INTERNATIONAL JOURNAL OF TECHNOLOGY AND ACADEMIC RESEARCH

ISSN: 2224-6878 | Pakistan Volume 6, No. 10.

IF: 14.91 | 2026 http://waerasia.org/index.php/ijtar

THE CONCEPTS OF HYPERTEXT, HYPERLINKS, AND HYPERMEDIA. SEARCHING FOR AND SELECTING INFORMATION USING INTERNET SEARCH ENGINES. EXCHANGING INFORMATION VIA EMAIL

Abdrudazzoqova Xumora Akmal qizi

Assistant, Department of Digital Technologies and Bioengineering,

Samarkand State Medical University

Dustyarova Bonu Elyor qizi

First-year student, Faculty of General Medicine, Samarkand State Medical University

Shayzakova Shabnam Muhiddin qizi

First-year student, Faculty of General Medicine, Samarkand State Medical University

Hasanov Baxodir Oybekjon o'g'li

First-year student, Faculty of General Medicine, Samarkand State Medical University

Shonazarov Umid sharop ogli

First-year student, Faculty of General Medicine, Samarkand State Medical University

Abstract. This article examines the concepts of hypertext, hyperlinks, and hypermedia and their relationship to online information retrieval and email communication. The study is based on a descriptive and comparative analysis of official technical documentation. The analysis distinguishes the functions of these concepts and develops criteria for refining search queries and selecting sources. A practical approach is proposed that integrates finding, verifying, recording, and delivering information to a recipient. This approach may support the development of students' digital literacy and their ability to work with academic information.

Keywords: hypertext, hyperlink, hypermedia, internet, search engine, information literacy, email, digital communication.

Introduction

In digital education, working with learning materials often begins with opening a web page. A student follows a link to another document, searches for relevant information, and sends the material to a teacher or colleague. Although these activities are interconnected, each requires distinct knowledge and skills. Opening a link does not in itself establish the reliability of a source; finding information is not sufficient to justify its use in academic work.

The relevance of this topic stems from the growing volume of information and the presentation of materials of varying quality within the same search environment. Distinguishing between an electronic textbook, a scholarly article, an advertisement, and a personal opinion depends on the user's capacity for critical evaluation. In educational assignments in particular, the identity of the source's author, the publication date, and the verification of evidence are important.

ISSN: 2224-6878 | Pakistan Volume 6, No. 10.

IF: 14.91 | 2026 http://waerasia.org/index.php/ijtar

The aim of this article is to systematically analyze hypertext structures, search methods, and email capabilities and to propose a coherent procedure for working with information. The research question is formulated as follows: how can reliability, usability, and information security be taken into account when these tools are used together?

Materials and Methods

The study was conducted as a descriptive and analytical review. The materials comprised W3C documentation on hypertext and HTML links, a Google Search Help page, and RFC 5321 and RFC 5322, which describe email transport and message format [1–5]. Sources were selected because they directly define relevant terms or explain technical mechanisms, are published by an official organization, and are openly accessible. The online sources were accessed on October 10, 2026.

The analysis addressed three areas: clarifying the boundaries between the concepts, comparing the functions of search tools, and synthesizing the requirements for delivering information by email. Each area was examined using a "function — application — limitation" framework. This work is not a systematic literature review; no user experiment, survey, or performance measurement was conducted. The results consist of a content analysis of the selected documents and recommendations developed by the author.

Results

The analysis showed that hypertext, hyperlinks, and hypermedia are distinct concepts. Hypertext is a structure consisting of information units connected by links, enabling readers to navigate through content in different directions. A hyperlink provides a connection that allows users to move between these units or resources. Hypermedia extends linked information beyond text to include images, sound, and video [1, 2].

For example, moving from the "Computer Networks" section of an electronic textbook to a glossary constitutes hypertext navigation. The text or button that enables this transition functions as a hyperlink. Linking the same section to an animation demonstrating how a network operates and to an audio explanation creates a hypermedia environment. Thus, hypertext describes the structure, a hyperlink provides the connection, and hypermedia represents the expanded range of linked materials.

HTML distinguishes between the visible part of a link and its destination address [2]. This feature facilitates navigation, but users should check whether the link text corresponds to the actual destination. Learning resources should provide meaningful link labels, clearly organized sections, and a way to return to previously viewed content. Such organization helps users maintain their orientation within the material.

The analysis of search practices indicated that query precision and the quality of the retrieved source should be assessed separately. Google's help documentation describes using quotation marks to search for an exact phrase, site: to restrict a search to a particular domain, a minus sign to exclude an unwanted word, and filetype: to specify a file format [3]. For example, the query "digital literacy" site:unesco.org narrows the topic to an exact phrase and a specific domain. This is an illustrative methodological example; the number of results it produces was not measured in this study.

Five criteria were proposed for selecting information: an identifiable author or organization; the presence of evidence and references; a publication date appropriate to the task; relevance to the research question; and the possibility of verification against other independent sources. An official domain may be a useful indicator, but it does not eliminate the need to verify the content. Older material may be useful for understanding historical concepts, whereas the update date is particularly important for rapidly changing technologies.

ISSN: 2224-6878 | Pakistan Volume 6, No. 10.

IF: 14.91 | 2026 http://waerasia.org/index.php/ijtar

A practical search procedure begins by expressing the topic as a question. Keywords in Uzbek, Russian, or English are then selected, the query is refined, and the full text is opened. A final conclusion should not be based solely on the title and a short search snippet. The author, title, year, address, and, where applicable, DOI of the selected source are recorded. When duplicate copies are available, preference should be given to the original publication.

Email documentation distinguishes between message transport and the specification of message structure: SMTP is used to transmit email messages, while RFC 5322 describes message headers and the basic message format [4, 5]. From the user's perspective, effective correspondence depends on selecting the correct recipient, using a meaningful subject line, writing a clear message, and providing an appropriately identified attachment. For example, the subject line "Independent Assignment — Hypertext — Group 1" immediately communicates the purpose of the email.

When sending retrieved information, it is advisable to name the attachment according to its contents, identify the source used, and state the expected response clearly. When communicating with multiple recipients, the distinction between the To, Cc, and Bcc fields should be explained. Before sending an email, the recipient's address, the correct version of the attachment, and access to any linked resource should be checked. These steps are proposed as practical components of an information exchange procedure.

Discussion

On the basis of the analysis, teaching information handling through the sequence "find — verify — record — share" is considered appropriate. Hypertext enables users to navigate linked content; a search query narrows the range of sources; and email delivers the selected material. In assessing the quality of this process, the relevance and verification of the selected evidence are more important than the number of links.

In education, this approach can be implemented through a single integrated assignment: the student searches for an official source on a topic, explains the reason for selecting it, prepares a brief commentary with a link to the source, and submits it by email. The teacher can assess query precision, the justification for the source selection, and the content of the correspondence. The effectiveness of this pedagogical proposal should be tested in a separate future experiment.

For secure information exchange, users are advised not to open unfamiliar attachments, not to send passwords or verification codes by email, and to check the destinations of suspicious links. HTTPS indicates protection of the connection; it does not confirm the scientific accuracy of the claims on a page. The study is limited to five selected documents and a descriptive analysis; its recommendations should not be interpreted as experimentally validated findings for all services or audiences.

Conclusion

Hypertext, hyperlinks, and hypermedia are interconnected concepts with distinct functions in the organization of digital information. Combining search operators with critical source evaluation, and subsequently delivering the selected material through structured email correspondence, establishes a coherent information handling process. The proposed procedure can be used in digital literacy instruction; its effect on learning outcomes requires empirical investigation.

References

1. W3C. What is HyperText? https://www.w3.org/WhatIs.html
2. W3C. Links in HTML documents. HTML 4.01 Specification. 1999. https://www.w3.org/TR/html401/struct/links.html
3. Google. Refine Google searches. https://support.google.com/websearch/answer/2466433

ISSN: 2224-6878 | Pakistan Volume 6, No. 10.

IF: 14.91 | 2026 http://waerasia.org/index.php/ijtar

4. Klensin J. Simple Mail Transfer Protocol. RFC 5321. 2008. DOI: 10.17487/RFC5321.
5. Resnick P. (ed.). Internet Message Format. RFC 5322. 2008. DOI: 10.17487/RFC5322.
6. https://explore.openaire.eu/search/result?pid=10.5281%2Fzenodo.17435447
7. https://injoere.com/index.php/injoere/article/view/17