

Choosing the right diary format:

A literature-derived multidimensional evaluation of five
diary formats in educational research

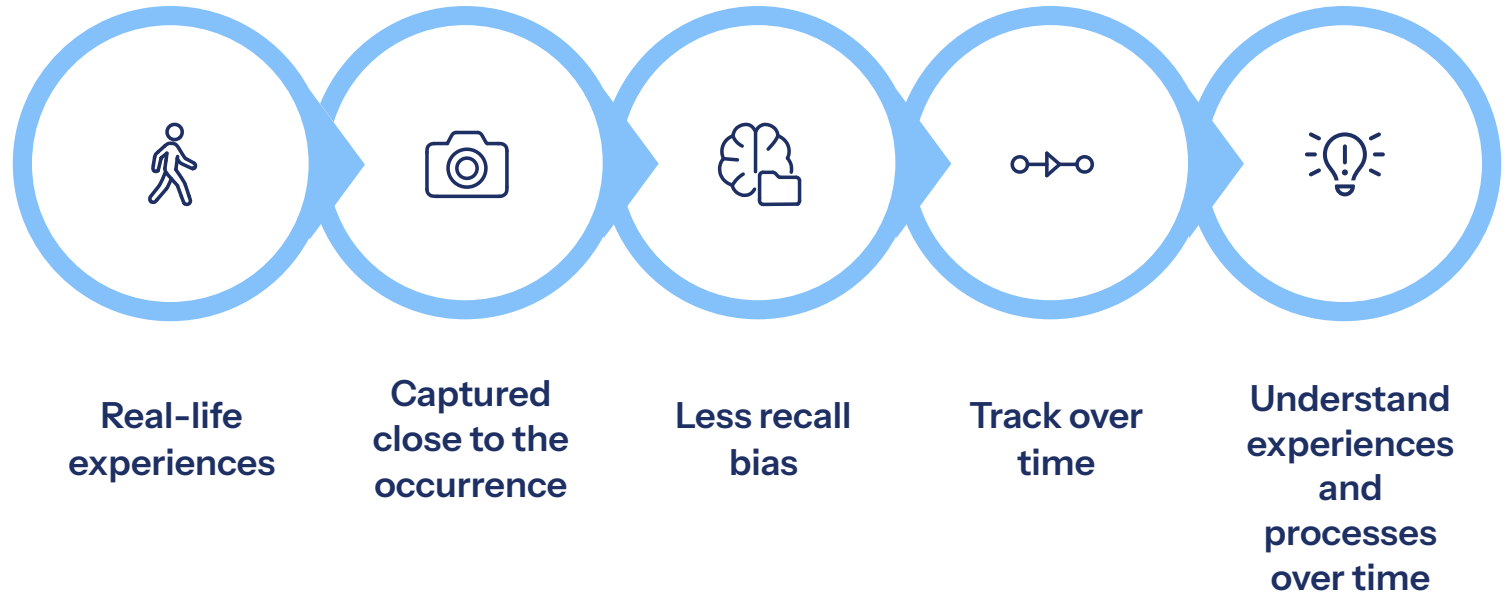
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Why diary methods?

An established qualitative method for studying experiences in everyday contexts



Bolger et al. (2003); Shiffman et al. (2008)

Choosing a diary format is a methodological design decision



Paper



Digital written



audio

Different methodological trade-offs

Data characteristics

Practical feasibility

Participant experiences

Janssens et al. (2018); McCombie et al. (2024); Williamson et al. (2015)

What is still missing?

Existing evidence ✓

- Paper ↔ Digital comparisons
- Written ↔ Audio comparisons
- Context-specific comparisons

Limitations X

- Mostly pairwise comparisons
- Predominantly focused on structured diary designs rather than open-ended qualitative diary approaches
- Limited methodological outcomes

Missing

Researchers still lack evidence-informed guidance for selecting diary formats.

A multidimensional qualitative comparison of **five diary formats** within one study.

Pearson et al. (2023); Wagner (2022); Williamson et al. (2015)

Study aim & research question

To compare five diary formats using a **literature-derived multidimensional evaluation framework**.

RQ: Which of the (five) diary formats provides the most favourable interplay between:

**Data characteristics
(RQ1.1)**

**Practical feasibility
(RQ1.2)**

Participant experiences (RQ1.3)

in educational research?



Literature-derived evaluation framework

Based on the diary-method literature, we developed a multidimensional evaluation framework to systematically compare five diary formats.



Data characteristics

- Detail & concreteness
- Reflection
- Completeness



Practical feasibility

- Time investment
- Flexibility (when?)
- Usability (difficulties?)
- Practical burden



Participant experiences

- Comfort
- Motivation
- Reflective processing
- Long-term participation

□ The framework ensures formats are not compared arbitrarily but evaluated across three equally weighted dimensions.

Study design

A standardised protocol ensured that **diary format** was the only methodological element that differed between participants.



Onboarding

Introduction session, identical explanation & informed consent (ethical approval!).

n = 12 participants

- 10 secondary school and 2 higher education
- 23-58 years old
- 2-15 years experience
- 8 females and 4 males



Format assignment (heterogeneity)

- 📝 Paper (n = 2)
- 💻 Digital written (n = 3)
- 🎙️ Dictaphone (n = 2)
- 📱 Voice recorder (n = 2)
- 💬 WhatsApp audio (n = 3)



Diary phase

- 3 weeks · 13 working days
- Same prompts (in advance vs daily), same period and same goal



Post-study evaluation

- Questionnaire
- Group discussion (secondary school participants)

Qualitative data analysis



Data types

- Diary entries per format
- Post-study evaluation questionnaire



Deductive framework

(Gale et al., 2013; Ritchie & Spencer, 1994)



Within-format analysis

- Data characteristics
- Practical feasibility
- Participant experiences



Cross-format comparison

Across the three evaluation dimensions



Distinct profile

A methodological profile for each diary format

Data characteristics

Evaluation criteria

- Detail & concreteness
- Reflection
- Completeness

Format	Main finding
 Dictaphone	Concise and concrete; considerable variation in reflection (recall bias!)
 WhatsApp audio	Most consistent combination of detail and reflection; completeness varied, but generally complete
 Voice recorder	Concise but concrete; reflection generally limited
 Digital written	Brief and mainly descriptive; limited reflection; completeness varied
 Paper	Concise but concrete; limited reflection; generally complete

- 📄 WhatsApp audio produced the most consistent combination of detailed and reflective entries; all formats showed specific strengths and limitations.

Practical feasibility

Evaluation criteria

- Time investment
- Usability
- Flexibility
- Practical burden

Format	Main finding
 Dictaphone	Short completion time; separate device reduced usability and flexibility; high burden
 WhatsApp audio	Low time investment; flexible, accessible, and generally low burden
 Voice recorder	Flexible and continuously available; burden differed between participants
 Digital written	Technically straightforward; practical fit depended on laptop use context
 Paper	Highest time investment; nevertheless feasible due to entry flexibility

- ❏ WhatsApp audio combined low time investment with high flexibility and limited practical burden; each other format involved distinct trade-offs.

Participant experiences

Evaluation criteria

- Comfort
- Motivation
- Reflective processing
- Long-term participation

Format	Main finding
 Dictaphone	Mixed; speaking was easy, but separate device reduced comfort and long-term appeal
 WhatsApp audio	Familiar, intuitive, and motivating; supported reflection and long-term appeal
 Voice recorder	Experiences varied considerably; strongly dependent on personal preference
 Digital written	Generally positive; routine developed over time; comfort data limited
 Paper	Positive for writing-preferring participants; burden depended on workload and context

- ❏ Participant experiences varied substantially across and within diary formats, highlighting the importance of **participant-format fit**.

Overall comparison

Format	Data characteristics	Practical feasibility	Participant experiences
 Dictaphone	Concise, variable	Device-dependent	Mixed
 WhatsApp audio	Detailed and rich, reflective	Flexible, low burden	Consistently positive
 Voice recorder	Concise	Flexible	Strong individual variation
 Digital written	Brief, descriptive	Context-dependent	Generally positive
 Paper	Concise but concrete	Time-intensive	Preference-dependent

 **RQ:** Which of the five diary formats provides the most favourable interplay between ... in educational research?

ANSW: Within this study, **WhatsApp audio** showed the most **favourable overall interplay** across all three evaluation dimensions.

What do these findings mean?

Four overarching methodological insights from the comparison:

1. Different trade-offs

Should be taken into account when making choices.

2. Audio ≠ one category

Dictaphone, voice recorder, and WhatsApp produced distinct methodological profiles.

3. Multidimensional evaluation

Data quality alone is insufficient. Feasibility and participant experiences matter equally.

4. Participant–format fit

The same format was experienced differently depending on preferences, routines, and context.



Implications for diary research

For researchers

- Do not select a format based on personal preference or educational background → trade-offs
- Evaluate across **multiple methodological dimensions**
- Consider **technological implementation**, not only modality (e.g., "audio")
- Balance **structure and participant flexibility** in protocols

□ Selecting a diary format is a **research design decision** that should balance methodological objectives, practical considerations, and participant characteristics.

Implications for diary research

Future research

- Compare formats in **larger and more diverse samples** (own ongoing research)
- Include **multiple organisational and educational contexts**
- Examine **longer diary periods** and actual long-term participation (own ongoing research)
- Explore **participant choice** (own ongoing research) and mixed-format diary designs

My positionality

- I expected to identify the ultimate "best" diary format
- Instead, I learned that...

There is no one-size-fits-all diary format



The 'optimal' choice (in educational research) depends on the interplay between data characteristics, practical feasibility, and participant experiences



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Thank you! Questions?

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