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What We See and Why it Matters: How Competency in Visual Literacy Can Enhance Student Learning

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What We See and Why It Matters:

How Competency in Visual Literacy can Enhance Student Learning

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Purpose

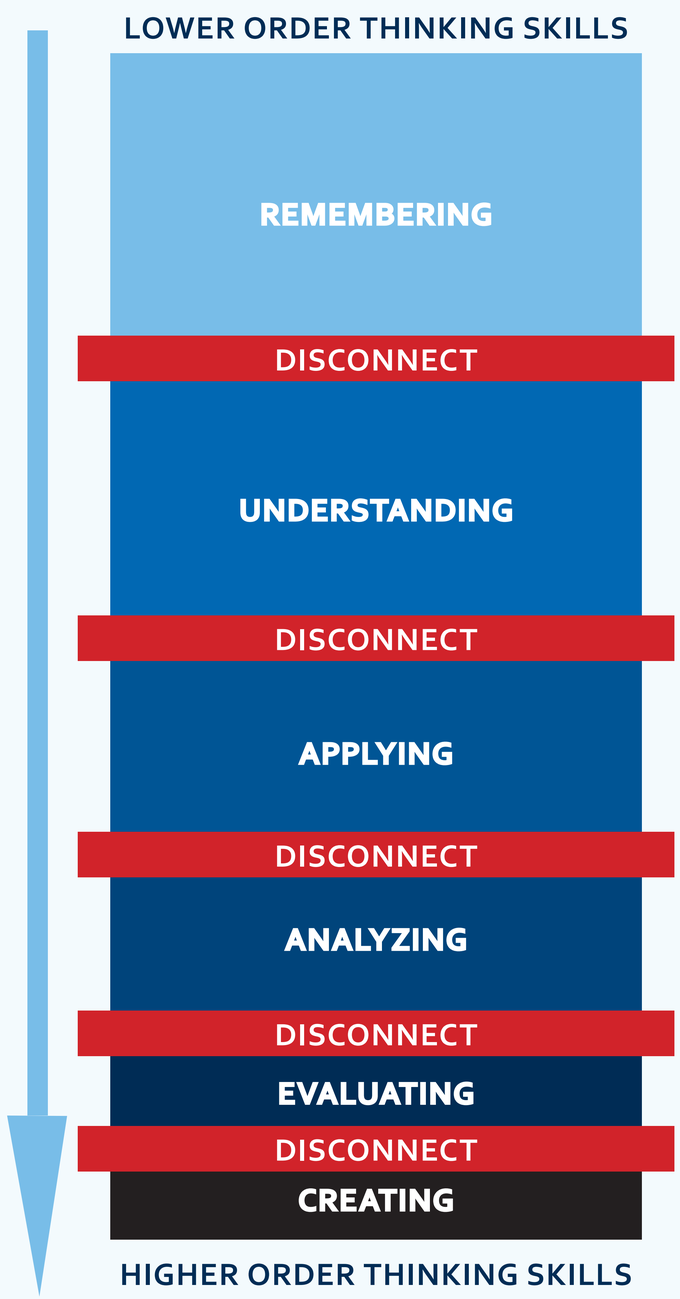
The purpose of this study is to explore the concept of visual literacy, how it impacts education, and if we are prepared as individuals to keep up in a world that has come to rely on the many facets of literacy that go way beyond reading and writing. It will measure effectiveness based on the Principles of Best Practice and on Bloom's Taxonomy.

The research questions that have guided this study are as follows:

1. How does visual literacy currently fit into curricula?
2. To what degree is the current generation of students visually literate?
3. How does applying design principles in the creation, analysis and interpretation of visuals enhance visual literacy and learning?

Definitions of Visual Literacy

- The general idea of visual literacy has been around since the dawn of civilization (Burmark, 2002; Riddle, 2009; Yeh & Cheng, 2010)
- The ability to analyze and interpret images, and other visual material is not by itself sufficient for full visual literacy; it must be accompanied by some ability to create visual material" (Brumberger, 2011)
- Objectives for student competency in visual literacy:
  - Understand basic elements of visual design, technique and media
  - Are aware of emotional, psychological, and cognitive influences in perceptions of visuals
  - Comprehend representational, explanatory, abstract, and symbolic images
  - Are informed viewers, critics, and consumers of visual information
  - Are knowledgeable designers, composers and, producers of visual information
  - Are effective visual communicators
  - Are expressive, innovative thinkers and successful problem solvers (North Central Regional Educational Library, 2003)



Findings

How does visual literacy currently fit into curricula?

- Acquiring visual literacy proficiency can sometimes be developed through social interaction and observation (O'Neil, 2011)
- Using reading comprehension strategies can help gain understanding of illustrations in a book or scientific diagrams (O'Neil, 2011; McTigue & Flowers, 2011)
- Using "Visual Thinking Strategies" can help build fundamental visual literacy skills and set a foundation on which to build more complex critical thinking and reasoning skills (Rawlinson, et al., 2007) This is an inquiry based approach to questioning that utilizes basic questions
  - What do you see in this picture?
  - What makes you say that?
  - What else do you see?
- Thinking Maps give students choices as to how they organize their information based on the type of information they were evaluating. Students can use the maps as visual representations of information to make connections and show relationships (Hyrele, 1996)

To what degree is the current generation of students visually literate?

- Creating a visual gets mistaken for visual literacy (Northcut & Brumberger, 2010, p. 461)
  - lacks an understanding of
    - why technology is used
    - how it supports the communication task
    - how it shapes the final project (Northcut & Brumberger, 2010, p. 461)
- Assuming that "digital native students" have inherent visual literacy skills is contradicted by empirical evidence (Brumberger, 2011)

How does applying design principles in the creation, analysis and interpretation of visuals enhance visual literacy and learning?

- Designing or creating challenges students to think beyond just one method and answer prompts them to think critically and benefits observation, cognitive reasoning and/or communication (Adiloglu, 2011)
- Teaching visual design principals in the educational technology curriculum for pre-service teachers provides a good opportunity to improve their visual literacy (Yeh & Cheng, 2011)
- Incorporating Design and Technology into part of the National Curriculum has proven successful in England (Benson & Lunt, 2011)
- Adding design and technology made lessons engaging, interesting, fun, relevant and allowed students to feel in control (Benson & Lunt, 2011)

Methodology

- Focused on how communication, education, and graphic design work together as components of visual literacy as defined by Brumberger (2010) and NCREL (2003)
- Sought out literature that focused on all levels of education from early childhood through post-secondary studies
- Compared uses of visual literacy currently practiced against Bloom's Taxonomy and Best Practice Principles

Bloom's Taxonomy

- The diagram above represents the Cognitive Processes dimension of the Revised Taxonomy. In general, the organization reflects a hierarchy of complexity, with some overlapping within the categories. (Krathwohl, 2002)
- Bloom's Taxonomy provides an organizational structure used to classify educational goals, objectives, and standards. (Krathwohl, 2002)

Conclusions

- In most cases, only the very basic levels of cognitive functions are being utilized when addressing visual literacy in the classroom, which means that visual literacy competency is not being reached
- "Digital natives" do not inherently possess visual literacy skills and are not as visually competent as one would assume
- If teachers utilize designing and creating with understanding of tools and principles being used in their classrooms, they can help students to achieve visual literacy competency more effectively, implement the Best Practice principles, and fulfill the span of Bloom's Taxonomy to a greater degree resulting in enhanced student learning
- If competency in visual literacy is reached, students will be better prepared for a more visually driven future