact*: Understanding the natural growth patterns of bonsai.
  ➢ *Use and Value Renewable Resources and Services*: Using natural inputs for care.
  ➢ *Produce No Waste*: Pruning and trimming can create inputs for composting or propagation.
  ➢ *Apply Self-Regulation and Accept Feedback*: Learning from the bonsai's response to care.

Module 2: Styling with Intent - Pruning Bonsai

❖ *Ethics*
  ➢ *Earth Care:* Pruning with intent can mean minimal interference and waste.
  ➢ *People Care:* Styling bonsai can be a form of artistic expression and personal fulfilment.

❖ *Principles*
  ➢ *Design from Patterns to Details:* Understanding overarching patterns in bonsai before focusing on small pruning decisions.
  ➢ *Creatively Use and Respond to Change:* Styling bonsai as they grow and change.
  ➢ *Integrate Rather Than Segregate:* Each pruning decision is integrated into the whole design of the bonsai.
  ➢ *Apply Self-Regulation and Accept Feedback:* Reacting to how the bonsai responds to pruning.

Module 3: Stress-Free Bonsai Repotting
- ❖ *Ethics*
  - ➢ *Earth Care:* Repotting in a way that ensures the health of the bonsai and the use of sustainable materials.
  - ➢ *People Care:* Repotting techniques that prevent stress for the tree and the person can improve their well-being.
- ❖ *Principles*
  - ➢ *Observe and Interact:* Monitoring the bonsai's health and soil conditions to know when to repot.
  - ➢ *Use Small and Slow Solutions:* Repotting is a slow and careful process that reflects the tree's growth cycle.
  - ➢ *Use and Value Diversity:* Selecting various pot styles and soil compositions that suit different types of bonsai.
  - ➢ *Creatively Use and Respond to Change:* Adapting repotting techniques as the bonsai matures and conditions change.

Across these modules, the principles of *observing and interacting* with the bonsai, ***valuing renewable resources***, and *applying self-regulation and feedback* are consistent themes. Each reflects a permaculture approach, where the cultivator aims to work in harmony with nature, responds to the individual plant's needs, and creates a sustainable and productive environment. The overarching ethics of Earth Care, People Care, and Fair Share are intrinsic to the practice of bonsai and are embodied in the curriculum of the "Bonsai Bootcamp."

Analyse and Assess

In this analysis of the current beginner course, a range of factors, including soil health, water accessibility, sunlight levels, and the community's needs, are thoroughly scrutinised. The objective is to synchronise these elements with the defined goal, ensuring that the design not only bolsters the health and aesthetics of bonsai but also augments the well-being of both individuals and the wider ecology.

SWOC Analysis for the "Beginners Bootcamp"

I utilise a SWOC analysis to understand our strengths and weaknesses. This enables me to identify our core competencies, such as providing a structured learning pathway, fostering a supportive community, and offering hands-on experience while acknowledging areas for improvement like the intensive pace, cost considerations, and varying content depth. Simultaneously, it highlights external opportunities and challenges, from the burgeoning market for new skills to the potential for online expansion. It equips me to strategically plan our growth and address challenges like stiff competition and the need for continual quality enhancement. This analysis ensures our 'beginners bootcamp' meets and surpasses participant expectations, remaining relevant and effective in a dynamic educational environment.

STRENGTHS

Comprehensive Curriculum
various topics, bonsai care, history, classification, pruning, repotting

Integration of Permaculture
weaves permaculture principles into bonsai care, addressing ecologically conscious bonsai enthusiasts.

Detailed Evaluation Mechanisms
quizzes, discussions, hands-on sessions, and evaluations, skills continuously assessed.

Feedback & Continuous Improvement
participant feedback and refining content ensures the bootcamp remains up-to-date

WEAKNESSES

Time Constraints
some modules may seem rushed, especially if catering to absolute beginners

Dependence on Participant Feedback
reliance on participant feedback improvements might limit innovations or pre-emptive refinements

Potential Overemphasis on Theory
it likely to overwhelm beginners, potentially detracting from hands-on experience.

OPPORTUNITIES

Expand to Online Platforms
online courses or supplementary material can broaden the audience and provide flexibility

Collaborations with Bonsai Nurseries
partnering with bonsai nurseries & horticultural societies can offer real-world insights and guest lectures bootcamp's credibility.

Further Specialisation
more specialised courses can be introduced, catering to intermediate and advanced bonsai & permaculture enthusiasts

CHALLENGES

Competition
as the concept of integrating permaculture with bonsai gains traction, other institutions might offer similar courses, potentially with more resources.

Changing Horticultural Practices
the world of sustainable horticulture is ever-evolving. The bootcamp must ensure it stays updated with the latest practices.

Participant Expectations
with such a detailed curriculum, participant expectations will be high. Not meeting these could affect the bootcamp's reputation.

Resource Analysis for the "Bootcamp on Growing Sustainable Bonsai"

The Bootcamp on Growing Sustainable Bonsai aims to equip participants with fundamental and advanced knowledge of bonsai care, emphasising the integration of permaculture principles. The programme has been structured around the goals, ensuring clarity, relevance, and continuous improvement.

Resources Required:
1. Venue:
   a. A spacious indoor/outdoor venue capable of accommodating participants with provisions for hands-on practice, demonstrations, and theoretical sessions.
   b. Seating arrangements, desks or tables for practical sessions, audio-visual equipment, and sanitation facilities.
   c. Outdoor space for live demonstrations and practice.
2. Bonsai Materials:

      a. Bonsai plants for demonstrations and hands-on sessions.
      b. A variety of bonsai pots and soils to demonstrate repotting.
      c. Bonsai tools, including pruners, wire, soil sieves, root hooks, watering cans, etc.
      d. Safety equipment: Gloves, masks, aprons, etc.

3. Instructors:
      a. Experienced bonsai cultivators with knowledge of permaculture principles.
      b. Assistant instructors for hands-on guidance during practical sessions.

4. Educational Materials:
      a. Printed handouts detailing bonsai care techniques, history, classification, tools, repotting techniques, and permaculture integration.
      b. Multimedia presentations for each module.
      c. Quizzes, practical scenario sheets, and feedback forms.

5. Permaculture Specialist:
      a. An expert in permaculture principles who can interlink these principles with bonsai practices and provide a holistic approach to sustainable horticulture.

6. Other Miscellaneous Resources:
      a. Refreshments and catering services for participants.
      b. First aid kit.
      c. Waste management facilities, focusing on recycling and sustainability.
      d. Signage and directional aids within the venue.

Conclusion:

For the successful execution of the Bootcamp on Growing Sustainable Bonsai, the allocation of resources is crucial. These resources ensure that the goals set in the design are met and enhance the participant experience. By judiciously using these resources, the bootcamp can offer comprehensive training that marries traditional bonsai techniques with sustainable, ecological practices in permaculture.

Patterns to Detail: A Philosophical Approach Towards Bonsai Course Development

The complex and nuanced art of bonsai cultivation extends far beyond standard horticulture, embodying a profound and intricate interaction between humans and nature. Engaging with this practice demands an ability to discern and interpret the subtle rhythms and patterns inherent in nature, allowing practitioners to nurture miniature trees that do not simply survive but thrive and encapsulate the majestic beauty of their full-sized counterparts.

Bonsai, the art of cultivating miniature trees within containers, represents a condensed essence of nature. At the core of this sophisticated practice lies the principle of pattern recognition. This essential skill equips the bonsai enthusiast to harmonise with the plant's natural rhythms and seasonal fluctuations, fostering a deep understanding and connection with the living specimen.

Understanding and applying Pattern Language is crucial in bonsai cultivation. It significantly affects the tree's health and the art form's aesthetic achievements. The meticulous application of Pattern Language ensures a holistic approach to bonsai cultivation, intertwining the practical aspects of plant care with the philosophical dimensions of aesthetic appreciation.

In this context, we intend to utilise Pattern Language as a framework to meticulously design the "Beginners Bootcamp: Growing Bonsai Sustainably" course. This approach will allow us to weave together the practical skills necessary for bonsai cultivation with a deep understanding of the patterns and rhythms of nature. The course will not only impart the technical knowledge required for bonsai care but also nurture profound respect and appreciation for the art form, ensuring that participants are equipped to cultivate bonsai in a manner that is both sustainable and aesthetically enriching.

By adopting a Pattern Language approach, we aim to create an educational experience that transcends the conventional boundaries of horticulture education, offering graduate students a comprehensive and philosophical perspective on the art of bonsai. This approach ensures that the course is not just a series of instructions but a journey towards a deeper understanding and connection with nature, fostering a community of practitioners who are knowledgeable, skilled, and deeply attuned to the principles of sustainable and aesthetic bonsai cultivation.

Adopting a Pattern-Focused Methodology for Curating the "Beginners Bootcamp"

Incorporating the principles of pattern language into the design of a bonsai-focused educational module calls for a method that is detail-oriented and adaptable. This becomes particularly essential when harmonising the syllabus with the ethics of "The Mǎ-Kè Bonsai Way" and concurrently interlacing the core tenets of permaculture. What follows is a comprehensive exploration of how the "Beginners Bootcamp: Growing Bonsai Sustainably" course is shaped using this pattern language approach.

The essence of a pattern language in curricular development lies in its capacity to produce an educational journey that is enlightening, engaging, and transformative. Through this approach, there's a fluid amalgamation of theoretical insights, hands-on skills, and deeper philosophical context, guaranteeing a well-rounded grasp of sustainable bonsai cultivation."

Pattern 1: Embracing Historical and Cultural Foundations

Context: Participants enter the bonsai world, often with little background knowledge.

Problem: Without understanding bonsai's historical and cultural significance, participants may lack appreciation and context for the practice.

Solution: Start the module with an immersive introduction to the history and culture of bonsai. Use engaging discussions, visuals, and quizzes to solidify foundational knowledge.

Pattern 2: Comprehensive Bonsai Classification and Care

Context: Following the introduction to bonsai's background, participants need to learn about different types of bonsai and how to care for them.

Problem: Bonsai has numerous styles and species, and caring for them requires specific knowledge and skills.

Solution: Provide a detailed session on bonsai classification, species, and essential care techniques. Utilise hands-on demonstrations and practical sessions to ensure participants can confidently identify different bonsai types and understand their care requirements.

Pattern 3: Integration of Permaculture Principles

Context: The module aims to refresh traditional bonsai care methods with sustainable practices advocated by permaculture.

Problem: Bonsai care has not traditionally been associated with permaculture principles, leading to a potential knowledge gap.

Solution: Integrate permaculture principles into the bonsai care and cultivation process. Ensure participants understand how these principles align with sustainable bonsai practices.

Pattern 4: Hands-on Application and Experiential Learning

Context: Bonsai care requires practical skills that can only be acquired through hands-on experience.

Problem: Theoretical knowledge needs to be improved to master bonsai care; participants need practical experience.

Solution: Provide ample opportunities for hands-on learning, ensuring participants can apply their knowledge in real-life settings under expert guidance.

Pattern 5: Fostering a Community of Sustainable Bonsai Practitioners

Context: Learning is enhanced in a community setting, where participants can share experiences and learn from each other.

Problem: Bonsai cultivation can be solitary, potentially leading to isolation and a lack of shared knowledge.

Solution: Create a community of practice among participants, encouraging them to share their experiences, challenges, and successes. Use group discussions, social media groups, or meet-ups to facilitate this community building.

Pattern 6: Continuous Improvement and Adaptation

Context: Bonsai and permaculture are dynamic fields, with new practices and knowledge emerging.

Problem: The initial module content may need to be updated, and participants may need ongoing support and learning opportunities.

Solution: Establish mechanisms to continuously improve the module content based on participant feedback and emerging practices in bonsai and permaculture. Provide ongoing learning opportunities and resources for past participants.

Applying these patterns, the "The Beginners Bootcamp: Growing Bonsai Sustainably" programme can offer a comprehensive and sustainable approach to bonsai cultivation, aligning with "The Mǎ-Kè Bonsai Way" and permaculture principles. The patterns ensure that participants gain theoretical knowledge, practical skills, a sense of community, and a commitment to sustainable practice.

Design for "Beginners Bootcamp"

This section outlines a structured yet adaptable curriculum for the "Beginners Bootcamp: Growing Bonsai Sustainably", harmonised with "The Mǎ-Kè Bonsai Way" and underpinned by permaculture principles, utilising a pattern language methodology.

The "Bootcamp" spans a 9-hour day, beginning early, intensive hours, segmented into distinct sections to ensure comprehensive grounding in both bonsai cultivation's theoretical and practical aspects.

Bonsai Culture & Sustainable Care (2 Hours)

Hour 1: Participants will explore bonsai's historical and cultural context in-depth. A deep-seated appreciation for Bonsai's heritage will be cultivated through interactive lectures, multimedia presentations, and challenging quizzes.

Hour 2: The session will examine various bonsai types and their unique care requirements through understanding holistic patterns of individual species' details patterns. Practical demonstrations will enable attendees to identify different bonsai species and comprehend the nuances of their sustainable care.

------------------------- 15 min: COFFEE & CHAT BREAK ---------------------

Styling with Intent - Pruning Bonsai (2 Hours)

Hour 3: Introduction to the anatomy of trees will set the stage for "Pruning With Nature's Rhythms", a novel application of permaculture principles to bonsai cultivation. Participants will learn to understand plant growth hormonal patterns and maturity rhythms. A combination of lectures, group discussions, and hands-on experiences will elucidate the symbiotic relationship between these disciplines.

---------------------- 30 min: LUNCH & SOCIAL BREAK ---------------------

Hour 4: Transitioning theory to practice, participants will learn to discern stem growth cycles and comprehend the nuances of when and how to prune in alignment with nature's rhythms. Hands-on pruning exercises will foster experiential learning facilitated by expert guidance.

Stress-Free Bonsai Repotting (2 Hours)

Hours 5 & 6: Instruction will focus on utilising soil life cycles, bonsai vibrancy rhythms, and growth patterns to determine when a bonsai requires repotting. Participants will also learn to craft the optimal sustainable growing medium for bonsai. The session culminates in a guided practical on stress-free bonsai repotting.

----------------------- 15 min: COFFEE & CHAT BREAK ---------------------

Fostering a Community of Sustainable Bonsai Practitioners (1 Hour)

Hour 8: Participants will be introduced to Mǎ-Kè Bonsai's Online Platform, which promotes discussion, networking, and community involvement through social media groups and forums. There will be a focus on reflective writing that considers the community's contribution to sustainable bonsai growth, aiming to maintain the programme's progressiveness and flexibility. The session will conclude with an evaluation and feedback segment to keep the course material relevant, alongside providing sustained support for alums via surveys, events, and access to the latest resources.

Design Summary

A steadfast commitment to continuous improvement guarantees the programme's enduring relevance. Adaptive to feedback and alumni engagement, it will reflect the bonsai and permaculture practices advancements. This comprehensive and nurturing approach positions the "Beginners Bootcamp" as a paragon of excellence, seamlessly integrating "The Mǎ-Kè Bonsai Way" with foundational permaculture principles.

The "Beginners Bootcamp" programme incorporates a robust self-evaluation mechanism consisting of various surveys, feedback forms, online forums, and social media groups. I and other senior practitioners will monitor this system, ensuring that all questions and queries are addressed promptly and comprehensively.

Implementation Strategy for 'Beginners Bootcamp: Growing Bonsai Sustainably

Overview

Whilst the precise date for the inaugural workshop remains undecided, it is anticipated to occur after Autumn 2024. This timeline allows for the necessary arrangements, including finalising my residency, establishing my Portuguese company, and preparing the Bonsai Nursery for student admission.

This implementation plan is developed to facilitate the "Beginners Bootcamp: Growing Bonsai Sustainably." It includes both the teaching methods and practical steps needed to achieve the goals set out in the design.

Preparations Before the Bootcamp

1. Recruitment of Participants:
   - Getting People to Join: People interested in plants and looking after the environment.
   - How: Tell people about the bootcamp through notice boards, social media, bonsai clubs, bonsai forums, gardening groups, environment clubs, and permaculture associations.
   - Registration: Set up an online registration portal with information pack downloads.
   - Deadline: Registration is to close two weeks before the event for planning purposes.
2. Venue Preparation:
   - Location: The Gardens and grounds of Vila Pinheiro, on which Bonsai Nursery and Sustainable Farm are being created.
   - Setup: Arrange workstations, AV equipment for presentations, and areas for practical sessions.
   - Sustainability: Ensure all materials used are eco-friendly and that recycling facilities are available.
3. Sorting Out Resources We Need:
   - Bonsai Trees: Native and Naturalised Species acquired from local nurseries and growers who are conscientious of their environment.
   - Tools and Bits and Pieces: Make sure everyone has what they need and that it can be used again and again.
   - Handouts: Instead of paper, send out digital copies.
4. Talk to the Teachers:
   - Who's Teaching: Find experts who know lots about bonsai and looking after the earth.
   - Telling Them What We Want: Ensure the teachers know what we're trying to do and what we expect.

On the Day of the Bootcamp (9 Hours Total)

5. Module 1: Bonsai Culture & Sustainable Care (2 hours)
   - Start (15 mins): Chat about what bonsai is and why it matters.
   - The Story of Bonsai (15 mins): Show slides and tell the history of Bonsai.
   - Bonsai Styles and Sizes and Tools (30 mins): Play a game to learn about the types of bonsai and try out the tools.
   - Looking After Bonsai the Green Way (60 mins): Teach the "Mǎ-Kè Bonsai Nine Point Care Programme" and let everyone try it.

   =================Tea and Social Break (15 mins) ====================

6. Module 2: Styling with Intent - Pruning Bonsai (2 hours)
   - Why We Prune (30 mins): Discuss how pruning helps the environment and the bonsai.
   - Understanding the Tree (30 mins): Learn about the parts of the tree and their place in nature.
   - Practising Pruning (60 mins): Try pruning with help, thinking about the right time and how nature does it.

   ================= Lunch Social Break (30 mins) ==================

7. Module 3: Stress-Free Bonsai Repotting (2 hours)
- How to Repot (90 mins): Watch and then do repotting, thinking about how it fits nature.
- Care After Repotting (30 mins): Learn how to keep the bonsai healthy after repotting.

================== **Tea and Social Break (15 mins)** =================

8. Talking About How It Went (1 hour)
- What Did You Think: Fill out a form online to say what you thought.
- Group Chat: Share what you learnt and chat about the day.
9. Breaks (1 hour total)
- How We Do It: Two short lunch breaks and half an hour.
- Chatting Time: Encourage talking and making friends during breaks.

After the Bootcamp
10. Looking at Feedback:
- What Worked: See what people liked and what could be better.
- Goals: Check if we did what we set out to do.
11. Keeping in Touch:
- Group Online: Make a place for people to talk and help each other after the bootcamp.
- Keep Sharing: Give out more helpful stuff online after the day ends.
12. Keeping Everything Green
- Make sure we always think about the environment in everything we do.
- Choose things from nearby to cut down on pollution from transport.
- Try not to waste anything during the bootcamp.
13. If Things Go Wrong
- Have a backup plan for bad weather or something else.
- Make sure everyone knows how to be safe, especially when using sharp tools.
14. Telling People About the Bootcamp
- Make a story about how growing bonsai can help the earth.
- Use pictures and fun posts on social media to get people excited.

- Ask students who care about the environment to help spread the word.

15. Making Things Better for Next Time
- Think about what went well and what didn't after the bootcamp.
- Use what we learn to make the next bootcamp even better.

By following this plan, we want to ensure the "Beginners Bootcamp: Growing Bonsai Sustainably" is fun, teaches a lot, and helps.

Evaluation

The "Beginners Bootcamp: Growing Bonsai Sustainably" Design Project plan appears robust and well-considered. The attention to sustainable practice throughout the course structure aligns seamlessly with the overarching theme of the bootcamp and, indeed, 'The Ma-Ke Bonsai Way' core tenets.

Strengths:
1. Comprehensive Preparations: The plan meticulously outlines the steps needed to recruit participants, which is vital for the programme's success. The use of varied platforms for outreach is excellent, ensuring a wide audience is reached.
2. Eco-conscious Venue Preparation: The focus on sustainability is evident in the choice of venue and the provision of eco-friendly materials and recycling facilities; this not only supports the programme's ethos but also serves as a practical demonstration of sustainable practice to the participants.
3. Resource Allocation: The emphasis on acquiring native species and providing reusable tools reinforces the sustainable message.

4. Digital Handouts: The decision to distribute digital handouts is environmentally friendly and contemporary, likely resonating well with a graduate audience familiar with digital platforms.
5. Expert Instructors: Engaging knowledgeable teachers aligned with the bootcamp's goals is essential for delivering quality content and enhancing the credibility of the course.
6. Interactive Curriculum: The modular approach with practical sessions interwoven with theoretical knowledge offers an interactive and immersive learning experience. Including social breaks is a positive feature, encouraging networking and community building.

Areas for Enhancement:

1. Feedback Mechanism: While there is a provision for feedback, there could be a more structured approach to gathering and analysing this data. A pre and post-bootcamp survey could provide a more detailed insight into the participants' learning journey.
2. Emergency Preparedness: The plan mentions a backup for adverse weather conditions, but a more detailed risk assessment and mitigation plan for other potential issues would be advisable.
3. Long-term Support: The idea of an online group for post-boot camp interaction is excellent. However, the plan could include structured follow-up sessions or advanced modules to support continuous learning and engagement.
4. Metrics for Success: While goals are checked against, the plan could delineate specific metrics for success to measure the bootcamp's outcomes quantitatively against the goals.
5. Promotional Strategy: The promotional strategy is sound, but it could be advantageous to leverage alums or industry experts to endorse the bootcamp, thereby enhancing credibility and potentially drawing a wider participant base.

Conclusion:

The "Beginners Bootcamp: Growing Bonsai Sustainably" is well-crafted and committed to sustainability and education. With minor enhancements, particularly in developing a more rigorous feedback and follow-up structure, the bootcamp is poised to be enlightening and

enjoyable for participants. It has the potential to serve as a model for how practical workshops can be executed with an eco-conscious ethos without compromising on quality or educational value.

Design Project Future Directions

Ongoing Maintenance

The sustainability and success of the "Beginners Bootcamp: Growing Bonsai Sustainably" hinge on an effective maintenance plan. We will continuously recruit participants through diverse channels, such as social media and environmental networks, and ensure our registration system remains user-friendly and informative. Our venue, the Bonsai Nursery at Vila Pinheiro, will be meticulously maintained, alongside our commitment to using eco-friendly materials and tools to provide an optimal learning environment.

Our educational content will be regularly updated in consultation with our expert instructors, integrating the latest sustainable practices into our curriculum. Feedback from each bootcamp will be systematically analysed to refine and enhance the participant experience. An online community for graduates will foster ongoing engagement and support, promoting a vibrant network of bonsai enthusiasts.

We are dedicated to upholding our green ethos, minimising our carbon footprint by sourcing locally and maintaining zero-waste operations. Safety protocols will be reviewed and updated, ensuring a seamless experience despite unforeseen challenges. This focused approach promises to keep the bootcamp fresh, relevant, and in tune with environmental stewardship.

Reflection

Reflecting on the development of the "Beginners Bootcamp," I've observed a significant evolution in my grasp of permaculture, particularly in recognising the deep synergy between Pattern Language and the permaculture principle of "From Patterns to Details." This intersection underscores a commitment to holistic and sustainable design that is scalable and adaptable and has become crucial in creating functional and meaningful spaces. This alignment has been key in enhancing the utility of both approaches within environmental design.

The insights from the bootcamp have proven invaluable, and I'm keen to incorporate these principles into other areas, setting new benchmarks for sustainable bonsai practice. With each module I integrate, I see my capabilities as a Bonsai Horticulturist expanding, contributing to my overall growth as a Permaculturist.

Over the years, the Mǎ-Kè Bonsai Way has fostered a mindful approach to sustainable bonsai cultivation, striving for excellence. Nonetheless, this project is still developing and lacks a comprehensive introductory component to permaculture. In the next phase, I plan to introduce a one-hour module on Permaculture, emulating the educational strategies from this bootcamp, which will necessitate considerable research and development to craft a substantial introductory session.

Overall, I am thoroughly pleased with the knowledge and skills acquired from this project, which has been instrumental in establishing a methodological framework for other modules. Looking ahead, I'm excited about the prospect of creating a specialised, day-long Bootcamp for Bonsai Artists focusing on Permaculture. The iterative feedback and module refinement process has deepened my understanding of design and ensured that each component is well-integrated, providing a cohesive and comprehensive learning experience.

Appendix 1: GADIE: A Comprehensive Closed Loop Process for Instructional Design

The GADIE Design Framework has a rich heritage, tracing its origins to established design methodologies. It developed from the ADIE model, an extension of the classic ADDIE framework.

The ADDIE Framework and Its Relevance to Permaculture

Originally conceived as a structured approach for Instructional Design, the ADDIE (Analyse, Design, Develop, Implement, and Evaluate) framework has found applications in various design disciplines, including permaculture. However, ADDIE's lack of emphasis on detailed goal setting or a holistic cyclical self-examination led to GADIE, which emphasised 'Analysis and Assessment' and introduced a Goal identification stage. This enhanced focus is particularly beneficial in permaculture, where a thorough understanding of every aspect of the project is crucial for creating a sustainable design that continuously evaluates itself at each stage of the process and provides feedback to relevant stages, allowing for continuous incremental and evolutionary change.

GADIE

G = Goal Articulation: GADIE commences with a 'Goal Articulation' stage, which is crucial for creating a roadmap for the entire design process. In the context of permaculture, it encourages the client and the design team to think holistically and for long-term sustainability.

A = Analyse & Assess: Here, various elements are rigorously examined. The aim is to align these factors with the articulated goals, ensuring the design enhances human and ecological well-being.

D = Design: Informed by comprehensive analysis, the design phase employs permaculture principles to create systems that are resilient, sustainable, and in harmony with natural ecosystems.

I = Implement: The practical application of the design, often carried out in stages in permaculture projects, to monitor the effects and adapt as needed.

E = Evaluate: This phase allows for reflective learning, where both the process and the outcomes are evaluated to understand their efficacy and sustainability.

Why GADIE is Ideal for Permaculture

1) Comprehensive Approach:
   a) Ecosystem Thinking: GADIE encourages viewing the design site as an ecosystem, fostering synergistic relationships between its components, whether they are learning systems and their proponents or plants, animals, and humans.
   b) Long-Term Sustainability: By establishing holistic goals, GADIE ensures that the design prioritises immediate and long-term benefits.
   c) Community Involvement: Goal articulation involves all stakeholders, ensuring a more socially equitable design.
2) Evaluative Approach:
   a) Feedback Loops: The 'Evaluate' phase enables continuous improvement, a fundamental principle in permaculture design.
   b) Adaptability: Given the evolving nature of ecosystems and communities, the 'Evaluate' stage ensures the design remains adaptable and resilient.
3) Data-Informed Decision Making:

a) In GADIE, the 'Analyse & Assess' stage provides empirical grounding to the project, enabling better-informed choices and risk mitigation, which is crucial for the complexities often encountered in permaculture.

By combining the holistic perspective of ecosystem-based design with the rigorous ongoing assessment of GADIE, the framework offers a dynamic, flexible, and comprehensive approach ideally suited for the intricacies and nuances of permaculture design.
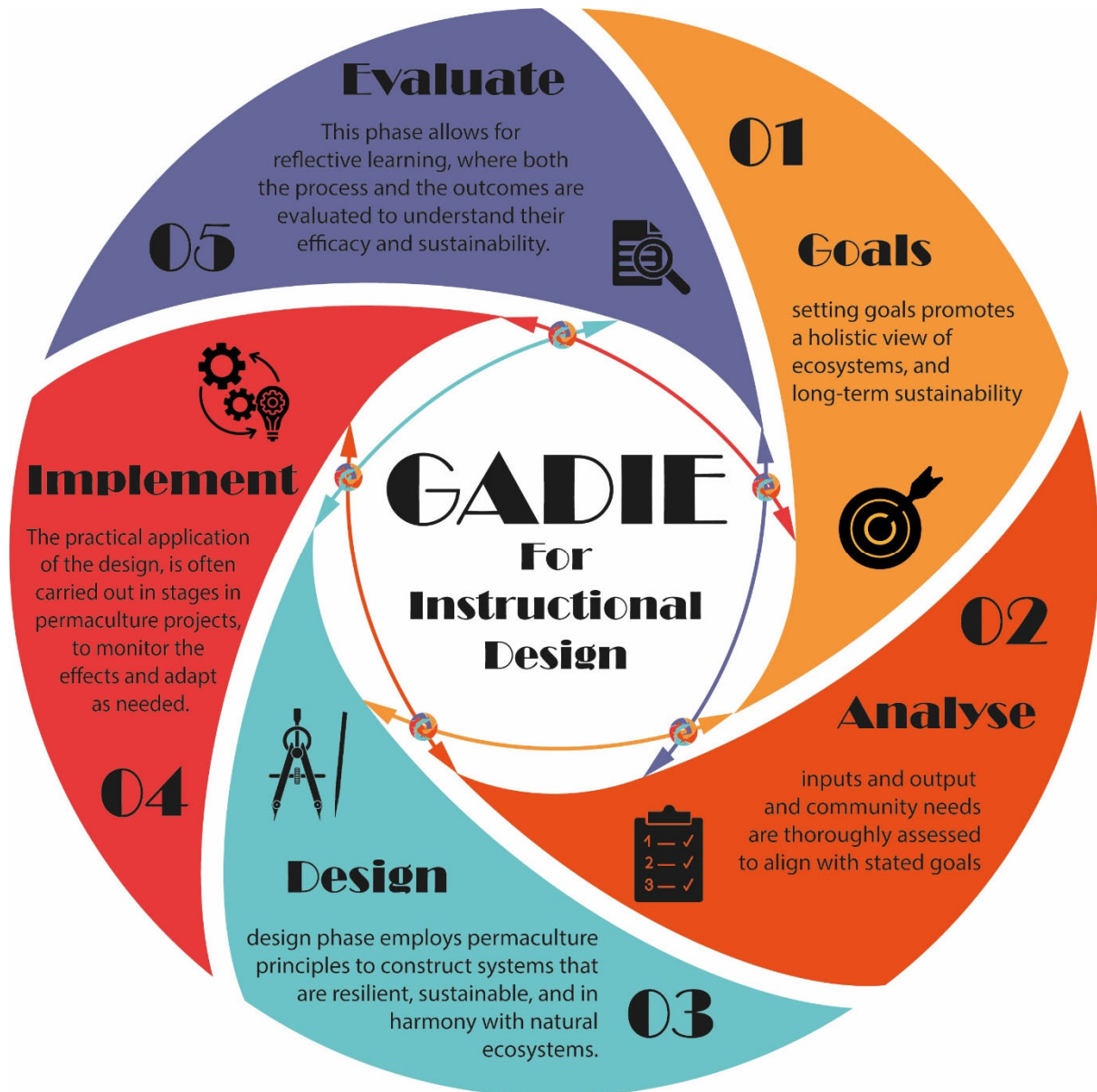

Figure 1: GADIE Framework for Permaculture Driven Instructional Design

Appendix 2: FLYER for Beginners Bootcamp: Growing Bonsai Sustainably Workshop

Since 2007, Mǎ-Kè Bonsai has been at the forefront of providing comprehensive bonsai courses to enthusiasts worldwide. Our most popular course, the "Beginners Bonsai Course", has empowered countless individuals with the knowledge and skills to nurture and cultivate beautiful bonsai trees. In response to the growing importance of sustainable practices and ecological awareness, we are proud to introduce a modified course curriculum that strongly emphasises sustainable bonsai development, incorporating introductory-level permaculture practices and information into our workshops.

Course Overview

The Bonsai Course for Beginners is an immersive and intensive day-long program designed to equip participants with the expertise and confidence required to care for and train their bonsai trees sustainably. This course is suitable for novices eager to embark on their bonsai journey, but it also offers valuable insights for experienced enthusiasts, grounding and enlightening them with sustainable bonsai practices.

One of the distinctive features of our course is that you don't need to possess a bonsai tree to participate. All you need is the desire to learn and grow with bonsai; we will provide you with all the material you need.

The course is divided into three modules, each carefully crafted to cover various topics, with a special focus on sustainable practices.

Workshop Modules

1101: Bonsai Culture and Sustainable Care

This module introduces you to bonsai origins and evolution, our nine-point system for managing and caring for your bonsai tree, emphasising sustainability. You will learn the basics of choosing the right location for your bonsai, how to properly water and feed your tree, and essential housekeeping tasks that contribute to the health and vibrancy of your bonsai while adhering to sustainable principles.

1102: Styling with Intent – Pruning Bonsai

Bonsai trees are dynamic, living entities that require continuous pruning to maintain their miniature size and shape while understanding the plant's physiology and hormonal drives. In this module, we delve into bonsai pruning, focusing on sustainability. You will learn when, how, and what to prune, exploring various pruning techniques and seasonal goals to ensure your bonsai thrives while minimising environmental impact.

1103: Stressfree Bonsai Repotting

Bonsai trees are cultivated in small containers with limited soil, necessitating periodic repotting. This module provides a comprehensive understanding of when a bonsai requires repotting and how to perform this task sustainably. You'll delve into introductory soil science, repotting techniques, and methodologies that prioritise the well-being of your bonsai while respecting the environment.

Venue

All classes are held at our picturesque location in Vila Pinheiro, Rua Projetada a Donna Maria II, 9, Bairradas 2500-532, Landal, Caldas da Rainha, Portugal.

Dates & Duration

The Bonsai Course is a full-day program encompassing the three sustainability-focused modules, blending theory and hands-on experiences. Weather permitting, we'll conduct portions of the course indoors and outdoors, so please dress accordingly.

Timings

The course runs from 9 am to 6 pm. We request that participants arrive 10-15 minutes early for registration.

Course Fees

The Beginners Bonsai Course Fees are €xxx. To secure your place, a non-refundable €xx is required upon booking, with the remaining €xx payable on the day of the course.

Course Delivery

Our course is thoughtfully structured to combine tutored segments with hands-on experiences. We believe in not only teaching the "how" and "when" but also the "why" behind bonsai care. This comprehensive approach prepares you to anticipate and meet the unique needs of your bonsai, ensuring their longevity and vitality through sustainable practices.

Language of Instruction

All classes are conducted in English for your convenience.

General Information

Throughout the day, complimentary tea and coffee will be available. We recommend bringing a packed lunch as there will be a short break between morning and afternoon sessions. As we work indoors and outdoors, please dress suitably to ensure your comfort throughout the workshop.

Join us in this transformative bonsai journey that not only cultivates the art of bonsai but also fosters a sustainable and eco-conscious approach to nurturing these magnificent living creations. At Mǎ-Kè Bonsai, we believe that by harmonising with nature, we can create bonsai trees that enjoy long, healthy, and fruitful existences while positively impacting the environment and creating a joyous and mindful experience for you.