GreenVETAfrica

**Teachers training on Green Waste
Management
Module 2 - Digital Pedagogy**

Date

GreenVETAfrica mission is to offer an innovative capacity building programme on Green Waste Management in Nigeria and Ghana

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Co-funded by the European Union

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The flipped classroom

Unit 2 – Lesson 1

Unit objectives:

- Explore innovative models of technology-supported classroom management
- Understand the principles and implementation of the flipped classroom model
- Learn effective strategies for cooperative learning and promoting positive interdependence among students.
- Recognize the role of the teacher as a facilitator and manager in a technology-enhanced learning environment.

Knowledge domain: Teaching and pedagogical methods

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Flipped Classroom

The flipped classroom is an instructional approach that reverses traditional teaching methods.

In a typical classroom, students receive direct instruction from the teacher during class and then complete assignments or homework independently at home.

In a flipped classroom, this approach is **"flipped" or inverted**

https://www.youtube.com/watch?v=qdKzSq_t8k8
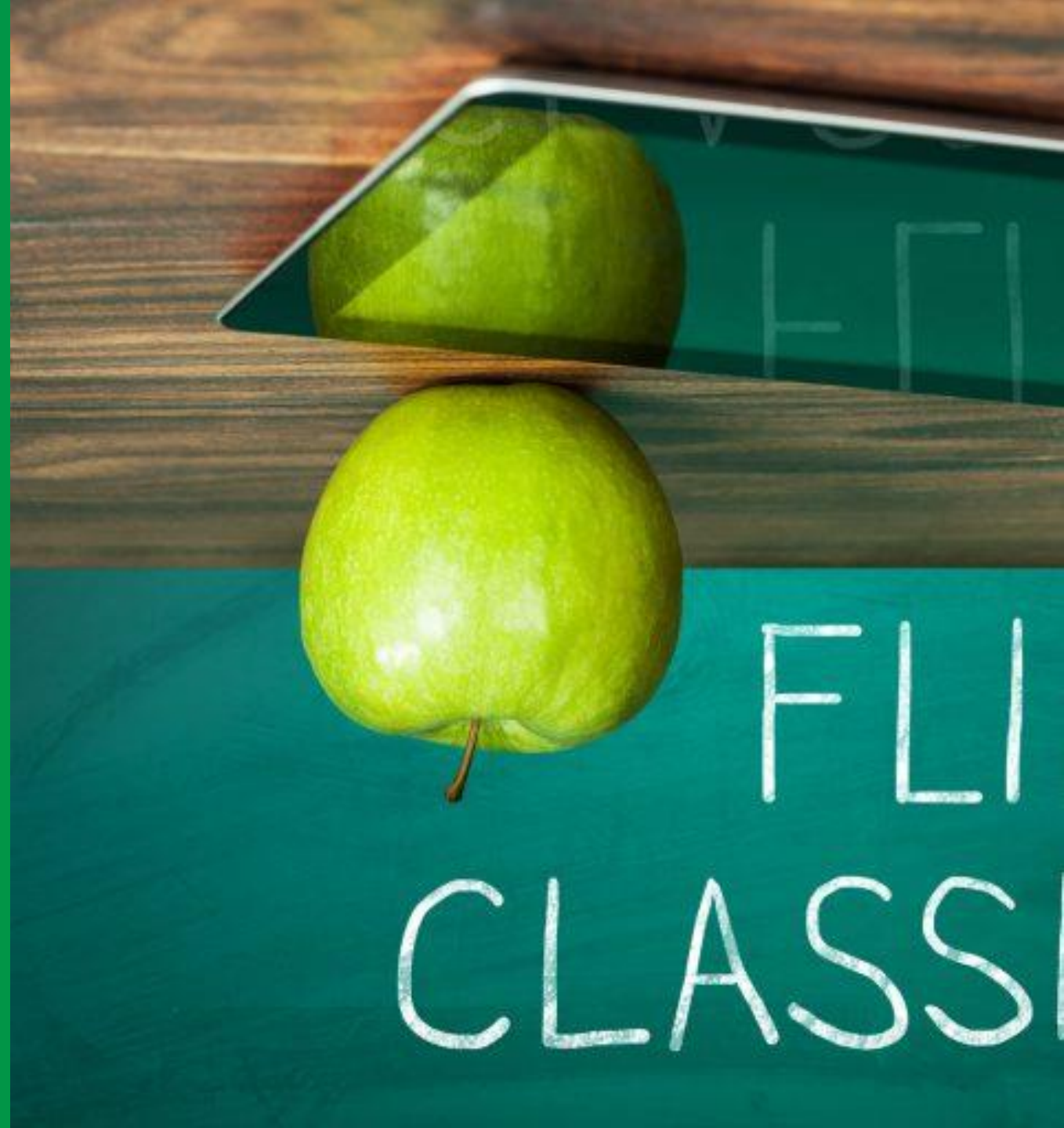
Flipped Classroom

The model

Pre-Class Learning

Before coming to class, students are provided with learning materials, often in the form of videos, readings, or online modules. These materials cover the foundational content and concepts for the upcoming lesson or topic.

In-Class Activities

When students come to class, the time is primarily dedicated to **interactive** and **collaborative activities** rather than passive lectures. The teacher facilitates discussions, problem-solving exercises, group projects, and hands-on activities related to the content.

LECTURE

CLASSROOM ACTIVITIES

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Flipped Classroom?

Key features

Active Learning

Individualized Pace

Accessibility

KEY FEATURES

Teacher as Facilitator

Flexibility

Time Efficiency

Immediate Feedback

Peer Collaboration:

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Why use the flipped classroom?

- Students can proceed at their own pace

- Doing "homework" in the classroom gives the teacher an exact sense of students' difficulties and different learning styles

- Teachers can adapt and update the curriculum and provide it to students 24 hours a day 7 days a week

- Students can benefit from the expertise and teaching styles of multiple teachers in the same discipline

- Teachers improve their professionalism by watching videos of colleagues and learning from each other

- Classroom time can be used more effectively and creatively than the traditional pattern

Limits of Flipped Classroom

- Students can proceed at their own pace

- Cost

- Complexity of design

- Time consuming

- Need for efficiency and technological accessibility

- Effectiveness as yet unproven

- Starts from a reductive/simplified conception of the traditional approach

Collaborative Learning

Theoretical Perspectives

The literature of cooperative learning mainly shows several perspectives about the influence of collaborative learning on achievement:

- Motivational
- Social cohesion
- Developmental
- Cognitive elaboration
- Cognitive load
- Sociocultural approaches

Collaborative Learning

MOTIVATIONAL PERSPECTIVE

*learners are more likely to help one another when they gain a **reward based** on the performance of all group members.*

The effectiveness of coopertaive learning is enhanced when a person's achievement depends on the achievements of other group members

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Collaborative Learning

Theoretical Perspectives

SOCIAL COHESION PERSPECTIVE

team-building activities are crucial for collaborative learning because learners help other group members to learn when they care about the group.

Instructors need to promote positive interdependence among group-members, but **incentives for collaborative learning are not essential** in the social cohesion perspective

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Collaborative Learning

Theoretical Perspectives

DEVELOPMENTAL PERSPECTIVE

*learners are more likely to help one another when they gain a **reward based** on **the performance of all group members**.*

The effectiveness of coopertaive learning is enhanced when a person's achievement depends on the achievements of other group members
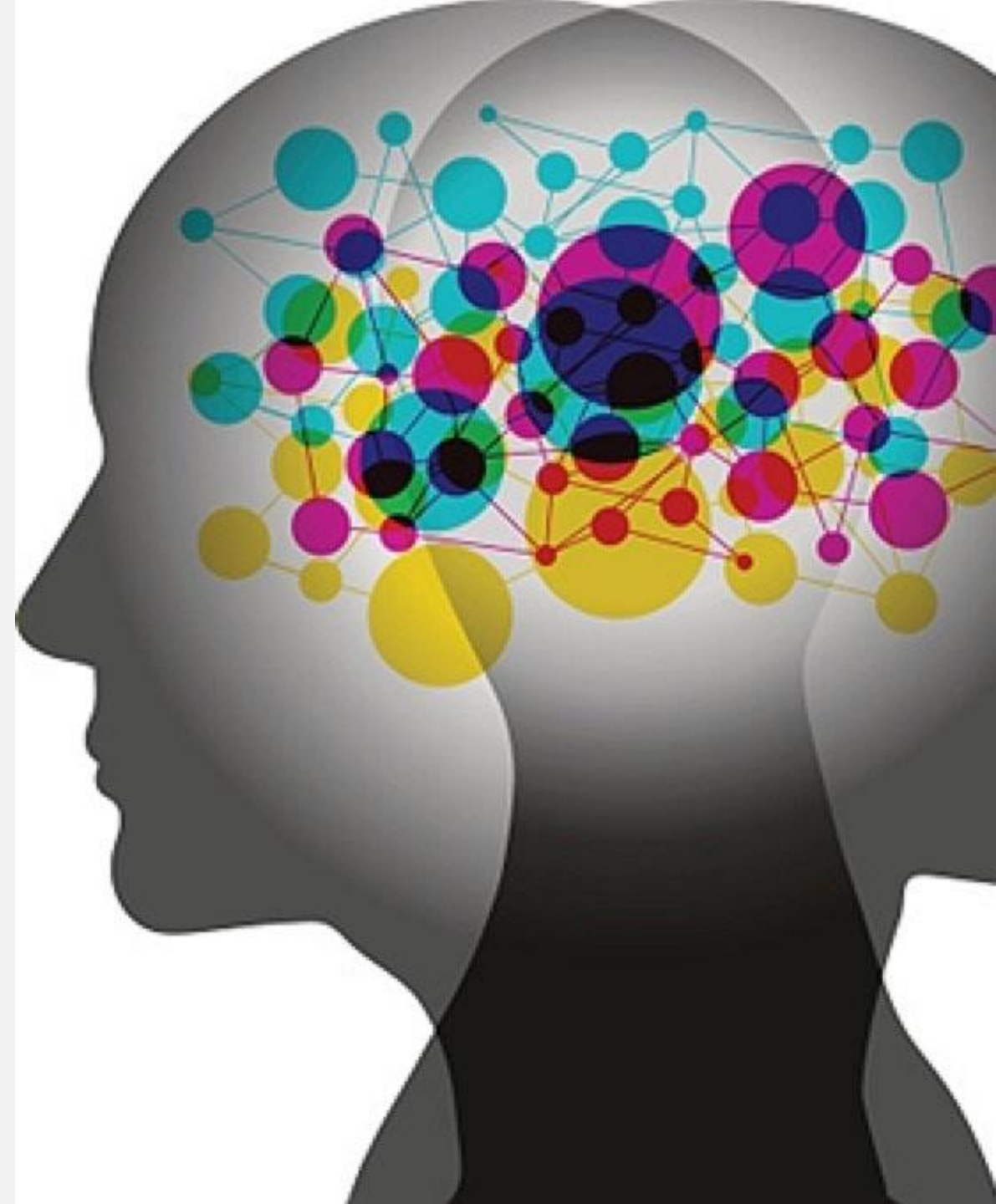
Collaborative Learning

Theoretical Perspectives

COGNITIVE ELABORATION PERSPECTIVES

collaborative learning is effective when group participants are jointly engaged in making inferences, integrating new knowledge with prior knowledge, and repairing faulty knowledge and beliefs

*Previous studies of peer interaction have shown that **students learn from giving elaborated explanations, critical thinking questions, and meaningful review comments to other group members***

Collaborative Learning

Theoretical Perspectives

COGNITIVE LOAD PERSPECTIVE

collaborative learning is effective for knowledge construction when a cognitive load is distributed among group members, particularly in a complex problem-solving situation (i.e., distribution advantages).

*In collaborative learning, however, a cognitive load unrelated to knowledge construction may increase due to transactional activities such as managing collaboration processes, coordinating actions and sharing group resources and tools. Collaborative learning would be beneficial only when di**stribution advantages are larger than disadvantages** caused by transactional activities.*

Collaborative Learning

Theoretical Perspectives

SOCIOCULTURAL APPROACH

collaborative learning is to participate in **authentic practices** of a community and make sense of the shared practices. By constantly participating in collaborative activities, a newcomer becomes a community member who can effectively work with other members to achieve a common goal.

From this perspective, it is important to provide an authentic situation in which learners collaborate

Collaborative Learning

Inclusive approach

Each person gives his or her own contribution, based on his or her own abilities and potential, succeeding in achieving in the group a result that individually he or she would not have been able to achieve, thus valuing his or her own contribution and feeling that he or she is a prominent actor, as an integral part of the group and not as a slowing element
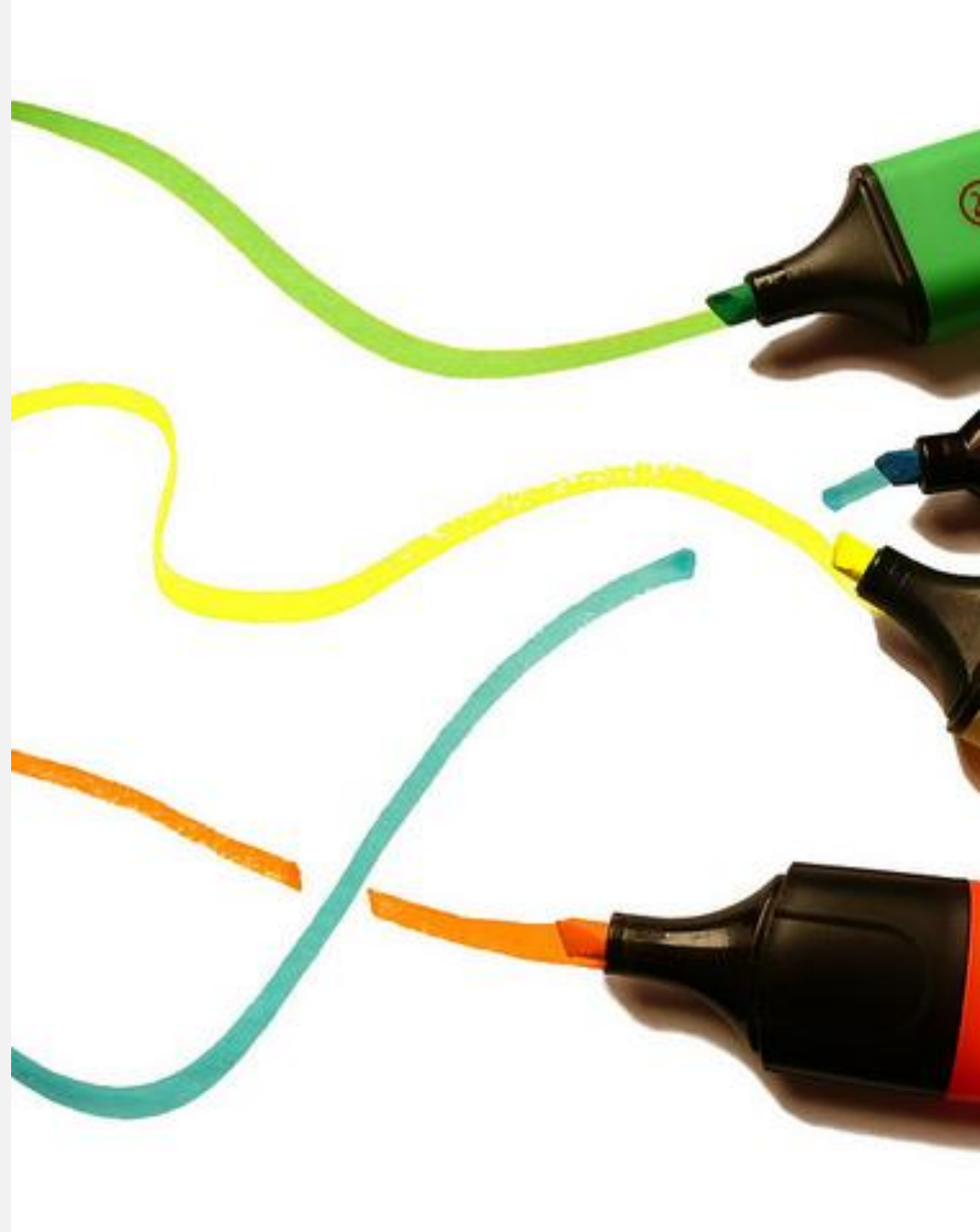
Design of cooperative learning activities

Key elements

5 key elements of cooperative learning:

1. Goals and incentives
2. Tasks
3. Groups
4. Collaboration process
5. assessment

Padlet

Link	http://it.padlet.com/
In summary	It is an application that allows you to create multimedia and interactive bulletin boards within which you can insert links to external sites and materials, images, videos etc. You can also upload personal files present only on your own computer. The bulletin boards created can be private (only the creator can make changes), shared with others (only certain users-for example, members of a class or work group-can make changes), or be made public and visible to anyone without being able to be edited.
It could be useful for:	• Tenere traccia degli argomenti trattati durante una lezione o durante un percorso • Gestire/facilitare/proporre attività di brainstorming, webquest etc. • Condividere le bacheche con la classe e all'esterno della classe • Supportare attività collaborative a gruppi • Far creare agli studenti delle raccolte di materiali online sugli argomenti trattati

Padlet

Account:	Also required only to save and share bulletin boards with other users. Also allows authentication via Google and Facebook accounts.
Technical characteristics:	• Web-based • È disponibile anche un'estensione chrome e un'app che ne semplifica/facilita l'uso su dispositivi mobile • Le bacheche create possono essere inserite all'interno di ambienti esterni con codice embed