Digital Literacy and the Making of Meaning: How Format Affects Interpretation in the University of Central Florida Libraries Search Interface

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The library: an epic repository of knowledge and information that has endured for centuries. Individuals of all ages have come to these hallowed corridors for enlightenment and discovery, borrowing fragments from so many different sources in order to create their own pieces of work. Work that may one day, too, find its rightful place alongside the pages that once served as their inspiration. Over the centuries, libraries have endured, weathering a diversity of tumultuous events. As such, they have also eased into the 21st century with an embracing, if awkward, welcome. The newest reincarnation of the library has been its modern, digital counterpart—a repository of a different kind that promises to be the grandest collection of knowledge ever put together. Digital collections can be truly vast, encompassing thousands of journals, periodicals, and even e-books, that no library would entertain indexing—and with a growing percentage of authorship taking place in digital spaces, print media can no longer stand alone. Experts in the field of library sciences are at odds on how to better implement digitization and to what extent; however, there is no debate with regards to its necessity. This digitization is, in fact, well under way and has been for quite some time.

We live in an increasingly digital world where a great percentage of our textual production and consumption (reading and writing activity) occurs in digital environments. Clive Thompson, whose book *Smarter Than You Think* examines authorship in the digital age, estimates the amount of online composition as more than 3.6 trillion words daily, or the equivalent of 36 million books *every day*. To provide a better perspective, Thompson writes, "The entire U.S. Library of Congress, by comparison, holds about 35 million books" (256). Libraries have thus joined the digital realm, and with that their overall collection has grown substantially. Each library now has its own section for digital collections where you will find plenty of otherwise print-based publications in digital format. According to research conducted by the Association of Research Libraries, digitization of library collections, or the process of creating a digitally available copy of published works, is no longer the job of major library institutions alone. This practice is gaining prevalence in libraries of all sizes, both public and private. The result has been unprecedented access to vast collections previously unavailable to the browsing masses, and even greater access to general collections, at the

tip of one's finger.

All this modernization of the venerable library appears to be most beneficial; however, the wide-reaching implications of such a significant undertaking must be taken into consideration. What has made the library so remarkable is not simply its collection of knowledge, but its means of accessibility to that knowledge that make the library a vast repository open to all and available to all. In general, no special literacy is necessary to browse through its collection or stumble upon epic works of intellectual enlightenment. Random, serendipitous discovery is more the rule than the exception. Within digital environments, however, means of access change. Browsing, a term so synonymous with a library's books, has been usurped by digital terms to convey a more pointed search for a target rather than the casual scanning of material. Search interfaces are our reference desks. Like little e-librarians, they must interpret terms we input in order to provide relevant matches. But these librarians are one-dimensional and cannot know any more than what you allow them to know through a few chosen words about what you hope to find. One-dimensionality in this sense arises from the fact that you, as a user, are its source of information on what can and will be retrieved. Unlike more complex web search engines like Google, library database searches do not collect user information and track their behaviors in order to build complex profiles on the kinds of material a particular searcher may be seeking. The keywords a searcher inputs limit the extent of the information received by the user.

These considerations are of great consequence to what exactly we *can* access, and what limitations exist on the library experience in the digital realm. Whether a search interface is used to locate your object of interest or an actual, physical librarian, your information is processed through a mediator, and thus the mediator becomes an important part of the result. The knowledge, expertise and perceptiveness of your librarian come into play when he or she stands as the mediator, acting as the bridge between you and what you seek. In the same way, accuracy, relevance, and—in the digital realm—speed, govern interaction and results when using a search interface. Both exert influence over interpretation of those results, but digital formats in this case rely entirely on user input. Thus, the receipt of information itself is affected by how it is processed and what conduit was used to access it. However, the manner in which it is received is also worth noting.

Possible influences upon information interpretation have garnered much interest in literacy and writing studies. Gail Hawisher and Cynthia Selfe conclude that digital literacy is shaped by "social contexts; educational practices, values, and expectations; cultural and ideological formations like race, class, and gender; political and economic trends and events; family practices and experiences; and historical and material conditions—among many, many other factors" (644). Ingrid Hsieh-Yee, a library information scientist, argues that the degree of an individual's expertise in searching and in utilizing digital interfaces equally affects the way results are achieved and subsequently processed for re-purposing, stating that "findings on the role of subject knowledge, suggest that experienced searchers knew how to cope with their deficiency in this area" (169). While plenty of research is available on how means of access affect information receipt, less attention has been paid to the more critical question: how do these changes influence the interpretation and utilization of the information? How such digital formats affect the meaning constructed from the results is what I wish to examine in this paper.

Literature Review

In this section, I will discuss briefly the theoretical basis for some of the concepts that are used throughout this research which have provided direction and a framework for this particular study. Digital literacy, as discussed earlier, has become a major component of writing studies, and new concepts have emerged about the varied influences of our interaction with digital material. Before addressing digital environments more specifically, however, the concept of construction of meaning needs to be more fully understood. For that, I have relied heavily on a few insightful works

whose conceptual breadth allows for further-reaching implications. James Porter and Nancy Spivey both have addressed construction of meaning in similar, if slightly different, terms. Spivey approaches the literary spaces we interact with as a conglomeration of workspaces that are mutually influential, as both the reader and writer exert influence on one another. This is captured in a brief interpretation of authorship, wherein Spivey posits, "What I present reflects my construction of an author and his or her work. . . . The 'author' serves as a means of classification and is a kind of projection of the various connections we make and the commonalities we see" (28). Spivey continues, "When an author is cited, my own readers are cued to bring their own constructions of that author and that text to bear, even though I provide guidance for the sort of selections and inferences that they might make" (28). Here, Spivey suggests that the way information is presented influences the audience in a certain manner, but an audience's interpretation is the final influence that constructs what that piece of information really means.

Porter enriches Spivey's view with his concept of intertextuality, arguing that "ever and always, texts refer to other texts and in fact rely on them for their meaning," suggesting that all texts are interdependent (87). He views the construction of meaning as heavily dependent on other literary influences and further explains that "we understand a text only insofar as we understand its precursors" (87). Influence from the intertext affects the meaning for both the writer and the reader extending that influence to the final interpretation. Exposure to a variety of texts is critical in shaping creative genius, a term which Porter is skeptical of, preferring instead "creative borrower" in an ode to the true skill of a writer's creativity: borrowing from so many other writers and texts to create a single cohesive work. In that vein, we must assess what governs access to those critical sources of information, including environmental, social, and economic factors. Hawisher and Selfe's research captures this intersection well through the term "cultural ecology," with the authors stating that "the specific conditions of access have substantial effect on people's acquisition and development of digital literacy" (644). Taking into consideration these numerous influences, Hawisher and Selfe conclude that "access is a much more complexly rendered social formation than we have heretofore recognized" (673).

Hawisher and Selfe's work offers a good point of transition to construction of meaning in the digital environment, as it addresses digital spaces specifically within the broader context of literacy development. The "cultural ecology" of digital literacy acquirement is one that creates very subjective, experiential interaction with literacy. Levels of accessibility cannot be measured in the same way for different individuals. Access to a certain portal does not mean that it can or should influence the user in the same way. It is, as Hawisher and Selfe suggest, "the specific *conditions* of access (and the timing of these conditions) [that] seem to be important in determining when and how people develop effective sets of technological literacy skills—or, indeed, if they choose to do so" (673, emphasis in original). Digital literacy is not a skill that we can choose *not* to acquire in this day and age, but how we possess it and the ways we utilize it are factors that also determine what we make of information received through that particular medium.

In examining factors of influence on access, and more importantly literacy, we turn to Hsieh-Yee's study of novice and experienced searchers to determine whether digital, and, more specifically, search literacy level are a factor in facilitating a successful search. The study was conducted with 32 "professional" or experienced searchers, and 30 novices; the purpose was to identify whether search experience and subject knowledge made a difference in the results obtained and the success of either group. The data from the study showed that experienced searchers were more successful in obtaining relevant results regardless of subject knowledge, and that they did so faster when the topic was familiar (167). The study further determined that novice searchers did not change their tactics when confronted with topics they were unfamiliar with, and that they relied less on usage of varied terms and thesaurus assistance in comparison with experienced searchers (167). On subject knowledge, Hsieh-Yee comments, "The most intriguing finding about subject knowledge, however, is its lack of effort on novice searchers. Data showed that

no matter which topic was searched, novice searchers displayed no difference in their use of search tactics selected for this study" (169). The author goes on to suggest that searchers "need to have a certain amount of search experience for subject knowledge to have any effects on them" (169).

The findings from Hsieh-Yee's study have strong implications on the type of ability that is needed to gain access to information from a search portal. Access here is governed by factors beyond the cultural ecology of the user and their degree of digital literacy in general, but also modal literacy in search tactics and knowledge of the subject being searched. It is not sufficient to be digitally literate, but to be literate in the effective use of search functions and terms. These findings show that search is a more complex act than simply the entering of a keyword or search term, and that many outside factors, unrelated with the search functionality, determine the kind of information that is produced. This issue becomes clearer when the complexity of retrieving information from a digital portal is examined, this time from the algorithmic, computational end. In "A Taxonomy of Web Search," Andrei Broder presents some difficulties in the processing of data entry, and how often what the user intends is not what the search function provides. Broder classifies searches as one of three types: navigational (the intent being to reach a certain site), informational (to acquire some information presumed to exist), and transactional (to perform a web-mediated activity). Though these search determinants are broadly placed, Broder suggests that there is no way for the system to determine "the need behind the search."

The accuracy of search results is in and of itself a matter of individual search systems. Each search provider has their own algorithm that is used to try and mitigate the effect of what I refer to as "intention-blindness" that is inherent in digital systems. This also suggests that each search system brings along with it a unique set of characteristics associated with its environment and sponsors. Broder submits that "human-computer interaction, and the cognitive aspects play a significant role" (4) in the web context and recognizes that this is "a rapidly changing landscape" (8). However, he concludes that for search interfaces to be most successful they will need to "deal with all three types" of queries, instead of interpreting the majority as simply informational, which the data determined, had made up less than 50% of total queries (9).

So far we have looked into how the individual's literacy, authority, and authorial capacity is shaped and influenced, and ultimately how these same factors affect the seemingly inanimate digital environment. Each specific data set and research effort creates a picture of how meaning is constructed and the individual influences on that process. Even in the language of the machine, the making of meaning is a critical element of how it provides answers to our queries. But beyond that, a final determinant of meaning is that of the interface itself. This simple portal that we recognize as a means to an end, barely noticing it beyond that, could well be dictating how researchers make moves within its space and, most importantly, what they get out of that interaction. In "Rhetorical Situations and Their Constituents," author Keith Grant-Davie examines this relationship between user and textual environment, which for our purposes may be digital or otherwise. Like Porter, Grant-Davie finds plenty of intertextual context for the development of certain rhetorical moves and the manner in which they are used. Again, the imperceptible and the implicit are most pervasive. Like Spivey, Grant-Davie finds construction of meaning a conditional relationship between input and output—author and reader, or in the concept for this paper, portal and user.

Grant-Davie provides a framework for his concept: the rhetorical situation. While he is not the first to suggest such a rhetorical construct, he has framed it in a unique and accessible manner that I find most relevant to this particular study. The rhetorical situation, in Grant-Davie's terms, has four constituents: exigence, rhetor, audience, and constraints. Though the first three are most likely familiar to the reader, constraints is one that may require some further defining. Grant-Davie refers to constraints as "factors in the situation's context that may affect the achievement of the rhetorical objectives" (111). Constraints are not necessarily a bad thing; they may be positive constraints, limiting contexts or frames in such a manner as to serve the rhetor's ends. He offers that rhetorical situations should be examined "as sets of interacting influences from which rhetoric arises, and

which rhetoric in turn influences" (104). Going beyond that, Grant-Davie sees rhetorical situations as complex, even compound, stating that "exigence, rhetor, audience, and constraints can interlace with each other, and the further one delves into a situation the more connections between them are likely to appear" (115).

Understanding the rhetorical situation is critical in understanding how an interface functions to influence its user. What moves does the rhetor (or rhetors) execute in order to accomplish his or her goal? And, more importantly, what exactly *is* the rhetor's goal? Here, rhetor is indicating the designer(s) or creator(s) of the library search interface. The exigence behind an interface is the primary determinant of how that interface will appear to its relevant audience. Finally, what constraints surround the use of a certain interface? In the same vein, we can also ask what is the audience's exigence—their need—in accessing that search function. What are the constraints that we have by now learned affect an individual's ability to access and use that interface effectively? Hsieh-Yee's study would suggest that digital literacy and search literacy along with subject knowledge are important constraints upon the successful utilization of a given search function. And, even more fundamentally, Hawisher and Selfe's research suggests that the "cultural ecology" of one's literacy development is an equally critical constraint upon an individual's interaction with the digital search interface. A keen rhetor must take these elements of audience into consideration if he or she is to successfully manipulate the rhetorical situation and respond to the exigence of the search page.

What these authors collectively suggest is that meaning is constructed way before we arrive at the interface from which we will begin a search.

I find it necessary to also briefly introduce another author whose research has been enlightening in as far as the sources, influences, and channels of meaning making. Eminent literacy researcher and scholar Deborah Brandt's piece "Sponsors of Literacy" delves into the concept of literacy sponsorship via an expansive, ethnographic study. Brandt finds sponsors taking on many shapes and origins, such as "relatives, teachers, priests, supervisors, military officers, editors, [and] influential authors" (335). Beyond individuals, sponsors may be institutions, as well as events and experiences (339). Although a correlation can be found between Brandt's and Hawisher, and Selfe's research, Brandt's particular frame of sponsorship—even the term itself—is very useful in interpreting those background influences on the creation of meaning. One area of Brandt's work that will be revisited later in this research is well-summarized in a quote describing sponsors as entering "a reciprocal relationship with those they underwrite. They lend their resources or credibility to the sponsored, but also stand to gain benefit from their success" (335). This concept plays a role in understanding some elements of purpose and support when considering the roles of the rhetor and exigence.

Finally, a work that has exerted an influence on my own thinking in approaching this research and that I find quite powerful in its ability to connect the concepts discussed thus far is Cathy Davidson's book *Now You See It*. This particular work is relevant to my research not only because of its brain-science approach to our interaction with digital environments, but because of the extensive work the author does showing the complex rhetorical moves that are made in order to influence an audience, and how these influences impact the meaning extracted from the situation. Davidson focuses on "attention-blindness" as a phenomenon only exacerbated by the digital world which we now occupy, writing, "[W]e are in a transitional moment. We are both adopting new information technologies all the time and being alarmed by them" (16). Davidson continues, "How we perceive the world, what we pay attention to, and whether we pay attention with delight or alarm are often a function of the tools that extend our capabilities or intensify our interactions with the world" (16).

These tools that Davidson speaks of are very much the same ones that, in differing terms, Hawisher and Selfe, Porter, Broder and Hsieh-Yee, speak of. They determine the means of access and control the production of information by allowing individuals at different corners of it to manipulate attention-blindness and interpret information in certain ways. What these authors collectively suggest is that meaning is constructed way before we arrive at the interface from which we will begin a search. Meaning is very subjective, yet it is also collective. Decisions are made that generalize conclusions for all and yet, inevitably, can only satisfy a few. The concepts put forth by the authors mentioned in this section are concepts that are neither unheard of nor individually remarkable. I would venture to say that many readers are already aware of them in one context or another. But together these concepts can shed light on a question that is less readily discussed: what influences do formats have on the making of meaning? And, more specifically, what influence does the University of Central Florida (UCF) Libraries search format have on the making of meaning?

Methodology and Data Collection

In order to investigate and examine my particular research question, I have chosen to conduct a rhetorical analysis of my research subject, namely the UCF library search function. I have considered other methods of ethnographic data collection; however, the constraints of time, accuracy, and accessibility on those methods led me to conclude that they may hinder or altogether disrupt my ability to conduct research and provide relevant and valid results. A rhetorical analysis involves the researcher critically examining a certain text, disassembling its cohesive parts, and determining how and why certain actions of speech or visual argument were made. In the case of the UCF library search format, the text here was a visual rhetorical argument, with each of its parts examined wholly and individually to determine its respective role on the page and identify the purpose for which it was placed. The rhetorical examination does not stand alone; it is framed by a certain theoretical lens that helps provide context to the argument I make and the conclusions that are drawn from the information. These lenses allow us to use well-established concepts and to stand on the firm footing of an existing wealth of research in deciphering and interpreting the information gleaned from the rhetorical analysis. It also serves to provide a framework to help conceptualize the data. I have already introduced most of the literature that creates these lenses through which rhetorical analysis is conducted in the literature review section above.

Ideas extracted from the various works that have been used to interpret my data are included in this paper. In addition, since the physical search interface is the subject of my research, commentary and analysis in many cases can be readily observed through viewing the page or using some of its functions. I have also conducted an extensive interview with a UCF research librarian, asking questions about some of the aspects of his specific interaction with the library search format and utilization of its functions. The input from the librarian is helpful in broadening the research perspective to encompass a professional viewpoint of using the library search function and what factors may affect its utility. It is, however, important to note that this is a single case study from one librarian's perspective and therefore no broader generalizations could be drawn from this particular data, neither on librarians in general nor for UCF librarians more specifically. The questionnaire sheet can be found in the appendix.

Finally, I will include some of my own observations in the course of using the UCF library search function for the purpose of this research. I have myself taken a single class of library research methods in conjunction with my Composition class, which was very helpful despite the fact that I was already familiar with the concepts discussed. I had also done a few hours of tutorials on the function and navigation of the UCF library search for the same class. This experience was instrumental in creating my individual identity as a researcher, although I identify as someone who is simply using a search engine. The realization that such a specialty affects the success of my own interaction with the interface helped initiate my interest to delve deeper in this subject.

Overview of Search Page

Let us briefly overview the elements of the UCF library search page. The search page contains four major elements immediately visible, placed as individual pieces on the page. The central two, and most visually fixating, are the large banner header and the OneSearch box immediately below it. Less significant in size or distinct in appearance are two bars on each side. To the right, six different buttons appear in plain text, with the various other modes of search function the library has available, including the specific articles and database and books/catalog search functions. The "Ask a Librarian" button is also located among the six buttons. On the left bar, the library hours are posted, also in plain text and regular typeset with emphasis made on the weekday hours. These two are not linked and do not direct the user to any other location. However, a small "more" link is located towards the bottom that navigates the user to a page giving extended information on operational times.

Garnering the most attention at first is the image-transition banner, with its picture format and extra large, colorized text. A quick glance at the images, however, allows the user to recognize that this is a non-function related element, displaying various shots of the library and informing of the availability of study rooms. Moving to the second largest and most prominent element on the page, we find the library OneSearch box. Besides the actual keyword entry box, three radio-buttons appear below allowing the user to select whether he or she is trying to initiate a search by keyword, title, or author. The keyword option is selected by default. Immediately below the term OneSearch are parentheses in faint gray text providing description for this search function: "Searches Catalog, Databases, and Articles." Though the term OneSearch may be, to an extent, self-explanatory, no further information is provided that explains to the user what is the advantage of OneSearch versus, for example, any other search function the library has available, if indeed there are other functions available. There is also an advanced search link to the right of the search and clear navigation buttons for the search box. However, this too is presented quite plainly.

The page contains two more elements that, although clearly visible, are easily lost in the more interesting and immediately available elements taking center-stage on the page: a navigation bar at the very top of the page, and a footer. The navigation bar at the top functions as a pull-down menu when the cursor is placed over it, with regular typeset and simple text links to various pages such as "home," "services," and "about." If the cursor is moved over those links, larger, pull-down menus and button links will appear with extensive navigation and search functions. The footer at the bottom contains ways to interact with the library on social media, as well as a few quick-navigation links, disclaimer page, and library news section. The overall color scheme of the page is one of light, unobtrusive hues and, apart from the header banner, contains no images.

Discussion

Several rhetorical elements of the search page are immediately identifiable. The centrality of the search function, the recessive nature of the side elements, and the mostly non-functional banner at the top all serve to emphasize the primary function of this page: the search. However, the page itself contains many different search elements. In fact, the entire right sidebar contains links to various *other* ways to search within the library. In fact, by definition, each of these search functions is more specific and specialized, hence more pointed in retrieving a certain result—assuming, of course, the user knows what he or she is looking for. And what if users do not know *exactly* what they are looking for? Equally, both the database and book catalog searches can help narrow results to more specific categories. But these functions are almost imperceptible, as the user's attention is immediately funneled to what appears to be the primary—and to the novice the only—search bar on the page.

Davidson refers to this as the "gorilla in the room," where we focus on the one main element that is deemed, by navigational location and immediacy, most important or most relevant to the purpose of the search—blinded to all other functions. Our literacy in the digital intertext of search modality assists us even further in making that immediate move to the central part of the page, because we are used to locating the search function conveniently in that location in so many other search interfaces used on the internet. We are already primed, in a sense, to locate the search bar in that central location, and to ignore the usual filler that appears in various parts of the page that most often have no function in assisting someone's research. Web literacy has taught us to ignore most side elements of pages because, beyond possible navigational qualities, they are mostly of no benefit to the user, and, in fact, are usually non-informational, such as solicitations.

In the preceding simplistic analysis of a single rhetorical element of the page, we were able to demonstrate that even users with good, and perhaps even extensive, digital literacy could be influenced by a page's format in several ways, and that this influence may not be entirely beneficial to the user's goal. But, if the function of the page is to conduct a search, what then is truly significant about this particular rhetorical move—the centrality of the primary search function? The question is not whether the search functionality of the page is readily accessible and central to it, but more so why this *particular* one has been pre-selected as the primary search function to which a user will most likely navigate. In that pre-selection, the other search elements that may be more relevant to a given searcher's query are ignored, or possibly not seen. The rhetor's exigence, to use Grant-Davie's terms, must then be examined and reviewed in relation to the audience's purpose in accessing the page and, more specifically, who that audience is.

Because the audience for the UCF library search page primarily consists of students, their perspective queries are more than likely academically related targets, such as a journal or a book related to a homework assignment. Generally, students tend to possess a few characteristics: young, digitally literate, and likely still learning about the subjects they are researching. These specific audience characteristics are ones that a rhetor must take into consideration when developing a space that successfully interacts with them. Knowing this audience is young, digitally literate, and still learning, we could infer that this audience wants quick access and response (young), places importance to certain parts of the page and pays attention to those parts in particular (digital literacy), and is not necessarily aware of what in particular they are looking for, and if they are, where exactly to find it (still learning). To satisfy an audience with these factors, the interface must be simple, focused, and broad in accessibility and results. Note that the "keyword" query option is selected by default, assuming that the purpose of a search is to narrow a topic, rather than having a specific one (e.g. title or author) in mind.

Not being a particularly savvy searcher, my personal observations using OneSearch in this manner are interesting to note. Though I was particularly aware of the subject matter I sought, I did not have particular articles or books in mind. Instead, I was searching for existing research and published work on a specific subject of interest. Finding relevant information was difficult. The significant number of returns to my queries had not provided specific responses that were relevant to the particular search target. I used simple parameters to limit the returns in the "Advanced Search" function of OneSearch. However, the accuracy of the results, though less numerous, was not significantly improved. Instead, the diversity of returns that included some of the terms entered led me to look into several other avenues of research and subject matter that were, on occasion, far removed from the original search target.

Having been made aware of the database search function through my course, I used that next. Though I did not know which database was most appropriate for my search, I selected a few relevant ones, so far as I could identify them. I also entered simpler keywords since I did not have to include terms that limited the focus of search to a general topic area as the database function already did that. The returns were significantly more accurate, with results mostly in line with the specific search target. In a final observation of comparative search methods, I consulted with a

librarian regarding the same topic search, asking for assistance in finding relevant journal articles or books. Though my inquiry was the same, no keywords were given to the librarian. Instead, I described with some extensiveness what the subject was, providing background and anecdotal information. The results were even more accurate and relevant, providing more specifics than the other methods used when searching on my own.

Clearly, the exigence—the need—a search page responds to is to provide prompt and accurate results. If it fails to do so, it fails its single function and users would discontinue using it. This cannot be the purpose of the rhetor in directing users to OneSearch. Revisiting Broder, we understand that search functions can only deduce limited value from keywords towards a certain query, and that each search system uses their own algorithmic formulas to determine search results. Thus, we must also consider constraints of sponsorship, in the concept of Brandt, and the environment on the search format. Sponsors, such as UCF and the database engine that operates the search, EBSCO, are two factors among many in determining the databases available for query and the prioritization of search results. Environmental factors such as the size of the university and the diversity in fields of study and overall student body at UCF affect the type of interaction that the rhetor would find most appropriate and effective.

Conclusion

We can conclude from the research conducted in this study that, indeed, the UCF search format influences the way in which we interact with it and submit our queries through its portal. But how that affects the meaning we make from the results is the ultimate question. The interaction and response phases say a lot about how we think of information access in the digital library age versus the age of the traditional library. The essence of "quantity over quality" seems to be a theme in digital spaces: higher returns are more valued, perhaps, than accurate ones. And what do simplistic search interfaces say about the *kind* of information we seek? Are we looking for a fast resolution to a problem, to quickly find a study subject? If searchers do not know what they are looking for *exactly*, does that also mean that they do not know what they seek in general? In my own observation, I had a very specific target subject and I was familiar with the subject matter. Hsieh-Yee's study results, however, indicate that a searcher's subject knowledge does not influence effectiveness if they are not also experienced searchers.

There is no doubt that information and knowledge is available, but access to it is what is inconsistent and the way we interpret it, as this research has found, is influenced by the portals we seek it through.

What if a very different search interface was used, one that was complex rather than simplistic but that would allow users to interpret the best way to get results to their queries? Interestingly, not many would use it. The UCF librarian I interviewed explained that, in his personal experience, most questions asked were simple but marginally more specific, and were perhaps best found using a subject database. The librarian observed that he rarely uses OneSearch, not because of its quality as a search portal, but because this librarian's queries are never so general.

My research conclusions here are not a critique of the UCF library search's effectiveness per se, but that of the digital environment that surrounds it, and which it is a part of. The format of the UCF search page reflects a certain digital tradition in which the traditional library does not belong. In their study of computer mediated communication in academic settings, Jane Mitchell and Gaalen Erickson noted that such communication has "far-reaching consequences for academic practices, particularly for ways in which knowledge is constructed, communicated, represented, used, learned, and critiqued as part of the processes of research and pedagogy" (21). These consequences, Mitchell

and Erickson later conclude, have the potential to "reconfigure the relationship between knowledge and language through how we read, write, and think" (38). That reconfiguration of meaning through the search portal is well under way.

Though inadvertently, the search page encourages this practice: the superficial pursuit of a random subject to complete a task, rather than an in-depth pursuit of a specific area of inquiry in order to gain a fuller understanding. In framing our query from the outset within this context, the search format in and of itself affects how we interpret these results, leading to the discovery of a quick answer or a single part of a greater body. Because the digital space is so much more prevalent and pervasive, we are much more likely to seek it than, for example, a librarian. The answers seem to be at our fingertips and they do not inquire or push us to questions of deeper meaning. But we miss a point that keywords cannot encompass—the nuance of meaning, the inflection, and anecdotes that communicate what we *truly* seek. There is no "you know what I mean" in digital interfaces. The accuracy gap that I encountered between the improved database search and that of my librarian query has less to do with the librarian's advanced knowledge than their ability to process the whole of my query and then utilize their specialized knowledge to target an appropriate search function.

There is no doubt that information and knowledge is available, but access to it is what is inconsistent and the way we interpret it, as this research has found, is influenced by the portals we seek it through. Our exposure to the intertext, too, is affected, changing from open-ended inquiry to targeted keyword search. In the case of the latter, we do encounter many texts, possibly more than those we would on a library's shelves; however, our inquiry is focused on matching results. Results that appear to be inconsistent with the query often end up disregarded, instead of piquing interest.

Davidson finds that we need to update our manner of interaction with the digital environment so as not to exacerbate attention-blindness, but to seek complex questions in a way that will allow us to find complex meaning. To gain the most from our digital world, we must make changes to the way we interact with it, rather than trying to fit old ways of information-seeking to new rules of information retrieval. As Davidson suggests, "learning, unlearning, and relearning, require cultivated distraction, because as long as we focus on the object we know, we will miss the new one we need to see" (19). More research will need to be to done to record and address the influences of search portal interfaces on the meaning of the results and the gaps that exist between our understanding of traditional and digital information access. Digital libraries, however, are not a thing to fear but rather to embrace. Digital collections will be just as great as their print counterparts, and perhaps greater as their proponents would suggest. It is simply a matter of learning, unlearning, and relearning.

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Appendix

UCF Librarian Questions

This is a brief questionnaire about the UCF Library search function, for the purpose of a research paper assignment. Replying to this questionnaire is entirely discretionary. You may at any time refuse to answer a question or discontinue the interview without consequence. You are not obligated to answer any or all of the following questions, or others that may arise from discussion surrounding them. This paper is not intended for publication; however, in the event that the author does choose to publish his or her research, you will be notified for approval prior to publication. Your participation is anonymous and you are not asked to give any personal information, including name, for the purpose of this interview.

1. How often do students seek your assistance in finding a text in/from the library?
2. Do you use OneSearch?
   If no, why not?
   If yes, how often?
3. When conducting a search, what function do you seek most often?
4. How would you generally interact with the search interface?
   Go directly to the 'advanced' function?
   Use a Boolean type search?
   Use general, relevant terms?
5. What do you find as the best search feature?
6. What is the worst feature?
7. How would you compare general web search engine function to library search?