Introduction

The digital age has ushered in an era where information, in its myriad forms, permeates every facet of our lives. Information, as conceptualized by Zins (2007), transcends mere data, embodying a processed entity that paves the way for knowledge acquisition. This nuanced transformation, from raw data to information and ultimately to knowledge, underscores the essence of digital text as a conduit for conveying meaning (Frické, 2009). Amidst this backdrop, the efficacy of communication—defined as the meaningful exchange of information—becomes paramount, especially within Information Systems (IS), where the manner of information presentation critically influences success (Delone & McLean, 2003).

In the contemporary research landscape, attention has progressively shifted towards enhancing User Experience (UX), with Information Engagement (IE) emerging as a pivotal measure of UX quality. IE, encompassing the emotional, cognitive, and behavioral responses to digital content, signifies a user's connection with technology (Attfield et al., 2011; O’Brien & Cairns, 2016). This connection, when optimized, can significantly enhance digital interactions, underscoring the importance of engaging content.

Given the prevalent reliance on digital text for information dissemination, this study zeroes in on the pivotal role of IE within digital textual content. Despite the criticality of IE, a gap persists in systematic approaches to its measurement, design, and enhancement. Addressing this gap, our research leverages the latest advancements in computational linguistics and natural language processing (NLP) to explore and enhance IE systematically.

This paper unfolds as follows: It begins with a comprehensive literature review, grounding our research within the broader discourse on IE and digital text engagement. Subsequently, it introduces a novel predictive model, the READ model, designed to forecast engagement levels based on textual attributes. Building on this foundation, we present a prescriptive model employing NLP to refine text engagement dynamically. Through a series of methodologically rigorous studies, this research not only illuminates the mechanisms underpinning IE but also offers practical tools for enhancing digital content engagement.

By bridging information systems research with cognitive psychology, this study contributes a nuanced understanding of IE, alongside innovative methodologies for its assessment and enhancement. In doing so, it aims to foster more engaging digital environments, ultimately enriching the user experience across various digital platforms.

* **Literature Review**
* The conceptualization of Information Engagement (IE) has evolved significantly, reflecting a nuanced understanding of how users interact with digital content. Defined broadly as the emotional, cognitive, and behavioral connection between users and information systems, IE serves as a crucial determinant of user experience (UX) quality across various domains, including government, business, and digital media (Attfield et al., 2011; O’Brien & Cairns, 2016). This multifaceted construct encompasses three primary dimensions: perception, participation, and perseverance, each reflecting different aspects of the user-information interaction (O’Brien & Toms, 2008).
* **2.2.1 Definitions**
* Engagement, as a concept, varies across contexts, from civic and political engagement in public policy to consumer and customer engagement in business and marketing (Chan & Pan, 2008; Brodie et al., 2013). In digital settings, engagement encapsulates the depth and quality of a user's interaction with online platforms, significantly impacting both specific aspects and the overall customer experience (Akdeniz et al., 2013; Mollen & Wilson, 2010).
* **2.2.2 Dimensions of Information Engagement**
* **Perception**: This dimension focuses on the user’s initial cognitive and affective responses to information, including interest, intent, and evaluative attitudes towards the content (Hassenzahl & Tractinsky, 2006; Attfield et al., 2011).
* **Participation**: Participation highlights the behavioral aspect of engagement, representing the user’s active interaction with the information, which can be measured through various observable actions (Xu et al., 2019).
* **Perseverance**: Reflecting the sustained cognitive engagement with content, perseverance involves the integration, retention, and ongoing use of information (O’Brien et al., 2017).
* **2.2.3 Determinants of Information Engagement**
* IE is influenced by a complex interplay of factors related to the user, the task at hand, and the system or technology being used. User determinants include demographics, personal relevance, and technological literacy (Perski et al., 2017; Arapakis et al., 2014). Task-related determinants encompass goals, outcomes, and the intrinsic interest and complexity of the information interaction (O’Brien et al., 2020). System determinants cover aspects like interactivity, content design, and the usability and functionality of the digital platform (Abraham & Chengalur-Smith, 2019; Norman, 2013).
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