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Developing Visual Mnemonic Codes as an Aid to Effective Memory Recall

Introduction

The use of mnemonics to aid memory recall are widely used within education, and while the effective use of techniques including acronyms, songs and rhymes, as well as patterns in letters or numbers are well-known (Wammes et al., 2016), the advantages of drawing as an effective cognitive mnemonic strategy are not as well documented (Wammes, 2017; Wammes et al., 2018).



An example of a visual mnemonic

There is however a growing body of research that suggests that when combined with traditional style written notes the use of visual imagery can be an effective tool to aid memory recall (Boggs et al., 2010; Fernandes et al., 2018; Wammes et al., 2018; Meade et al., 2019).

Taking visual notes or as it more commonly known 'sketchnoting' can help learners to manage unfamiliar ideas and concepts, assimilate information and to build bridges between concepts, helping to internally process information and recall it more easily (Andrade, 2009; Rhode, 2012).

Exploring the concept of self-generated mnemonic codes this research seeks to support those wishing to explore the technique for themselves, or to support others to develop their own personal visual mnemonic 'shorthand', a series of personalised images, icons and symbols as a strategy to enhance the process of memory recall (Schott, 2011).

Theoretically underpinned by symbolic interactionism, which aligns with the authors' epistemological and ontological position, the approach adopted for this small scale research study was informed by grounded theory (Charmaz, 2014). Work at this stage engaged 12 participants, who at the time of participation were lecturers working within Higher Education in the United Kingdom (UK). Data for this first phase took the form of a combination of evaluations, completed following participants attendance in a sketchnoting workshop, with follow up email discourse. Work at this stage sought to illuminate the participants rationale for attendance and to establish their lived experiences post attendance.

Verbal and written discourse were used as the primary research tools to gather empirically grounded data relating to the perceptions, understanding, and lived experiences. Analysis was undertaken in accordance with procedures advocated by Bowden and Green (2005), and ethical practices as outlined by the British Educational Research Association (BERA, 2018) were adhered to throughout.



Presentation of findings

Analysis of the data revealed that all participants (100%) attended the workshop because they wanted to know more about how they could use the technique in order to support their own memory recall, but also to understand the potential benefits of encouraging their students to use visual thinking when taking notes during lectures. When asked about how they had used outcomes from the workshop while all participants (100%) perceived the technique to be of value in aiding memory recall analysis, for themselves and for their students, the data revealed several tensions which may present as barriers to the full adoption of the technique in practice. While it was apparent that some participants had become comfortable with the technique, others cited barriers, which as perceived by participants in their own practice, and as they perceive it in use by their students, included the following concerns:

- The quality of outcome. This arose from personal concerns around an ability to draw and perceptions of how others may perceive their outputs.
- Missing key information. Some participants reported instances of reverted back to writing only note taking because of the time taken to draw.

Echoing larger studies (Wammes et al., 2018; Mead et al., 2019) findings from the first phase of this small scale research study indicate that when capturing verbal information using visual notetaking during lectures and seminars, participants perceived visual thinking (sketchnoting) to be an effective tool to support learner's interaction with content on a deeper level and enhance the effective retention and retrieval of information.



Discussion

While some participants said they were using the technique (both personally and with their students) on a regular basis since attending the workshop (n=5/12) the majority (n=7/12) while still cognisant of the benefits, articulated tensions around adoption of the technique. Following further analysis these tensions focused specifically around participants concerns relating to the aesthetical appeal of the final outcome, and also the additional time taken to draw, which as this quotation illustrates, some participants noting it was quicker to write.

"while it is a good technique, personally I spend too much time drawing and miss out on what is being said, so for me it's quicker to write rather than try to than draw each word"

Participant 5

Selected References

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Conclusion

In conclusion, analysis would suggest that where adoption of visual note taking is most effective the learner uses the technique to capture 'key concepts' and the 'big picture' of what is being said, rather than to record individual words. To do this participants (in this study) described the development of their own visual 'shorthand' using a series of personalised images, icons and symbols which held meaning to them as a strategy to enhance their own recall.

Based upon the findings, moving forward, future phases of this work may seek to explore the potential (additional benefits) to participants who actively seek to generate and use their own mnemonic codes, to help establish if the development of personal mnemonics leads to increased adoption of the technique, and also serves to further aid effective memory recall.

