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Using Generative AI in Multimodal Contexts to Develop Assessment Literacy

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Multimodal Pedagogy

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Defining Multimodality

Multimodality: making meaning through the transposition, representation, combination, and integration of different semiotic forms – text, speech, audio, video, texture, etc.

Multimodal *literacy*: the ability to use and combine different semiotic modes that are appropriate to a given context (Lim and Tan-Chia, 2023) in order to create or evolve meaning.
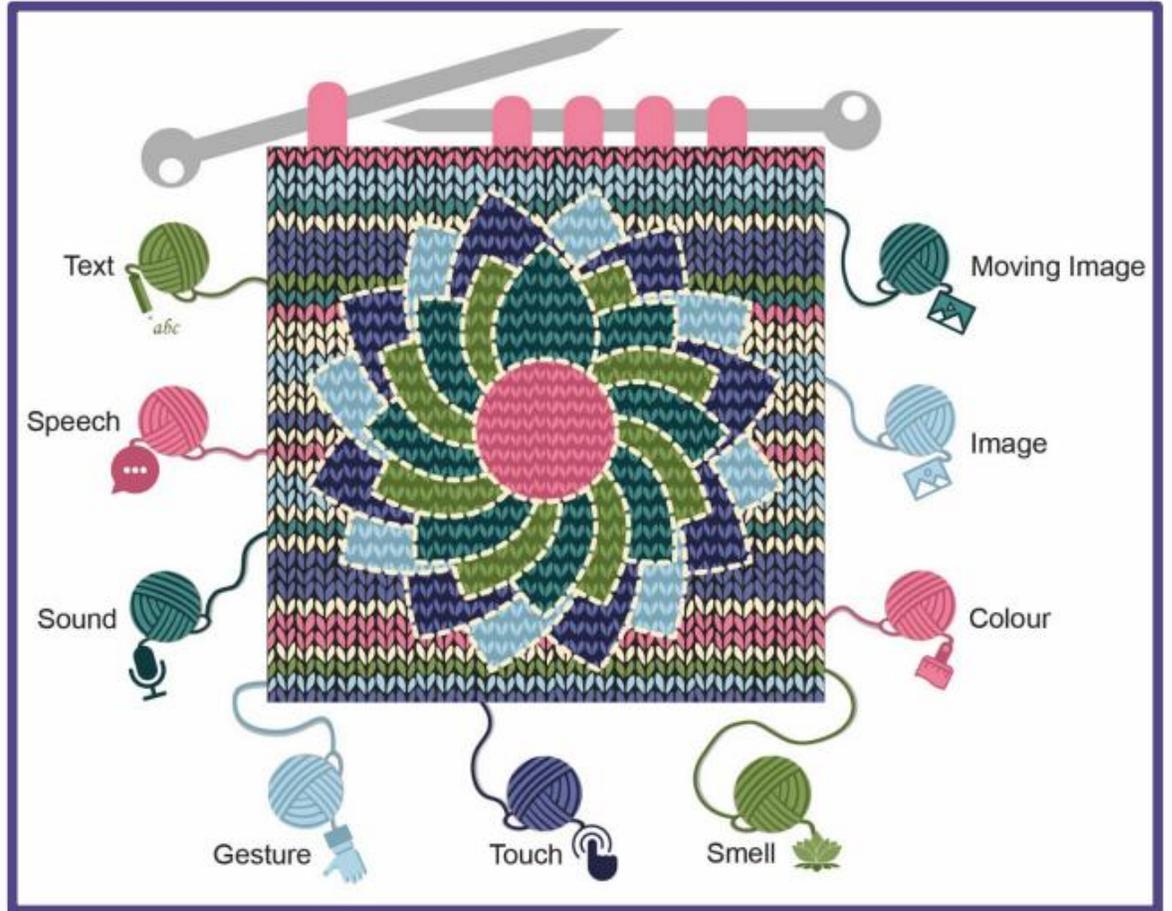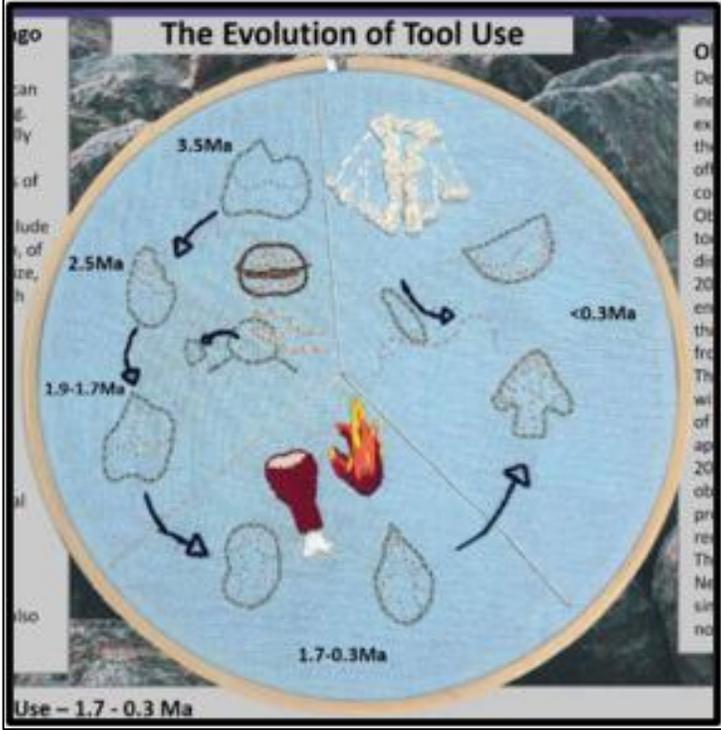

Credit: AdvanceHE Guide to Multimodality

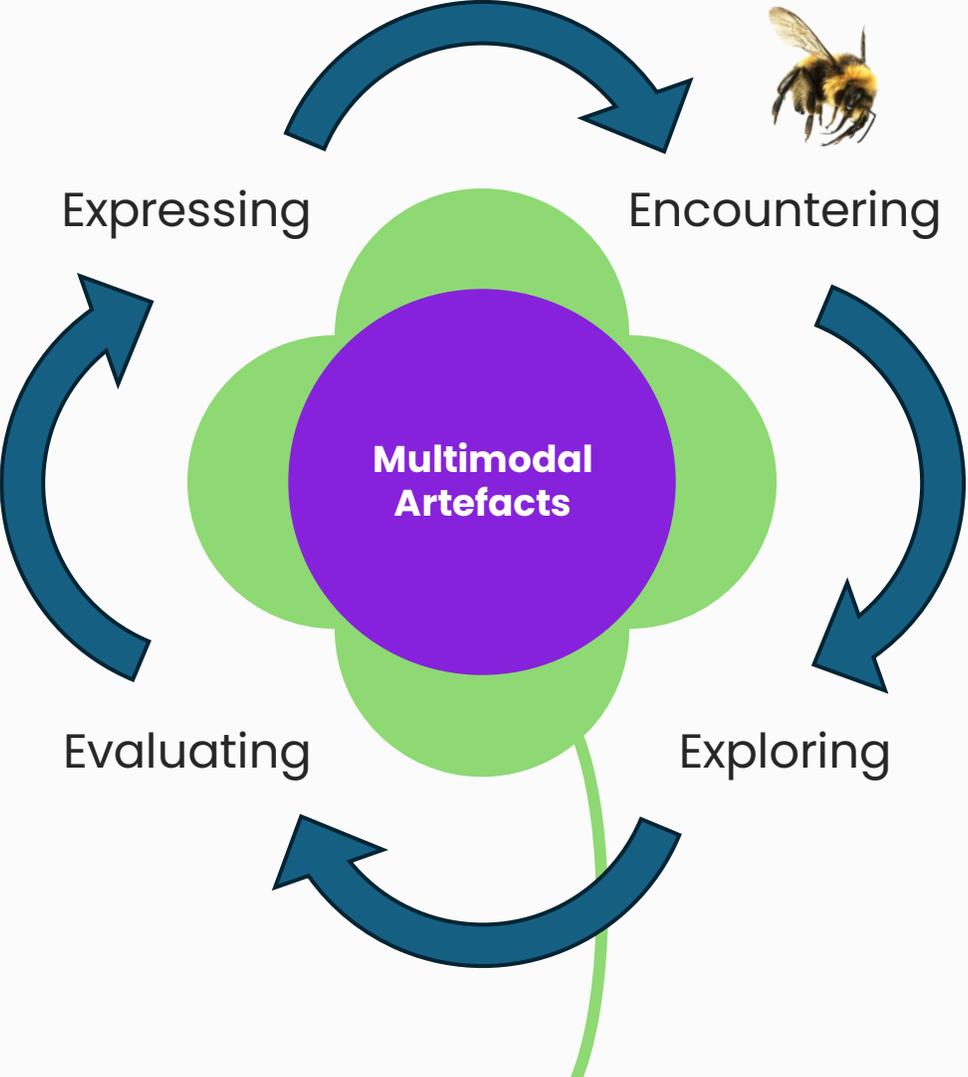# Defining Multimodality

Mary Jacob

Isabelle Winder

Lorenzo Ressel

In Varga-Atkins, 2024. Multimodal Learning: A Practitioner Guide, Advance HE

Generative AI in Multimodal Learning

Generative AI in Multimodal Learning

Fig. 7. Comparison of eight frames from the videos generated by different methods for "the numerous flowers are gradually opening to make people dazzled, and the shallow green grass is just enough to cover the hooves of the horses."

Text to image/video: Chen & Wu (2024) generate videos as visual teaching aids to Tang poetry

The Project

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Project Team

Dr Tünde Varga-Atkins (Liverpool) (PI)

Dr Sam Saunders (Liverpool) (PI)

Sue Beckingham (Sheffield Hallam)

Prof. Peter Hartley (Edge Hill)

Nayiri Keshishi (Surrey)

Dr Nataša Lackovic (Lancaster)

Dr Na Li (XJTLU, China)

Dr Run Wen (XJTLU, China)

Rob Lindsay (Liverpool)

Dr Isabelle Winder (Bangor)

Yuan Yuan and Siyi Li (XJTLU, China) (Student RAs)

Project Research Questions

Overall RQ: How is Generative AI being used in multimodal learning in higher education contexts?

- RQ1: What are the **learning designs** of multimodal learning using GenAI?

- RQ2: What are the **outcomes and impact** of the use of GenAI for multimodal learning?

- RQ3: What are the **opportunities and challenges** of using GenAI for multimodal learning in HE?

- RQ4: What are the **inclusivity, sustainability and ethical considerations** of using GenAI for multimodal learning?
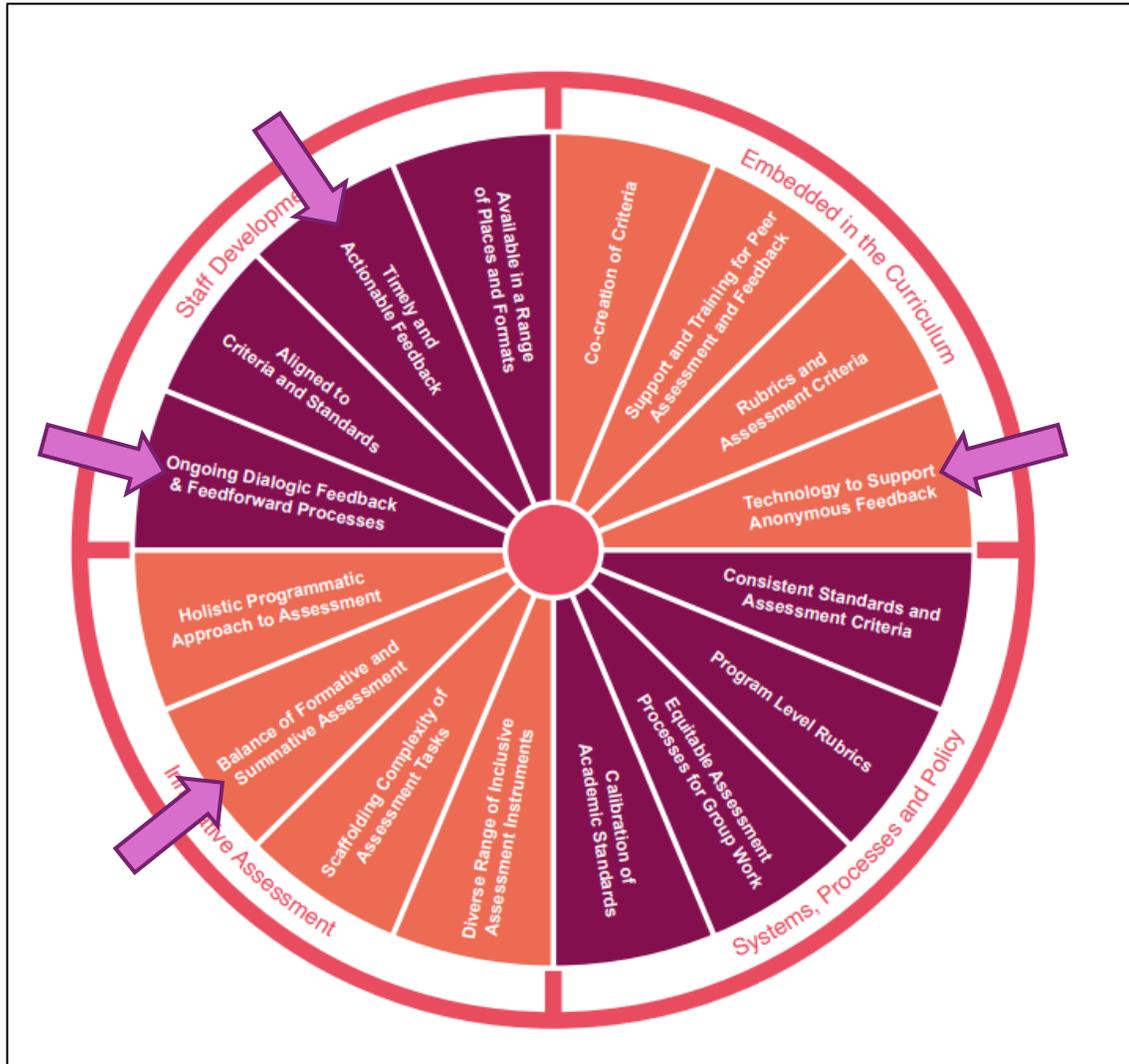
Assessment Case Study

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Assessment Case Study: Description and Process

Use of Notebook LM to generate a podcast of:

a) Students' assessment briefs/assessment descriptions, to aid in the development of assessment literacy and understanding of the task/its completion/the feedback process.

b) Students' formative work – a formative essay written ahead of the full summative essay at the conclusion of the module ('Victorian Murder and Other Crimes', MA Victorian Studies). Students upload their formative work to Notebook LM, listen to the podcast it generates, and then reflect on how well it engaged with the work and how helpful it is in preparing them for the summative task.

Students then complete a short evaluation form/questionnaire to reflect on the effectiveness and usefulness of the exercise (TBC).

Framework for Enhancing Assessment

Institutional or Departmental Policy

- Embedded in the Curriculum
- Co-creation of Criteria
- Support and Training for Peer Assessment and Feedback
- Rubrics and Assessment Criteria
- Technology to Support Anonymous Feedback
- Consistent Standards and Assessment Criteria
- Program Level Rubrics
- Equitable Assessment Processes for Group Work
- Calibration of Academic Standards
- Systems, Processes and Policy
- Diverse Range of Inclusive Assessment Instruments
- Scaffolding Complexity of Assessment Tasks
- Balance of Formative and Summative Assessment
- Innovative Assessment
- Holistic Programmatic Approach to Assessment
- Ongoing Dialogic Feedback & Feedforward Processes
- Aligned to Criteria and Standards
- Timely and Actionable Feedback
- Staff Development
- Available in a Range of Places and Formats

Student-Centred Dimension

- Contribute to Assessment Design
- Showcase Competencies
- Understand Assessment Criteria
- Give and Receive Feedback
- Contribution to Group Work
- Thrive on Complex Authentic Challenges
- Recognise and Act on Feedback

Next Steps

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Next Steps

Assessment group is performing this case study on modules that start in **January 2025.**

The case study will also be presented/discussed as part of an online **symposium** hosted by the project team, via the University of Liverpool, on **21 January 2025**.

Post-implementation: analysis of results, write-up of case study, and inclusion in the wider **Generative AI and Multimodal Learning** guide for educational developers, currently under construction by the wider project group.

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Beyond Text: Symposium

Generative AI in multimodal teaching, learning and assessment

Location: Online
Date: 21 Jan 2025
Time: 09:30-12:00 UK/GMT
10:30-13:00 CET
17:30-20:00 CST

Register with Eventbrite

Come along to our international symposium where we present and discuss and practise the uses of generative AI in education in beyond-textual contexts, such as AI-generated images, videos, sound.

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Questions/Comments?

Thank You

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