

Emotionalization

Conduct a deep, systematic literature review of recent empirical research published within the last 10 years (up to a maximum of 15 years) on emotionalization in digital storytelling and narrative-based e-learning, focusing on adult education and workplace learning (and, where necessary due to limited availability, higher education). Give priority to meta-analyses, followed by experimental and quasi-experimental studies. Include null, mixed, or contradictory findings where reported.

Review evidence related to:

- emotional arousal and emotional valence,
- affective engagement,
- psychophysiological measures (e.g., SCR, heart rate, EEG),
- facial expression analysis or behavioral indicators of emotion,
- contemporary refinements of emotional design and narrative engagement theories.

Integrate findings from the digital storytelling literature, affective learning research, and multimedia learning theory, with an emphasis on recent empirical refinement rather than foundational theory alone.

Explicitly analyze:

- conditions under which storytelling increases, decreases, or fails to affect emotional engagement,
- moderating factors such as stimulus length, narrative structure, instructional context, or task demands.

Output format:

Provide a table with the following columns:

- Author(s)
- Year
- Method (meta-analysis / experimental / quasi-experimental)
- Key findings directly relevant to emotionalization in storytelling-based e-learning
- DOI
- Indexing status (SCOPUS, SSCI, both, or neither)

Include only studies with a DOI.

After the table, provide a concise thematic synthesis highlighting convergent, divergent, and null findings.

Memorization and perceived learning difficulty

Conduct a deep literature review of recent empirical research (last 10 years, up to 15 years maximum) examining the effects of digital storytelling and narrative instructional design on memorization and perceived learning difficulty (or cognitive load) in adult education and workplace learning, supplemented by higher education studies where necessary. Prioritize meta-analyses, followed by experimental and quasi-experimental studies, and explicitly include null and contradictory findings.

Focus on contemporary empirical refinements related to:

- recall of main ideas vs. detailed information,
- episodic vs. semantic memory processes in narrative learning,
- recognition vs. free recall outcomes,
- perceived learning difficulty, mental effort, and cognitive load,
- recent empirical developments within Cognitive Load Theory, Multimedia Learning Theory, and narrative processing accounts.

Explicitly examine:

- boundary conditions under which storytelling facilitates, impairs, or has no effect on learning outcomes,
- moderating factors such as text length, topic complexity, narrative density, or assessment format.

Output format:

Present findings in a table with:

- Author(s)
- Year
- Method (meta-analysis / experimental / quasi-experimental)
- Key findings relevant to memorization and perceived learning difficulty
- DOI
- Indexing status (SCOPUS, SSCI, both, or neither)

Include only studies with a DOI.

Conclude with a theory-oriented synthesis emphasizing recent empirical refinements and mixed evidence.

Interest and motivation

Conduct also a deep, theory-oriented review of recent empirical research published within the last 10 years (up to 15 years maximum) on digital storytelling, learner interest, and motivation in adult education and workplace learning, supplemented by higher education research if necessary. Give precedence to meta-analyses, followed by experimental and quasi-experimental studies, including null and contradictory results.

Focus on contemporary empirical refinements related to:

- situational interest and post-learning interest,
- motivation, engagement, and narrative transportation,
- interactions between interest, emotionalization, and learning outcomes,
- recent motivational and narrative engagement frameworks in digital learning.

Integrate findings from the digital storytelling literature with current motivational theory, emphasizing how recent studies refine or qualify earlier assumptions.

Output format:

Summarize findings in a table with:

- Author(s)
- Year
- Method (meta-analysis / experimental / quasi-experimental)
- Key findings relevant to interest and motivation in storytelling-based e-learning
- DOI
- Indexing status (SCOPUS, SSCI, both, or neither)

Include only studies with a DOI.

After the table, provide a concise synthesis highlighting converging, null, and contradictory findings.

Validation studies

Conduct a comprehensive and deep literature search to identify empirical validation studies for the specific instruments and measures used in my research, with a preference for recent (2020s) peer-reviewed journal articles indexed in SCOPUS and/or SSCI where available.

Specifically, locate and summarize validation studies for:

1. The Shimmer GSR3+ skin conductance device with dry electrodes, focusing on evidence of validity and reliability in measuring emotional arousal/skin conductance responses. Include direct validation studies comparing output with other standards (e.g., lab devices, BIOPAC) and, if available, studies involving adult learners in educational contexts. Industry-reported validations (e.g., manufacturers' benchmarking studies) may be included if peer-reviewed.
2. Affectiva AFFDEX 5.1 (facial expression/emotion analysis software), emphasizing studies that assess measurement validity and reliability, especially in adult populations and educational or learning environments when possible. Include industry-reported validations and independent research that evaluates the tool's performance.
3. Single-item interest scales that have been empirically validated by comparison with established multi-item interest scales. Focus on studies measuring post-learning interest and situational interest in educational or e-learning contexts where available. Include studies reporting correlations between single-item and multi-item measures as evidence of convergent validity.

For each validation study identified:

- Report Author(s), Year, and Source (with DOI)
- Describe the sample and context (e.g., education/workplace/higher ed)
- Specify measures compared (e.g., GSR3+ vs. gold standard, single item vs. multi-item scale)
- Summarize key findings on validity and reliability (e.g., correlation coefficients, ICCs, sensitivity/specificity, criterion validity)
- Include indexing status (SCOPUS, SSCI, both, or neither)