

What is this presentation all about?

Field trips hold immense educational value, providing an unparalleled opportunity for students to have first-hand exposure to real spaces where students can make strong connections to the concepts, they learn in the traditional classroom settings. However, unprecedented, uncertain and challenging times amid COVID-19 pandemic forced academic institutions across the world to quickly adapt to technology-driven instructional strategies to support students learning. The objective of this paper is to share the new experiences in creating such thoughtful and engaging learning environments that can provide many of the identical cognitive and affective gains that off-campus field trips to botanical gardens and herbariums can provide.

What is the context?

For many years, field trips to botanical gardens and herbariums have been an integral part of our degree course in pharmaceutical chemistry (module: pharmacognosy and phytochemistry) in which the biodiversity, conservation, taxonomy, medicinal value and sustainable use of medicinal plants have been taught. However, thousands of botanical gardens around the world have been temporarily closed due to the coronavirus pandemic leaving the planned field visits to these real world spaces being cancelled. Similarly, our field trip to local botanical garden was called-off a week before the actual date. This resulted in a rush to find possible ways to provide students similar engaging experience and support to achieve the intended learning outcomes.

What are the intended learning outcomes?

Discuss the role of botanical gardens in contributing to biodiversity conservation, education, medicinal plant research and drug discovery

Discuss good practices in collecting, preparing and pressing the plant specimens

and more ...

Which instructional approach has been adopted?

Total Teaching and Learning Time: 3 hr

Mode of Virtual Tour: YouTube Videos

Expert Talk for Knowledge Enhancement: YouTube Video

Mode of Engagement: Discussion Forum with Moderation

Flow of Tour and Forum: Organised in Blocks on LMS

Forum Moderator: Curator &/ Teaching Faculty

Facilitation Platform: Microsoft Teams

What is the role of the Teaching Faculty?

Identification of appropriate learning resources (Videos)

Construction of thoughtful questionnaire for forum

Facilitation of the virtual tour on LMS

Moderation of the forum along with the curator

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VIRTUAL FIELD VISIT & FORUM

A Peek into the World of Botanic / Tour Video: 10 min



What is biodiversity? Why is it vital for a healthy and sustainable planet?

What are biodiversity hotspots? How botanics are playing their part in conserving biodiversity?

and more ...

[FORUM]

Harvesting Cinnamon | Demo Video: 15 min



what is the appropriate time for harvesting cinnamon?

What is the process of harvesting cinnamon?

How to differentiate various types of cinnamon?

and more...

[FORUM]

Introduction to Herbarium | Tour Video: 7 min



what are the functions and significance of herbariums?

How do herbariums get specimens?

Why do they keep more than one specimen each?

and more...

[FORUM]

Plant Collecting and Pressing | Demo Video: 13 min



What are the good practices in collecting specimens from fields?

Why are fresh plants from field collections quarantined upon receiving?

Why are the DNA collections are made in herbariums?

and more ...

[FORUM]

Mounting Herbarium Specimen | Demo Video: 6 min



What are the good practices in preparing and pressing the specimen?

How the bulky and fleshy parts are processed?

and more ...

[FORUM]

A Medicine Cabinet in Your Garden | Expert Talk: 45 min



Why is a specific compound found in a plant? In other words, why do plants produce secondary metabolites?

What are the current challenges associated with the growing demand in herbal medicines or natural products?

Is it possible to patent a natural compound?

and more...

[FORUM]

Students' Feedback

Participating in this virtual field visit enhanced my knowledge about the importance of botanical gardens and its role in conserving the biodiversity

Discussion forum was really engaging with lot of thoughtful questions about the subject & visit

Stimulated my interest towards medicinal plant research and drug discovery

Virtual field visit was organised in an interesting way, really engaging with the structure and flow and more...

Conclusion

In times of unprecedented circumstances, teachers face numerous obstacles as they work to make learning enjoyable, and effective, ensuring the learning outcomes and objectives are achieved. Therefore, innovating and finding new ways to supplement student engagement is as crucial as ever.