Chapter 1: Introduction

Chapter 2: Literature Review

Chapter 3: Methodology

Chapter 4: Results

Chapter 5: Discussion

Chapter 6: Conclusion

Abstract

Studies of Emotional and Cognitive Interactions With Hypertext.
INTRODUCTION

1. Interaction with Hetero...

CHAPTER AND INDEX

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The influence of prior memory on mental imagery with physical scenes.

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2.2. Sampling

This meta analysis employed the procedures of sampling, coding, and analysis developed in the social and behavioral sciences (e.g., Glass, McGaw, & Smith, 1981; Rosenthal, 1987). Experimental studies were located from journals, conference proceedings, bibliographical databases, and previous surveys and reviews of hypertext studies. The following journals on human–computer interaction and hypertext were searched: *Human–Computer Interaction; International Journal of Man–Machine Studies; IEEE Transactions on Systems, Man, and Cybernetics: Interacting with Computers; Communications of the ACM; Hypermedia; ACM Transactions on Information Systems;* and IEEE *Computers.*

Conference proceedings searched included the proceedings of the 1987, 1989, 1991, and 1993 Association for Computing Machinery (ACM) conferences on hypertext, the proceedings of British Hypertext Conferences I and II (McAleese & Green, 1990), and the proceedings of the 1986, 1988, and 1991 Computer–Human Interaction (CHI) Conferences. *Dissertation Abstract International (DAI)* between 1988 and 1993 was also reviewed.

This study also used several bibliographical databases to collect experimental studies, including the *PsyNFO* database (1987–1993), the Educational Resources Information Center (ERIC) database (1982–1993), and a computer science and electronic engineering database, INSPEC (1989–1993). In online searches, the terms hypertext, hypermedia, experimental, empirical, and effects were used.

Experimental studies were selected for the meta-analysis according to the following criteria:

1. An experiment design must be used.
2. A hypertext must be used in at least one experimental condition.
3. Dependent variables must include effectiveness and efficiency measures.
4. Results must be reported adequately for the estimation of combined effect sizes and significance levels (e.g., sample sizes, group means, and standard deviations).

The resultant sample consisted of 23 experimental studies reported between 1988 and 1993. Of them, 20 studies (87%) appeared in the literature between 1990 and 1993.

2.3. Coding Individual Studies

The following information was coded for each study: independent variables, dependent variables, sample sizes, methods of assigning subjects, background of the researchers, characteristics of hypertext systems used, year of publication, tasks, and statistics of significance tests. A total of 56 effect sizes and associated significance levels were combined in the meta-analysis.

This study selectively grouped independent variables into three types of contextual variables—users, tasks, and tools (see Figure 2). The meta-analysis also grouped the dependent variables into two categories of effectiveness and efficiency (see Figure 3).

Coverage of browsing in hypertext measures how much information stored in hypertext actually is accessed by users. This meta-analysis included several of this type of measure under the category of effectiveness—for instance, the ratio of the number of relevant nodes visited to the number of nodes visited and the ratio of the number of nodes visited to the total number of nodes in a hypertext document. Graphical maps were expected to have greater effect sizes on the effectiveness.

The validity of such clustering was assessed via subjective ratings of five hypertext experts. Each used a 5-point scale to measure the similarity among variables of individual studies. These five experts were from a department of computer science and included a professor, a visiting professor, an associate professor, and two final-year PhD students. The reliability coefficient alpha was .80 (standard item alpha = .78) for all of the cluster pairs of measurements, thus, the clustering procedure was valid.

2.4. Analysis

An effect size is the estimate of the magnitude of a specific relationship between two variables. Usually one is the independent variable and the other is the dependent variable. Effect size $r$ can be calculated from a given one-tailed $p$ value and corresponding sample size. Tests of significance alone are not informative enough for practitioners and designers of hypertext systems to judge the usefulness of a design. This meta-analysis compared and combined effect sizes and significance levels in the form of Fisher's standard score $z$, and the standard normal deviate score $Z$. An effect size $r$ was transformed to Fisher's $z$ (e.g., an effect size $r$ of .30 corresponded to Fisher's $z$ of .31). $Z$ scores can be obtained from reported one-tailed $p$ values of significance tests according to cumulative distribution functions (CDF), such as $TCDF$ (for $t$ tests) and $FCDF$ (for $F$ tests).

Effect sizes in Fisher's $z$ were then combined according to standard formulae in textbooks on meta-analytical methods. The $Z$ scores were combined according to Stouffer's method. These two procedures of combination have been recommended for their computational simplicity (e.g., Rosenthal, 1987). Finally, the results of the combination were converted back to a correlation coefficient $r$ as the combined effect size and a one-tailed $p$ value as the combined significance level. For studies that only reported group means and standard deviations, the significance levels were calcu...
29. **Composition:**

- **Name:** Janice Lee
- **Date:** February 10, 2023

29. **Annex B:**

- **Name:** John Doe
- **Date:** February 12, 2023

29. **Annex C:**

- **Name:** Jane Smith
- **Date:** February 13, 2023

29. **Annex D:**

- **Name:** Michael Brown
- **Date:** February 14, 2023

29. **Annex E:**

- **Name:** Sarah Johnson
- **Date:** February 15, 2023

29. **Annex F:**

- **Name:** David Williams
- **Date:** February 16, 2023

29. **Annex G:**

- **Name:** Emily Davis
- **Date:** February 17, 2023

29. **Annex H:**

- **Name:** Robert Taylor
- **Date:** February 18, 2023

29. **Annex I:**

- **Name:** Matthew Turner
- **Date:** February 19, 2023

29. **Annex J:**

- **Name:** Elizabeth张某
- **Date:** February 20, 2023
3. Results

Card and AdA

...)
Effects of the Complexity on the Performance

Table 3.4. Features of the Complexity in the Performance

<table>
<thead>
<tr>
<th>Complex</th>
<th>Type of Feature</th>
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Study 2: Effects of the Complexity on the Performance

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Table 3.5. Features of the Complexity in the Performance

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Table 3.6. Features of the Complexity in the Performance

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### Effects of Information Sharing on Efficiency

The current study examines the effects of information sharing on the performance of different groups. The results indicate that sharing information significantly improves efficiency. The table below summarizes the findings:

| Group | Without Sharing | With Sharing | Improvement
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<tr>
<td>A</td>
<td>0.54</td>
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<td>0.65</td>
<td>8%</td>
</tr>
<tr>
<td>D</td>
<td>0.78</td>
<td>0.73</td>
<td>6%</td>
</tr>
<tr>
<td>E</td>
<td>0.86</td>
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The study also found that the benefits of information sharing are more pronounced in larger groups. Further research is needed to explore the optimal level of information sharing for different group sizes.

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### Interacting with Hypothesis

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4. DISCUSSION

The mean amplitudes combined the results of the studies that tested the effects of graphic maps versus textual instruction on effectiveness of learning. A graphical map is defined as a representation of information that uses visual elements such as icons, images, and diagrams to convey information. The mean amplitudes were calculated for both the graphic map and textual instruction groups.

<table>
<thead>
<tr>
<th>Group</th>
<th>Sample Size</th>
<th>Significance Level</th>
<th>Effect Size</th>
<th>Mean Amplitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic Map</td>
<td>150</td>
<td>0.05</td>
<td>0.8</td>
<td>0.65</td>
</tr>
<tr>
<td>Textual Instruction</td>
<td>100</td>
<td>0.05</td>
<td>0.7</td>
<td>0.55</td>
</tr>
</tbody>
</table>

In conclusion, the results showed that graphic maps were more effective in conveying information than textual instruction. The mean amplitudes confirmed that graphic maps were more effective in enhancing learning outcomes.


4.4. Strengths and Limitations of the Model


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INTERACTING WITH HYPERTEXT
The **interaction with hypertext** refers to the process of navigating through a hypertext document, where users can click on links to access related information. This interaction can significantly influence how people interact with the information. For example, if a hypertext document is designed to have a particular structure or layout, it can provide hints to the reader about the importance of certain pieces of information. In this context, the **conception of interaction** is crucial, as it helps to guide the reader through the text and make it more accessible and engaging.

Interactive experiments further emphasize this concept, allowing for a more dynamic and responsive interaction between the reader and the document. This interaction can be measured and analyzed to understand how effective it is in facilitating learning or comprehension.
REFERENCES


NOTES

Address multiple issue specific requirements in order to provide product interactive with hyperELT.