Big Claim (Introduction)

The excitement of hypermedia is not justified. Hypermedia software became popular with the HyperCard on Macintosh computers. Hypermedia takes elements shared electronically connected in text, graphics, digitized speech, animations, and clips with hypertext (Conklin, 1987). It consists of information accessed in any order through hyperlinks (Grafton & Permaloff, 1991). Additionally, hypermedia enables the convenient retrieval of information from vast multimedia collections of content condensed into compact formats (Marchionini, 1988). Learners can explore hypermedia environments in multiple ways. As non-linear information, learners can select and sequence information according to personal needs and preferences(Scheiter & Gergjets, 2007).

In contrast, multimedia environments present information linearly (Scheiter & Gergjets, 2007). Although hypermedia has demonstrated its capacity to enhance learning compared to traditional methods, like rote memorization and oral recitation, the use of hypermedia for self-regulated learning is associated with inducing disorientation. *Disorientation* is a situation due to cognitive overload and a complex environment; learners do not know where they are, how they reached that place, or where they will go (Firat, et al., 2011, p.56). This essay examines the impact of hypermedia on educational technology, exploring how it has introduced disorientation while expanding education opportunities.

Support Claim #1: Hypermedia navigation leads to disorientation, challenging the common belief in its effectiveness for easy information retrieval and learning.

Evidence #1

The quantity of information users access causes disorientation compounded by jumping freely into hyper-documents and getting lost in "hyperspace" (Marchionini, 1988, p.3).

Hypermedia diverges from a linear and cohesive presentation. Consequently, poorly designed links, paths, and guidance can complicate navigation and browsing, significantly increasing the likelihood of disorientation, such as broken hyperlinks on a website or spiraling on social media (Nunes & Fowell, 1996). Students using hypermedia should actively analyze the learning context, set meaningful learning objectives, choose suitable strategies assessing the effectiveness in achieving goals, and evaluate their comprehension of the subject (Azevedo, 2018). Moreover, students must regularly check their understanding and change their plans, objectives, strategies, and efforts based on the context, effectively managing their learning with hypermedia to meet task requirements (Azevedo, 2018).

Support Claim #2: Redundancy of information affects learning outcomes and cognitive load in hypermedia learning.

Evidence #2

Redundancy in information can be content-based, repeating the same information across different sources, or modal, presenting information simultaneously in the same mode (auditory or visual). Content redundancy occurs regardless of the source combination, while modal redundancy can happen independently or with content redundancy, like when animation or narration accompanies written text (Albers et al., 2023). The problem of reading hypertext presents many choices on which links to follow and which links to disregard, which brings about cognitive overhead: "the additional effort and concentration necessary to maintain several tasks or trails at one time" (Conklin, 1987, p. 40). Not all learners benefit the same from different amounts of redundancy. Skilled readers do well with less repetition, which helps combine information, while less-skilled readers need more repetition for similar benefits (Roscoe et al., 2015).

Support claim #3: Many think hypermedia offers freedom from traditional print materials, and access to material through technology.

Evidence #3

The hypermedia format encourages thinking, speculation, and personal judgment on the part of the learner (Ambrose, 1991). Hypermedia brings about high levels of learner control, which increases interest and motivation in adapting to learners' preferences and cognitive needs, supporting self-regulatory skills (Gerjets et al., 2008). Teachers and designers can reduce distraction by exploring strategies with students to filter information, assessing relationships, and fostering self-directed study and learning approaches (Marchionini, 1988). We must admit that effective use of hypermedia for learning requires students to adapt their approach and emphasize the need to cultivate self-regulation in navigating these complex environments (Azevedo, 2018).

Conclusion

Hypermedia's promise of enhanced learning tempers by the challenge of disorientation it introduces—the overstatement of excitement surrounding hypermedia shadows the complexities and drawbacks associated with its use. Information redundancy and cognitive overload impair its effectiveness. Despite these challenges, hypermedia presents an opportunity for freedom from traditional educational formats and access to diverse learning platforms. To harness its full potential, educators and learners must navigate these complexities strategically and thoughtfully.

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