INVESTIGATING THE ASSOCIATIONS BETWEEN CREDIBILITY ASSESSMENTS AND INFORMATION USE TASKS WITH RESPECT TO DOCUMENT GENRES IN THE CONTEXT OF UNIVERSITY TEACHING

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Abstract

Higher education requires intense information practices for knowledge diffusion,

application, and innovation. Faculty assess and use a variety of documents when they

teach their students. They make complex credibility assessments, and they use

information with varying degrees of perceived credibility to achieve their teaching goals.

Unfortunately, existing credibility research often stops once documents are selected. Our

knowledge of the associations between credibility assessments and information use

remains limited. Additionally, scholars agree professional tasks are associated with the

genres of the documents used to accomplish these tasks. For example, instructional

genres – including tutorials and lesson plans – are particularly useful to tasks related to

educational pursuits. Despite the potential benefits that the identification of genres might

provide in searching, navigation, and comprehension of information, researchers rarely

exploit it to facilitate faculty's document assessments and information use in support of

their teaching.

To solve the above problems, this study aimed at uncovering the associations

between credibility assessments and information use tasks with respect to document genres in the context of university teaching. Specifically, it investigated whether there were associations: (1) between the criteria faculty employed to assess the credibility of the documents they used to support their teaching and the genres of these documents; (2) between the credibility criteria they employed to assess and the information use tasks they performed to use these documents; and (3) between the genres of these documents and the information use tasks they performed. Understanding the above associations could enhance our knowledge of the roles of document genres in making credibility assessments and information use decisions in the context of university teaching.

This study took a mixed-method, bottom-up approach to uncovering the above associations. It first employed qualitative citation analysis to identify the genres of the documents faculty used in their courses based on the citations in their teaching materials (e.g., syllabi, lecture slides, lab notes, and links to resources). Customized genre repertoires that detailed the contexts in which different genres were used in Excel format were created. Semi-structured interviews were then implemented to collect data about the

courses included in this study, the general criteria faculty employed to select documents

for their courses, the tasks they performed to use the information in the genres this study

selected for in-depth interviews, and the criteria they employed to assess the selected

genres. Interviews were fully transcribed for qualitative content analysis.

The results of this study indicate the criteria faculty employed served as function

enablers that bridged the selected genres and the information use tasks they performed to

use these genres. Credibility was one of the function enablers that enabled faculty to use

the selected genres to perform different tasks. It played different roles in different tasks. It

played a leading role in teaching tasks that developed students' advanced learning skills

and helped students to continue their learning. It also played a leading role in information

use tasks that involved subject experts, professional orginations, and diverse genres

originated from heterogeneous sources. The results also indicate the information use tasks

faculty performed served as inclusion and exclusion criteria for genres. The information

use tasks determined the information characteristics of genres that mattered in faculty's

task performance.

This study shed new light on existing knowledge about genre-task associations by:

(1) Exploring these associations in the context of university teaching; (2) Explicating

these associations through the perception of credibility; and (3) Adding the

criterion-genre and criterion-task associations to complement these associations. This

study also enhanced our understanding of credibility in the context of university teaching.

Finally, this study made several methodological contributions, including: (1)

Transforming citation analysis from bibliographic records to research tools that engaged

participants and ensured the accuracy of data; (2) Transforming citation analysis from

bibliographic records to customized genre repertoires that preserved the contexts of

information use; and (3) Developing rules to consistently select genres for investigating

task-genre associations across disciplinary boundaries.

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DOCUMENT GENRES IN THE CONTEXT OF UNIVERSITY TEACHING

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Chapter 1 Introduction

1.1 Overview

This study investigated the associations between credibility assessments and

information use tasks with respect to document genres in the context of university

teaching. This chapter introduces this study. It starts with a problem statement that

describes the theoretical and practical problems this study identified from education

research and previous research on credibility assessments in the context of information

seeking and use, human-information interaction in contexts, and scholarly information

practices. These problems not only motivated and guided this study, but also formed the

basis for the contributions this study made. This chapter goes on to describe this study's

overarching goal and research questions. It then details the definitions of the key concepts

this study employed. This chapter goes on to describe the scope of this study, followed by

the limitations and significance of this study. This chapter concludes with the structure of

this dissertation.

1.2 Problem Statement

Institutions of higher education have adopted instructional technologies (e.g., learning management systems, wikis, and blogs) to organize their courses (Kim and Bonk, 2006). Online courses and blended courses that combined both face-to-face and online instruction have grown rapidly (Kim and Bonk, 2006). As instructional technologies penetrate in different types of courses in higher education, faculty's reliance on information documents in support of their teaching increases. Learning object repositories, such as *Multimedia Educational Resource for Learning and Online Teaching* (MERLOT), have been developed to support faculty's teaching. Faculty could share and reuse learning objects in different teaching contexts. The *2012 Paris OER Declaration* that the *World Open Educational Resources Congress* at *UNESCO* adopted emphasized the open availability of educational resources (Sinclair, et al., 2013). Abundant educational resources are openly available for faculty to use. In addition to the educational resources offered by learning object repositories, faculty are free to use the resources offered by academic libraries at their home institutions and those they obtain by other means. However, the sheer amount of resources available has challenged faculty

because they often had to choose among many options. Thus, the education community

developed assessment instruments that contained different sets of criteria to help faculty

to assess different types of educational resources (Sinclair, et al., 2013). For example, the

Learning Object Review Instrument (LORI) was developed to help faculty to rate the

quality and suitability of reusable learning objects (Leacock and Nesbit, 2007). One of

the most common criteria in these assessment instruments concerns the quality of the

information in learning objects. These assessment instruments guide faculty to assess

whether the information in a learning object is accurate and reliable, and whether it

presents different viewpoints in a balanced way (Kay and Knaack, 2008; Leacock and

Nesbit, 2007; Mhouti, Nasseh, and Erradi, 2013; Sinclair, et al., 2013). Essentially, these

assessment instruments suggest that faculty consider the credibility of a learning object

when they decide whether to use it to support their teaching.

Although a variety of assessment instruments are available for faculty to use,

currently there is a scarcity of research on how faculty assess the credibility of

information resources they use to support their teaching in education and in (library and)

information science. Teaching in higher education involves intense information practices.

Faculty seek, assess, and use documents to support their teaching. They make complex

credibility assessments to use information (Francke and Sundin, 2012; Rieh & Belkin,

2000), and they use information with varying degrees of perceived credibility to achieve

their teaching goals (e.g., exposing students to controversial viewpoints to stimulate

critical thinking). Unfortunately, existing credibility research often stops once documents

are selected. Previous credibility research did not track how the selected documents were

used to accomplish a task. Our knowledge of the roles of the selected documents in task

performance and how credibility assessments might be associated with information use

remains limited. This is problematic because assessing the credibility of documents and

using the information in documents are different. Information use is an intricate decision

involving the treatment and application of information in different contexts (Wang and

Soergel, 1998; Wang and White, 1999). For example, in the context of university

teaching, faculty have to decide what documents to use, what documents should be used

together in a class, when to use a document (e.g., at the beginning or at the end of the

semester), and how to use the information in different documents to achieve their

teaching goals. It is important to increase our knowledge of how faculty use information

to support their teaching and the associations between faculty's credibility assessments

and information use.

When conducting a research study on faculty's credibility assessments and

information use, an immediate problem emerges: how could researchers approach the

documents faculty assess and use, and unfold the associations among these documents,

and faculty's credibility assessments and information use? A number of previous studies

demonstrate information objects that users interact with affect their credibility

assessments (Fogg, et al., 2003; Hilligoss and Rieh, 2008; Rieh, 2002; Rieh and Belkin,

2000). However, existing models that depicted credibility assessments failed to

systematically address the impact of information documents because they were developed

either from a single medium, a single type of document (e.g., Fogg, et al., 2003; Rieh,

2002; Rieh and Belkin, 2000), or various types of information objects without defining

what an information object is (e.g., Hilligoss and Rieh, 2008). Sundin and Francke (2009)

argued the materiality of documents needs to be considered when investigating how the

credibility of various resources is perceived because users examine architectural

characteristics of documents that offer contextual information for them to make

credibility assessments. The materiality of information artifacts affects different kinds of

social practices, including credibility assessments (Francke, Sundin, and Limberg, 2011).

Thus, one may ask: Is there a concept that can effectively approach the wide variety of

documents faculty assess and use to support their teaching and the materiality of these

documents?

Relevant research in education and in (library and) information science has

employed a number of different concepts to approach document assessments, including:

school or library resources, tools, information objects, (multimedia) learning objects,

instructional resources, (e-)learning resources, academic texts, instructional materials,

and so on. These concepts reflect researchers' purposes and perspectives, rather than

users' purposes and perspectives in assessing and using documents. Thus, these concepts

cannot reflect the identity of a document in its use contexts. Additionally, these concepts

refer to different things in different research contexts; sometimes include things other

than information documents. Some researchers use different concepts interchangeably

without clearly defining the concepts they used (e.g., Brown, 1999). For example, Brown

(1999) employed the concept *tool* to investigate the resources faculty in

chemistry-biochemistry, math, and physics-astronomy in University of Oklahoma in

Norman used to support their research and teaching. The concept *tool* was

operationalized as "primary source" in her survey (Brown, 1999). The primary source she

listed in her survey includes document genres (e.g., textbooks and journal articles) as well

as means to obtain information (e.g., conference attendance and personal

communication). The term *primary source* might have a different meaning in other

research studies. It might refer to first-hand information, as opposed to secondary

information. It is important to clearly define the concept used to approach document

assessments and information use to avoid confusion and the negative impact that such

confusion might bring to theory development and integration. The concept *learning*

materials in Bundsgaard and Hansen's study (2011) includes textbooks, blackboards, and

computers. The concept *learning objects* originates from object-oriented programming

practice in computer science (Churchill, 2007). It has a lot of different definitions in

education (Churchill, 2007; Sinclair, et al., 2013). These concepts seemed inapplicable to

this study.

This study employed the concept *document genre* to solve the above problems. A

document has physical and semantic forms that require users to process and interpret for

their own use (Dillon, 2008). The genre of a document is often characterized by and

could be identified based on its socially recognized communicative purposes and forms

(Crowston and Kwaśnik, 2003; Crowston, 2010). Identifying the genre of a document

reduces users' cognitive load in navigating within this document and comprehending the

information in it (Crowston and Kwaśnik, 2003; Dillon, 2008). Expert users who have

sufficient knowledge of the genres enacted in a domain could rely on their knowledge to

identify the genres of the documents they interact with and assess the fit of these

documents to their task situations according to the architectural traits they perceive and

examine (Crowston and Kwaśnik, 2003; Rosso, 2008; Sundin and Francke, 2009).

Additionally, the concept *genre* helps to differentiate among different text types because

it adds "fixity" in a medium (Crowston and Kwaśnik, 2003; Yates and Summer, 1997).

New information and communication technologies have blurred the distinctions between

information creators and users. More and more people contribute to both the creation and

consumption of information, especially when it comes to digital documents. The

contributions that creators and users make help to stabilize the social contexts in which

communicative actions among community members become typified. Genres could

evolve and become better-defined to support specific communicative needs and work

practices (Yates and Summer, 1997). Thus, the concept *genre* could address the

materiality of a document. Furthermore, genres in both written and spoken forms are

repeated regularities of communications that people use to accomplish their activities in

specific contexts (Andersen, 2008; Dillon, 2008). A variety of genres consists of

professional, scholarly, cultural, and organizational communications and contributes to

different social practices. Investigating the set of genres people use in their practices

allows us to understand their communicative activities and information needs (Andersen,

2008). The concept *genre repertoire* helps to address the variety of documents faculty

assess and use to support their teaching, including both printed and digital documents.

Employing the concepts *genre* and *genre repertoires* will enable this study to understand

not only the creation and use of documents, but also the work practices and typified

activities that faculty discursively engage in (Andersen, 2008). The typified human

activities and work practices that involve the use of genres illustrate the kinds of path to

knowledge that are considered legitimate in specific communicative situations (Andersen,

2008). Thus, employing the concepts *genre* and *genre repertoires* to investigate faculty's

credibility assessments and information use in the context of university teaching could

help to understand the variety of genres that organize their teaching activities as well as

how credibility assessments and information use are carried out to support their teaching.

The concept *genre* has been employed to investigate credibility assessments.

However, only a few studies have explicitly addressed the associations between

credibility assessments and genres. Flanagin and Metzger (2007)'s study demonstrates

users' perceived credibility of the websites that contained the same news story but varied

in genres was different. According to Francke, Sundin, and Limberg (2011), genre was

one of the strategies students in an upper secondary school in Sweden adopted to assess

the credibility of sources. Students assessed the credibility of a source based on its genre

in two ways. First, students made a distinction between printed and digital media. While

the former was perceived as fixed and stable, the latter was perceived as fluid and

unstable. The fixedness and stability of a source affected students' perceived credibility

of this source. Second, the genre of a source affected students' perceived credibility of

this source because of the types of information it contained. For example, blogs were

often perceived as not credible because it contained opinions (Francke, Sundin, and

Limberg, 2011). There is a lack of research on the roles of document genres in credibility

assessments in the context of university teaching. How faculty assess the credibility of

the genres they use to support their teaching has been under-investigated. This study

endeavored to bridge this gap.

Because credibility assessments are information practices carried out in specific

situations in an overarching social practice (e.g., students' learning in a school) (Francke,

Sundin, and Limberg, 2011), it is important to model the situations in which credibility

assessments take place to gain a holistic view. Freund (2008a) argued task as an

analytical framework offers a means to distinguish patterns of information behaviors at

an intermediate level. This intermediate level serves as a middle ground between

generalizing patterns of information behaviors to the entire population and differentiating

among individuals. Using task as an analytical framework assumes users' information

needs change when they perform different tasks (Freund, 2008a). Thus, the concept *task*

could serve as a simple, situational model for users (Freund, 2008a). The concept *task*

also helps to understand the human activities genres help to accomplish and the

contributions genres make to human activities (Andersen, 2008; Vakkari, 2000; 2001).

Thus, this study employed the concept *task* to approach information use.

Professional tasks are associated with the genres of the documents used to

accomplish them (Freund, 2008b). For example, instructional genres – including tutorials

and lesson plans – are particularly useful to tasks related to educational pursuits

(Roussinov, et al., 2001). Because previous research on scholarly information practices

only investigated a small number of genres that scholars use to support their research

(e.g., journal articles and listservs), our knowledge of the genres faculty use to support

their teaching is insufficient. It is important to systematically identify the genres faculty

use to support their teaching to increase our knowledge of the roles and contributions of

different documents in their task performance. Despite the potential benefits that the

identification of genres might provide in searching, navigation, and comprehension of

information (Rosso & Haas, 2011; Vaughan & Dillon, 2006), researchers rarely exploit it

to facilitate faculty's document assessments and information use in support of their

teaching. If task-genre associations exist in the context of university teaching, modeling

and incorporating these associations into the design of search systems might help faculty

to effectively assess documents and use information. Therefore, it is important to uncover

the associations between the tasks faculty perform to use information in the documents

they use to support their teaching and the genres of these documents to facilitate the

design of search systems.

1.3   Research Questions

To solve the above problems, this study aimed at investigating the associations between credibility assessments and information use tasks with respect to document genres in the context of university teaching. Uncovering these associations could increase our understanding of the roles of document genres in faculty's credibility assessments and information use decisions. Specifically, this study wished to answer the following research questions:

Q 1   How do faculty assess the credibility of the documents they use to support their teaching? What are the criteria they employ to assess the credibility of these documents? Are the credibility criteria they employ associated with the genres of these documents?

Q 2   How do faculty use the information in the documents they assess to support their teaching? What are the information use tasks they perform to use these documents? Are the criteria they employ to assess the credibility of these documents associated with the information use tasks they perform?

Q 3   Are the information use tasks faculty perform to use the documents they use to

support their teaching associated with the genres of these documents? If so, what

are these associations?

1.4   Definitions

Key terms in this study include: document genre, genre repertoire, credibility

assessment, and information use task. *Genre* is a distinctive type of communicative action

emerging from recurrent situations in which social interactions among community

members become typified over time. Information documents refer to "signifying objects"

(Crowston, 2010) in this study. They are tangible and physical objects that exist in

different media. *The genre of a document* can be identified based on its socially

recognized communicative purposes, and common aspects of forms and content

(Crowston & Kwaśnik, 2003). Some genres are defined primarily based on their

communicative purposes, such as editorials and proposals; some are defined primarily

based on their forms, such as poems and glossaries; still some are defined based on a

fusion of communicative purposes, forms, and content, such as FAQs and law (Crowston,

2010). In this study, *genre repertoire* refers to the set of document genres faculty rely on to prepare and teach a course (Orlikowski & Yates, 1994). Faculty use a set of genres to achieve the teaching goals they set up for a course. Different genres are used in combination to support their teaching. A genre might be used to achieve a distinct teaching goal, but it might also be used with other genres to achieve another teaching goal and hence form specific relationships with other genres. For example, different genres might be used in combination to complement or supplement each other. Different genres might also be used together for the purpose of comparison and contrasting.

In this study, *credibility* is defined as the perceived quality of the information "instantiated in documents" (Rieh and Danielson, 2007). Credibility is closely related to believability, trust, reliability, accuracy, fairness, objectivity, and so on (Hilligoss and Rieh, 2008). According to Hilligoss and Rieh (2008), credibility has two key dimensions: trustworthiness and expertise. Trustworthy information tends to be "reliable, unbiased, and fair" (Hilligoss and Rieh, 2008). Trustworthy person is "honest, careful in choice of words, and disinclined to deceive" (Hilligoss and Rieh, 2008). Expertise is "the perceived

knowledge and skill of the source" (Fogg and Tseng, 1999). The information provided by

a source with expertise tends to be accurate and valid because this source is

"knowledgeable, experienced, and competent" (Fogg and Tseng, 1999).

Information use is a task that is guided by faculty's teaching goals. *Information use task* refers to the activities faculty engage in to make use of the information in the

documents they obtain through a variety of means in order to achieve their teaching

goals. Teaching a course in the university is a purposeful and meaningful activity that

motivates faculty to engage in different types of information activities, including making

credibility assessments and using the information in the documents they obtain. To use

the information in the obtained documents, faculty process information and make

decisions according to their teaching goals. The decisions they make include but are not

limited to: what information to use (e.g., specific chapters of a textbook or the comments

made for a blog post), how to use the information (e.g., assign it as a required reading or

slightly mention it in the classroom), when to use the information (e.g., at the beginning

of a class or after students have read the textbooks), and so on.

1.5   Scope of This Study

This study focused on the credibility assessments faculty made and the information use tasks they performed to teach a complete course in the university setting. It did not include the credibility assessments they made and the information use tasks they performed for other types of teaching activities, such as advising students on their theses or leading discussions in a study group. Additionally, this study only investigated the credibility assessments faculty made for the documents they used and the information use tasks they performed to use these documents in the courses they selected for this study. This study did not investigate faculty's credibility assessments and information use tasks regarding the same documents they used in other courses or in other contexts, such as in advanced courses and in their research.

This study did not attempt to identify all of the genres participants have used to teach the courses they selected for this study. Instead, it tried to identify the genres important to their teaching and some genres that might help this study to capture variations of credibility assessments and information use tasks based on the citations in

their teaching materials. This study selected ten genres according to how heavily a genre

was used and how frequently a genre appeared in a course for in-depth interviews. This

approach allowed this study to include genres core to the context of university teaching as

well as those peripheral but nevertheless played a role in this context in the data, which

helped this study uncover possible variations of credibility-genre associations,

credibility-task associations, and task-genre associations. Identifying all of the genres

faculty used to teach their courses was not necessary because this study did not aim to

produce statistically representative generalizations. Additionally, identifying and

including all of the genres faculty used to teach their courses would have caused

problems in data collection, especially when it comes to managing the length of

interviews, as some faculty used a huge amount of documents (e.g., images in lecture

slides) to support their teaching. Thus, in order to effectively and consistently collect

data, this study tried to identify representative sets of documents faculty used in their

courses and selected ten genres for in-depth interviews.

This study focused on the credibility assessments faculty made for the documents that belong to the selected genres, regardless of how familiar they were with these documents and how deeply they have interacted with these documents when they participated in this study. Credibility assessments occurred at different levels of human-information interaction in contexts. The credibility assessments this study investigated included those made at different levels of interactions. Faculty's credibility assessments might change as their interactions with documents deepen. The predictive assessments they make before they encounter specific documents might affect the credibility assessments they make when they interact with these documents. However, sometimes the credibility assessments they make remain at the surface level. For example, they may make quick credibility assessments for and decide not to deeply interact with certain documents. They may ask their students to skim these documents for the purpose of knowing the existence of these documents. Sometimes faculty do not have sufficient time to interact with the documents they select before they actually use these documents in their classes. Additionally, the information in the documents they use might

be so basic that they do not have to deeply interact with these documents. Faculty may

just switch to a new document, and they are still experimenting with it. Their credibility

assessments may change or remain the same later. This study collected data about the

credibility assessments faculty made for the documents they used for different purposes

in their courses, regardless of how familiar and how deeply they have interacted with

these documents. This helped to capture the variety of credibility assessments they made

as well as the variety of information use tasks they performed.

Finally, the credibility assessments faculty made for the documents they

encountered in their information seeking and selection process but did not use in their

courses were excluded from this study because this study focused on the associations

between credibility assessments and information use.

1.6   Limitations of This Study

The methodology this study employed consists of qualitative citation analysis and

semi-structured interviews. The data collected from interviews were self-reported by

participants. Most participants seemed to report how they actually assessed the

documents they used and how they actually used the selected genres. However, there might be participants who portrayed themselves as carefully considering the documents they used. Therefore, the authenticity of the data might be slightly affected.

This study's results primarily depended on the following: the courses participants selected for this study and the documents they used. The courses were important for this study because they might play a role in faculty's document selection, assessments, and use. Faculty selected different genres for different courses. Including a variety of courses could help this study to capture and uncover possible variations of credibility assessments and information use tasks. This study took two approaches to include a variety of courses to collect data. First, it recruited faculty from different disciplines by asking participants to refer to other faculty in their departments/schools and in other disciplines. Second, it invited participants to select a course they have taught within the last year or they were currently teaching for this study, which gave them the freedom to choose. However, due to the difficulties in recruiting participants from other disciplines, this study included more courses in social sciences than in humanities and sciences. Nevertheless, this study

still included a variety of courses in the data. The courses this study included varied in a

number of different ways, including: student levels (e.g., doctoral, masters, and

undergraduate), course development (e.g., developed from scratch, partially inherited,

and inherited), and course requirements (e.g., required, highly recommended, elective,

and elective in requirements). Such a variety has helped this study to uncover variations

in the associations among tasks, genres, and credibility criteria. Additionally, including

more courses in social sciences helped to capture variations of credibility assessments

and information use tasks as the number of documents used in the courses in social

sciences tended to be higher than the number of documents used in the courses in

sciences and humanities. The genres participants in social sciences used were more

diverse. The more documents they used, the more credibility assessments they made. The

number of information use tasks they performed also increased as the number of

documents they used increased. Therefore, including more courses in social sciences

helped to uncover variations of task-genre associations through the perception of

credibility because it captured the diversity of genres used in social sciences.

This study only investigated the credibility assessments faculty made for the documents that belong to the genres this study selected for in-depth interviews. These documents tended to be more credible. The documents faculty encountered in their information seeking and selection process but did not use in their courses were excluded from this study. It could be argued that such exclusion limits the results because this study failed to capture the credibility assessments made for the documents they decided to not use. However, this study aimed at investigating the credibility assessments faculty made in relation to the information use tasks they performed. Including the documents they used could help this study to understand how credibility assessments shaped information use as well as how information use shaped credibility assessments. Including the documents they encountered but did not use may not shed new light on the associations between credibility assessments and information use because the documents were not actually used for task performance. It would have been difficult to identify these documents and capture the credibility assessments made for these documents because

faculty engaged in a variety of information practices to obtain documents at different

points of time.

Since this study did not aim to produce statistically representative generalizations,

the results cannot be generalized to the courses in the university where this study was

conducted. The context-specific nature of the data indicates this study's results should be

carefully interpreted. The results might be reasonably transferred to settings that share

identical or similar contextual characteristics. The variations of contextual characteristics

– including participants' teaching experiences, document familiarity, course

requirements, and course development – should be taken into consideration when

transferring this study's results to other contexts. The detailed description of participants

and the courses included in this study in this dissertation permits comparing this study's

results with the results of other studies that include different courses.

1.7 Significance of This Study

The results of this study reveal faculty's approaches to course design and

predictive assessments they made to select documents for their courses. This study also

uncovers the associations among the criteria faculty employed to assess the credibility of

the documents they used to support their teaching, the information use tasks they

performed to use these documents, and the genres of these documents. These results

increase our knowledge of faculty's information practices in support of teaching and

bridged the gaps in education research and information seeking and use research.

This study increases our knowledge of task-genre associations by: (1)

investigating these associations in the context of university teaching; (2) investigating

these associations through the perception of credibility; and (3) adding the criterion-genre

and criterion-task associations to complement these associations. This study took the

initiative to systematically identify the genres of the documents faculty used to support

their teaching as well as the tasks they performed to use these genres across disciplines.

Researchers could build on the genres and tasks this study identified, and the three types

of associations this study uncovered to continue this line of research or to repurpose this

study's results. Librarians in academic libraries, publishers, search engine companies, and

publishers could apply this study's results to design information services and systems that

facilitate faculty's credibility assessments and information use in support of teaching. For example, they could highlight the document attributes faculty rely on to make credibility assessments for specific tasks. They could also improve ranking algorithms and design filtering mechanisms according to this study's results. The education community could apply this study's results to develop assessment instruments and implement these instruments in learning object repositories to facilitate faculty's credibility assessments and information use.

This study also contributes to credibility research. First, it investigated how faculty assessed the credibility of the genres they used to support their teaching. It identified the set of credibility criteria faculty employed to assess the genres they used. Credibility research has rarely been conducted in the context of university teaching, and this study bridged this gap. Second, this study increases our knowledge of the roles of contextual factors – especially document genres – in credibility assessments. Previous credibility research tended to select one or a few genres for investigation. The concept *genre* has rarely been employed to investigate credibility assessments in the context of

information seeking and use. This study has bridged this gap. Third, this study increases

our knowledge of the associations between credibility assessments and information use.

Previous credibility research tended to focus on credibility assessments made in the

information seeking and selecting process without tracking how the selected documents

were used in real task performance. This study has bridged this gap.

This study also made methodological contributions. It took the bottom-up

approach to identifying the genres faculty used to perform their information use tasks and

characterizing these genres by structural dimensions of their use contexts. Customized

genre repertoires that documented the use contexts of different genres in Excel format

were created based on the citations in faculty's teaching materials. The customized genre

repertoires this study created were used to facilitate the interviews and collect data on

faculty's credibility assessments and information use tasks. The methodology of this

study was developed and adapted based on the citation analyses that previous researchers

employed to investigate scholars' information use (Meho & Haas, 2001; Palmer &

Neumann, 2002). This study successfully transformed citation analysis from

bibliographic records to research tools that engaged participants and ensured the accuracy

of the data. Additionally, it developed rules to systematically identify and select genres

across disciplinary boundaries for in-depth interviews. This dissertation details the

rationale behind the research procedure as well as the advantages and limitations of this

study's methodology. Future research could adopt this study's methodology to

investigate task-genre associations in similar or other contexts.

1.8   Structure

This dissertation is structured as what follows: Chapter 2 reviews the research that

laid the conceptual foundation for this study. It reviews previous education research on

teaching with learning objects and important assessment instruments developed by the

education community. It also reviews important and relevant research on tasks, document

genres, credibility assessments, and scholarly information practices in information

science. Chapter 3 describes the methodology of this study. It explains the sampling

principle, recruiting strategies, and the procedure of and rationale behind data collection

and analysis in detail. Chapter 4 summarizes the data about participants and the courses

included in this study and reports the results. Chapter 5 reports the answers to research

questions and discusses this study's results based on the literature reviewed in Chapter 2.

Chapter 6 concludes this dissertation and discusses this study's research quality. It also

discusses the advantages and limitations of this study's recruiting strategies and

methodology. It then details the contributions this study made to theories, methodology,

and practices, and this study's limitations. This dissertation ends with future research

directions.

Chapter 2 Literature Review

2.1 Overview

This chapter describes the background of this study. To investigate how faculty's credibility assessments might be associated with their information use tasks with respect to the document genres they use to support their teaching, it is important to first understand: how faculty teach with documents, what a document genre is, the roles of genres in information seeking and use and credibility assessments, tasks and their facets, how credibility assessments might take place, and the criteria that constitute the perception of credibility in different contexts. It is also important to understand how scholars select and use documents because faculty might engage in the same information practices to support their teaching. This chapter reviews previous research that laid the conceptual foundation for this study. Relevant research in education, human-information interaction in contexts, information seeking and use, and scholarly information practices in information science are discussed.

This chapter starts with a review of literature on teaching with learning objects and the assessment instruments the education community designed to assess learning objects. It then reviews research on genre, task, credibility, and scholars' document selection and use. The gaps in the previous research that this study aimed to bridge were described with the review of literature.

2.2   Teaching With Learning Objects in Higher Education

2.2.1   Teaching with learning objects

A learning object could be defined as "a representation designed to afford uses in different educational contexts" (Churchill, 2007). A learning object is designed for educational use based on certain principles, such as multimedia communication and effective screen presentation. Designers might design a learning object for a particular educational use, but it might be re-purposed or used in unexpected situations. Thus, a learning object might be used in predictable and unpredictable conditions. For example, it might be used to aid in demonstration, initiate classroom discussions, and so on. Both faculty and students could use learning objects. Students could use learning objects when

they study independently or work on their assignments. Different types of learning

objects could be integrated and adapted to support different pedagogical approaches

(Churchill, 2007).

According to Churchill (2007), learning objects could be classified into the

following six categories: (1) Presentation objects: These objects were designed to transfer

subject knowledge by presenting messages that represent chunks of subject knowledge.

Examples of presentation objects include video and/or audio-recorded lectures and

demonstrations; (2) Practice objects: These objects are designed to practice procedures or

complete tasks. Examples of practice objects include educational games and quiz

questions; (3) Simulation objects: These objects represent different types of systems or

processes. They allow students to learn how to accomplish tasks that different systems

support and understand how these systems operate; (4) Conceptual models: These models

represent concepts or ideas. They are similar to the cognitive structure of subject experts.

These models might be helpful for decision-making and problem-solving in a discipline;

(5) Information objects: These objects present information visually or in multimodal

mode. Examples of these objects include images and videos. These objects also convey

information in diverse forms. Examples of these objects include tables, interactive maps,

and formulas. Presenting information in multimodal mode or conveying information in

diverse forms help to reduce complexity and aid in clarity; and (6) Contextual

representations: These representations allow students to navigate through real or

simulated scenarios to learn how to solve problems or answer inquiries. These

representations are designed because the real contexts might be inaccessible to students.

Bundsgaard and Hansen (2011) proposed a model that depicted how teaching and

learning take place with learning objects in a specific situation. This model is illustrated

in Figure 2.2.1.1. In this model, a teaching and learning situation is viewed as a

communicative situation in which multiple individuals (S1, S2) communicate via

communication technologies (C). Teachers and students consume marks (M) in media

(M) as texts (T) in their communication. Marks refer to ink-stains or carvings created by

technologies (e.g., printer). Media refers to paper, screen, or stone where marks are

inscribed. Texts are possessed because individuals might interpret the teaching and

learning situation, texts, and other artifacts differently. Other individuals (S3) might

affect or be affected by the teaching and learning situation. Quality learning materials

help students to acquire knowledge and enable different interpretations and

understandings.
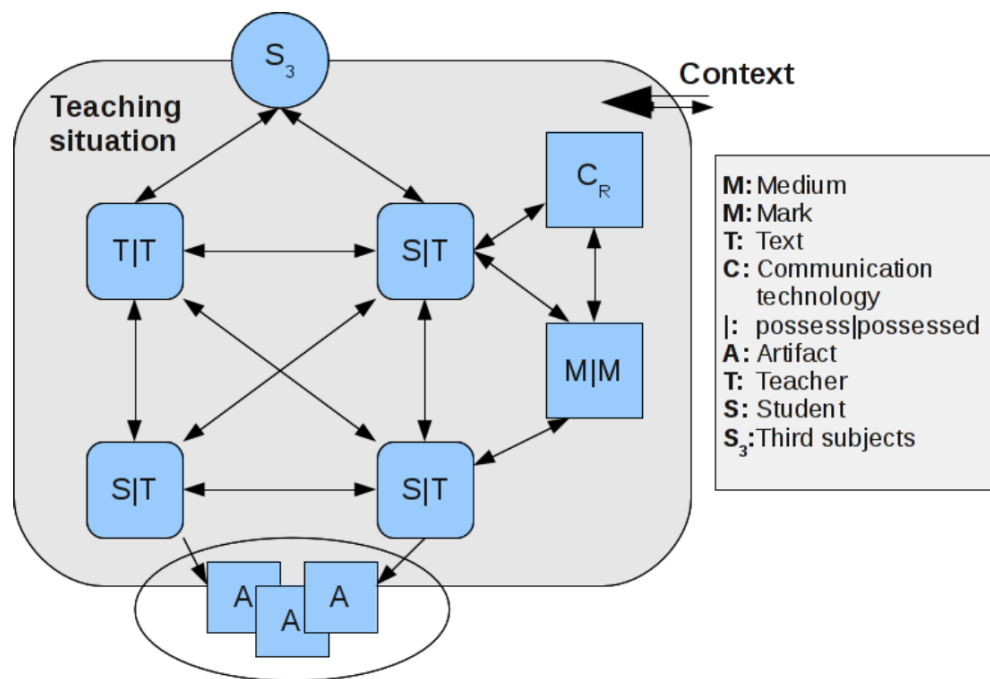
Figure 2.2.1.1 A teaching and learning situation (reproduced from Bundsgaard and

Hansen, 2011)

Teaching with learning objects benefit both faculty and students (Parrish, 2004).

Learning objects help to enrich teaching since it supports active learning (Parrish, 2004).

Specific features of learning objects affect learning (Kay and Knaack, 2007). Kay and

Knaack (2007) have inductively identified secondary school students' perceived benefits

of learning objects when testing a learning-based approach for assessing learning objects.

These benefits include: (1) Timing: When the learning object was introduced in the

curriculum affected students' perceived benefit; (2) Review of basics/reinforcement: The

learning object helped students to review and reinforce the concepts they were learning;

(3) Interactive/hands on/learner control: The learning object was interactive in the

process; (4) Good for visual learners: The learning object provided visual aids in

students' learning; (5) Computer-based: Students generally preferred to work with

computers; (6) Fun/interesting: The learning object made the learning fun, interesting,

and motivating; (7) Learning-related: The learning object improved the learning process;

(8) Clarity: The learning object clarified the learning content; and (9) Compare with other

method: Students preferred to learn with the learning object, rather than being instructed

by their teachers or learning from books (Kay and Knaack, 2007).

2.2.2   Assessments and assessment instruments of learning objects

Bundsgaard and Hansen (2011) argued the evaluation of learning materials could

not be decontextualized and isolated from their use situations. They proposed a

functionalistic and phenomenological model for analyzing learning materials. Figure

2.2.2.1 illustrates this model. In this model, the textual evaluation of learning materials is

broken down into five descriptive steps. First, *context* describes the context of learning

materials. Second, *characteristics* describe the appearance of learning materials.

Characteristics encompass forms and content of learning materials. Third, *analysis* is a

critical point that consists of three parts, including: *expression*, *intentionality*, and

activity. *Expression* refers to the form of representations, such as medium, mode, genre,

and text type. *Intentionality* refers to repurposing the intention to connect the content to

students' life world. *Activity* refers to the situation in which instructors find it is necessary

to appeal students. Fourth, *interpretation* and *perspective* describe the potential of

learning materials for learning.

The proliferation of learning object repositories, including MERLOT II

(Multimedia Educational Resources for Learning and Online Teaching), has encouraged
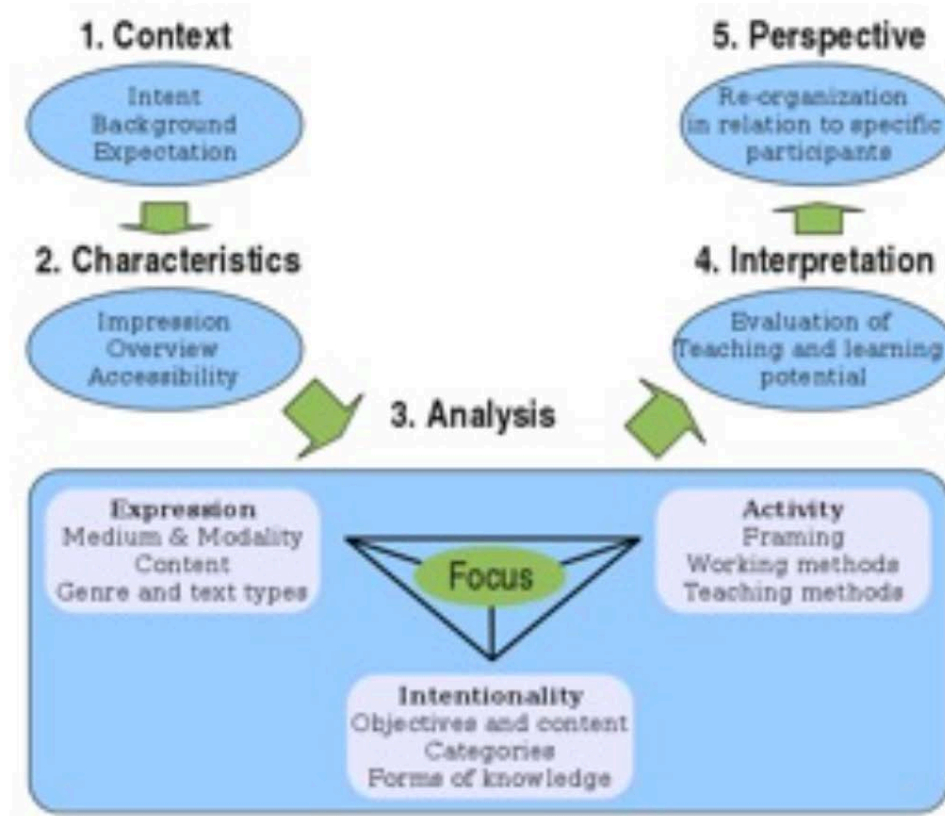
Figure 2.2.2.1 Textual evaluation of learning materials (reproduced from Bundsgaard and

Hansen, 2011)

the education community to develop assessment instruments that guide instructors to

assess learning objects, especially the quality and reusability of these objects. For

example, Mhouti, Nasseh, and Erradi (2013) developed an assessment instrument for

assessing the quality of multimedia learning resources. Figure 2.2.2.2 illustrates the

structure of their assessment instrument. Their assessment instrument first guides
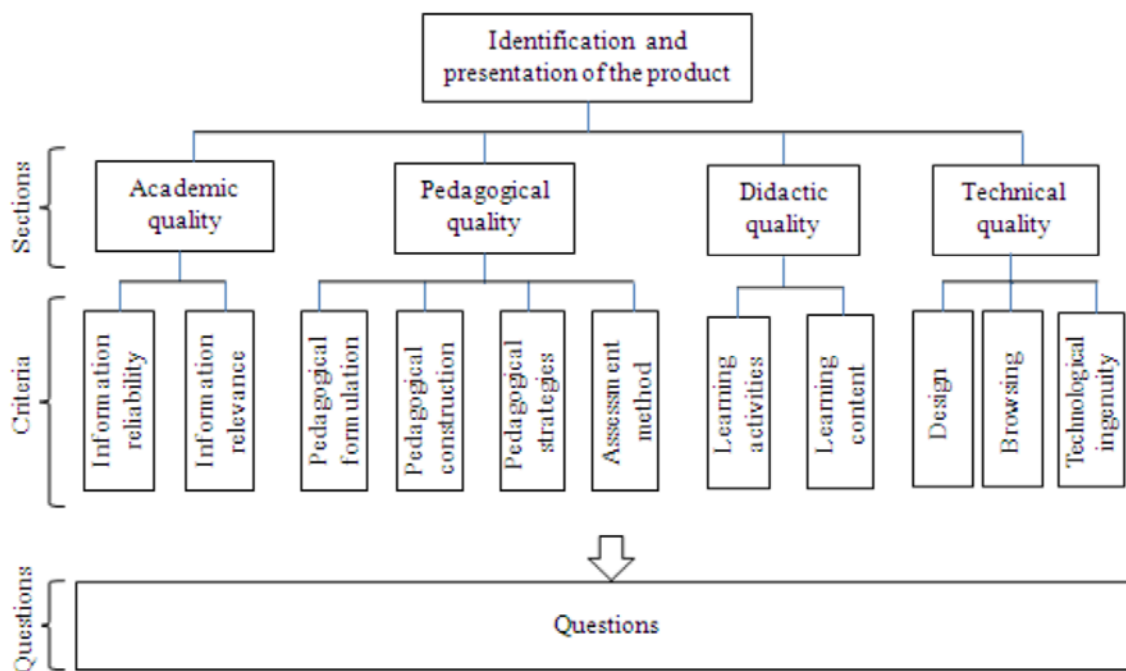
Figure 2.2.2.2 Tree structure of the assessment instrument (reproduced from Mhouti,

Nasseh, and Erradi, 2013)

instructors to identify a multimedia learning resource and relevant product information

(e.g., the creator or organization responsible for this product and the target audience of

this product). This multimedia learning resource should be assessed by a set of criteria.

The criteria instructors could employ were classified into four categories, including:

academic quality, pedagogical quality, didactic quality, and technical quality. Each

category contains multiple criteria. When an instructor employs a criterion to assess the

quality of a multimedia learning resource, he should answer a set of questions to rate this

resource. Below describes the criteria in Mhouti, Nasseh, and Erradi's (2013) assessment

instrument.

- *Academic quality* refers to the quality of the information in a multimedia

  learning resource. It includes two criteria: information reliability and

  information relevance.

  - *Information reliability* refers to the credibility and accuracy of the

    information in a multimedia learning resource.

  - *Information relevance* refers to the effectiveness of information in

    stimulating learners' behaviors that an instructor desires.

- *Pedagogical quality* refers to whether a multimedia learning resource

  enhances learning and supports skill development. It includes four criteria,

  including: pedagogical formulation, pedagogical construction, pedagogical

  strategies, and assessment methods.

  - *Pedagogical formulation* refers to whether students could comprehend

    the content of a multimedia learning resource.

- *Pedagogical construction* refers to whether the structure of a

   multimedia learning resource is useful in a specific learning context.

- *Pedagogical strategies* refer to whether a multimedia learning resource

   supports an instructor's teaching goals, teaching styles, and students'

   learning styles. These strategies also concern whether a multimedia

   learning resource fosters students' engagements, and promotes active

   learning, creativity, and innovative pedagogy.

- *Assessment methods* refer to whether a multimedia learning resource

   supports the assessments (e.g., exercises or tests) that an instructor

   employs.

- *Didactic quality* concerns the learning activities and the nature of the

   knowledge that a multimedia learning resource encompasses. It includes two

   criteria: veracity of learning activities and content of the educational tool.

- *Veracity of learning activities* refers to whether the activities in a

  multimedia learning resource reflect the problems that students might

  encounter in the real world.

- *Content of the educational tool* refers to whether a multimedia learning

  resource presents different viewpoints in a balanced way and whether it

  presents information at an appropriate level of detail. It also refers to

  whether a multimedia learning resource meets an instructor's teaching

  goals and matches students' backgrounds.

- *Technical quality* refers to whether students are able to use a multimedia

  learning resource. It contains three criteria, including: design, browsing, and

  technological ingenuity.

  - *Design* refers to the visual and audio quality of a multimedia learning

    resource. It also concerns the organization of content.

  - *Browsing* refers to whether a multimedia learning resource allows

    students to easily navigate through it.

- *Technological ingenuity* refers to whether a multimedia learning

resource uses multimedia techniques (e.g. animation and flashing text)

to foster knowledge acquisition and skill development (Mhouti, Nasseh,

and Erradi, 2013).

The criteria in the assessment instrument that Mhouti, Nasseh, and Erradi (2013)

developed includes credibility. Credibility is one of the criteria that instructors should

consider when they assess a multimedia learning resource for their teaching. Since this

assessment instrument was designed to assess multimedia learning resources, criteria

included in *technical quality* might not be directly applicable to printed learning

resources. Other criteria – including academic quality, pedagogical quality, and didactic

quality – might be applicable to printed learning resources.

Another assessment instrument designed to assess the quality of learning objects

is the *Learning Object Review Instrument* (LORI) (Leacock and Nesbit, 2007). LORI

elicits instructors' ratings of and comments about learning objects in terms of strengths

and weaknesses. There are nigh items in LORI, including: (1) Content quality, which

refers to the accuracy of content in a multimedia learning object; (2) Learning goal

alignment, which refers to the match between what students are learning and what they

are assessed on; (3) Feedback and adaptation, which refers to whether a multimedia

learning object could customize the learning environment according to learners; (4)

Motivation, which refers to the impact of motivational quality of a multimedia learning

object on learners' motivation and the match between intellectual levels of this object and

learners; (5) Presentation design, which refers to the quality of exposition; (6) Interaction

usability, which refers to the extent to which it is easy for learners to navigate through a

multimedia learning object, including its interface and content; (7) Accessibility, which

refers to whether a multimedia learning object could be used by disabled learners; (8)

Reusability, which refers to whether a multimedia learning object could be reused across

different courses and contexts; and (9) Standards compliance, which refers to whether a

multimedia learning object complies relevant technical standards and specifications

(Leacock and Nesbit, 2007).

There were other assessment instruments available for faculty to use. Different

assessment instruments contained different sets of criteria. Faculty could employ these

criteria to assess learning objects for their teaching. The learning objects Churchill (2007)

classified and the aforementioned assessment instruments focus on multimodal,

system-related learning objects. It seemed there is a lack of understanding of other types

of learning objects, such as printed resources, that faculty use to support their teaching in

the education community. It is important to investigate the types of learning objects

faculty actually use to support their teaching to increase our knowledge of how they teach

with these objects and the benefits that different types of learning objects might provide

in teaching and learning. It is also important to investigate how faculty actually use and

assess learning objects to support their teaching to design assessment instruments

applicable to different types of learning objects.

2.3 Work Tasks and Information Use Tasks

2.3.1 Definitions and classifications of tasks

Tasks are goal-oriented activities that people perform to make progress in their work or personal life. Tasks have practical goals that can be achieved in a process, and they may have an observable beginning and end (Byström and Hansen, 2005). Task performance involves physical and cognitive actions that lead to a meaningful product(s) (Vakkari, 2003). In the area of information seeking and use, most researchers classified tasks based on the hierarchical relationships among different types of tasks. Tasks were often classified into three categories – work tasks, information seeking tasks, and information search tasks. Work tasks refer to the activities people perform to fulfill the requirements of their work responsibilities. Work tasks give rise to information needs and problems, which lead to information seeking and use behaviors because people need information to solve their problems. Information seeking tasks refer to the activities people perform to identify and gather information (Byström and Hansen, 2005). Information seekers may use a variety of means to find information that helps to solve the problems in their work tasks. For example, they may ask their colleagues, visit university libraries, use search engines or databases, or browse their own personal collections to

find documents that contain solutions to their problems. Information search tasks refer to

task situations in which information seekers rely on search systems, such as search

engines and databases, to find information that helps to solve their problems and

accomplish their information seeking tasks and work tasks (Li and Belkin, 2008). There

were also other ways to classify tasks. Table 2.3.1.1 presents examples of different types

of tasks.

Table 2.3.1.1 Examples of different types of tasks

Previous research	Context	Type of task	Sub-type of task
Byström & Järvelin (1995)		Tasks differ in their complexity	Genuine decision task Known, genuine decision task Normal decision task Normal information processing task Automatic information processing task
Xie (2000; 2002)	Users from academic, public, and special libraries searched online public access catalogs	Long-term goal: Leading search goal: Current search goal: Interactive intention	Identify Learn Find Access Locate Evaluate Keep records Obtain
Freund (2008b)	Software engineers'	Work task	Architecture Deployment

	workplace		Design
			Implementation
			Installation & Configuration
			Integration
			Migration
			Performance tuning
			Project management
			Proof of concept
			Troubleshooting
		Information task	Learn about a topic
			Make a decision
			Find out how to
			Find facts
			Find a solution
Xie (2009)	Corporate and academic	Search task	Update information
			Look for specific information
			Look for items with common characteristics
			Look for known items

The aforementioned hierarchical classification of tasks focuses on information

seeking and searching. It does not account for the variety of information activities that

task performers engage in in their everyday practices. Some information activities, such

as other people actively share information with task performers, are not addressed.

Freund (2008b) noticed task performers' goals of using information had not been

seriously considered in previous task research. The goal-based approach directly

addresses goals of using information. Differentiating and classifying tasks according to task performers' goals could have great potential for information seeking and retrieval. Vakkari (2000) also argued it is important to identify and classify information users' expected use of information to design document representations that offer clues useful for them to infer the potential contributions of documents to their tasks. The goal-based approach to tasks could be useful for modern information environments in which a wide variety of documents are sought and used and different types of information activities are performed. In Freund's (2008b) study, she identified five information tasks that software engineers performed, including: *learning*, *fact-finding*, *decision-making*, *problem solving*, and *performing procedures (how-to)*. She argued these tasks are generic enough to be applied to other domains.

Previous task research has not paid sufficient attention to information use. It is important to investigate how information is used to perform a task as this could help to increase our knowledge of the roles of information in a task and the associations between information and task performance. Information use itself has been conceptualized in a

number of different ways. It has been conceptualized as information practices,

information search, information processing, knowledge construction, information

production, applying information, and the effect of information (Kari, 2010). Different

conceptualizations focus on different aspects and stages of human-information interaction

in contexts. For example, conceptualizing information use as information search

considers information use as part of the searching process. Conceptualizing information

use as knowledge construction focuses on the contribution of information to thinking and

meaning-making. Conceptualizing information use as information application or

utilization focuses on the role of information as internalized knowledge used in certain

actions that form the basis of practices. Information use often encompasses other

information activities, including interpreting the value of information sources and

evaluating information (Kari, 2010). Information use is interrelated with other

information activities that task performers engage in.

2.3.2 Facets of tasks

Tasks can be characterized based on different facets because they can be described from different perspectives. Tasks have external and internal attributes, as well as objective and subjective aspects (Byström and Hansen, 2005). Li and Belkin (2008) and Li (2009) developed a facetted classification of tasks. They used a set of facets to depict work tasks and search tasks. In their classification scheme, work tasks and search tasks share many common facets and sub-facets, including: source, task doer, time, and so on. Li (2009) investigated the relationships between work tasks and search tasks in the university setting. She found search tasks could be predicted by work tasks. Work tasks affected several facets of search tasks, including: *time (length)* and *objective and subjective task complexity*. Specifically, the more complex a work task was, the more information systems task performers tended to use to find reliable information. Li (2009) also investigated the intra-relationships between different facets of work tasks and between different facets of search tasks. Her results demonstrate the facet *objective task difficulty* was correlated with other facets of work tasks and search tasks, including: *difficulty*, *subjective task complexity*, *knowledge of task topic*, and *time*.

Xie (2009) investigated the effect of different task facets on information seeking

and retrieval processes in two different contexts. One was in a corporate context and the

other in an academic context. She classified tasks into two types, including work tasks

and search tasks. She identified the facets of work tasks and search tasks that affected

users' plans for information searching and retrieval, the information seeking strategies

they adopted, and their search-task-related goals. She employed mixed methods to collect

data, including web-based surveys, diaries, and telephone interviews. As a result, she

inductively identified the facets that affected users' information seeking and retrieval

process. Table 2.3.2.1 illustrates the facets she identified and their sub-facets.

Table 2.3.2.1 Facets of work tasks and search tasks in Xie's (2009) study

Task type	Facet	Sub-facet
Work task	Nature	Routine
		Typical
		Unusual
	Stage	Pre-focus
		Formation
		Post-focus
	Timeframe	Extremely urgent
		Urgent
		Non-urgent

Search task	Origination	Self-generated
		Assigned
	Type	Update information
		Look for specific information
		Look for items with common characteristics
		Look for known items
	Flexibility	Very flexible
		Flexible
		Inflexible

The facets of work tasks that Xie (2009) identified include: *nature of task*, *stage of task*, and *timeframe of task*. The facet *nature of task* was divided into three sub-facets according to how familiar users were with the work tasks they performed. The facet *stage of task* was divided into three sub-facets according to the process users went through to formulate their problems. The facet *timeframe of task* was divided into three sub-facets according to how much time users had in completing their work tasks. The facets of search tasks that Xie (2009) identified include: *origination of task*, *type of task*, and *flexibility of task*. The facet *origination of task* was divided into two sub-facets according to whether the search tasks were assigned or generated by task performers themselves. The facet *type of task* was divided into four sub-facets according to the types of

information users searched. The facet *flexibility of task* was divided into three sub-facets

according to whether users were able to change or modify their search.

Xie's (2009) results demonstrate the above facets of work tasks and search tasks

affected users' information seeking and retrieval process in terms of the extent of their

planning, the information seeking strategies they adopted, and the shifts in their

search-task-related goals. However, different facets affected users' information seeking

and retrieval process differently. Some affected the extent of users' planning more, while

some affected the information seeking strategies they adopted more. For example, the

nature of work tasks and the *type of search tasks* primarily affected the extent of users'

planning. Xie (2009) also found other constituents of human-information interaction in

contexts – including work domain, users' knowledge and experiences, and temporary

conditions – affected the facets of work tasks and search tasks.

Vakkari and Hakala (2000) and Vakkari (2000; 2001) focused on the facet *task*

stage. They conducted a longitudinal study to investigate the search tactics and relevance

criteria master's students employed and the types of information they sought at different

stages of writing their research proposals. In their study, students were instructed to

search the LISA database at three stages of their proposal-writing process, including: at

the beginning, in the middle, and at the end. Interviews were conducted before and after

students performed their search. The purpose of their pre-search interviews was to

measure students' knowledge about specific topics. The purpose of the post-search

interviews was to capture the criteria students employed to assess the relevance of the

retrieved documents according to bibliographic information at different stages. Students

were also instructed to describe their expected contributions of the retrieved documents to

their proposals, the kinds of information they expected to receive from these documents,

and if these documents helped them to structure their problems at hand. At the middle

and final stages, students were instructed to re-assess the documents they had retrieved at

the earlier stages. Students were also instructed to keep a research diary and a search

diary in all stages. Vakkari and Hakala (2000) conceptualized relevance as the

relationships between task performers' prior knowledge of their problems and the

information in the documents they encounter. They operationalized relevance as task

performers' expression of how useful a document is to their tasks at hand. Their results

demonstrate students' knowledge of their problems was associated with the relevance

criteria they employed. Students became more and more discriminatory as their problems

became more and more focused and structured. Fewer documents were relevant to their

tasks as they made progress in their proposal writing process. The roles of different

relevance criteria changed at different stages. For example, the importance of *authors* of

documents increased as students progressed. Students became knowledgeable about the

topics they were working on in their proposal-writing process, so they were able to

identify key figures at the latter stages.

Subsequently, Vakkari (2000; 2001) investigated the associations between the

type of information and the stage of a work task and between the type of information and

perceived relevance. His (2000; 2001) results demonstrate the specificity of the

information students sought increased as they made progress in their proposal-writing

process. Different types of information contributed to students' proposal-writing at

different stages. For example, information about research methods and cases contributed

the most to the middle stage. Thus, the facet *task stage* helped to predict the specificity of information and the type of information that could contribute to students' proposal-writing.

Among all of the facets, the complexity of work tasks has been found to be an important factor that affects information seeking and access (Byström and Järvelin, 1995). Freund (2008b) found work tasks and information tasks affected information seeking and selecting behaviors in the software engineering consultants' workplace. *Task complexity* determined the amount of information required to complete a task. Tasks that were more complex tended to be associated with more genres, and vice versa. Different genres were useful to different tasks at different degrees. Some were particularly useful to a task, while some were moderately useful to many tasks.

Work tasks motivate information tasks and prompt human-information interactions in contexts. Credibility assessments and information use are elements of tasks, but they are not the complete task. To understand tasks better, it is important to understand how information is used and how meanings are extracted from documents

(Dillon, 2008). Information use has been conceptualized primarily from researchers'

perspectives without eliciting users' perspectives. Our knowledge about the tasks users

perform to use information remains limited. There is a need to explore how task

performers perceive information and define the roles of different genres in their tasks.

Thus, this study took the goal-based approach to identifying the tasks faculty performed

to use information in the documents they obtained.

2.4   Document Genres and Genre Repertoires

2.4.1   Characteristics of document genres and genre repertoires

Genres are "socially recognized types of communicative actions" (Orlikowski and

Yates, 1994). They are typified communicative actions performed to organize community

activities. Some genres naturally emerge from recurrent communicative situations in

response to a communication need. Some genres are deliberately designed and introduced

to realize a communicative purpose. The genre of a document can be identified or

recognized based on its socially recognized communicative purposes, and common

aspects of forms and content. Form encompasses both physical and linguistic features of

communication (Yates and Orlikowski, 1992; Dillon, 2008). Different genres are defined

differently. Some are defined based on the communicative purposes they serve; some are

defined based on their forms; still some are defined based on a fusion of purpose, forms,

and content (Crowston, 2010). For example, the genre *proposal* is primarily defined

based on its communicative purposes. The genre *poem* is primarily defined based on its

physical forms. The genre *dictionary* is defined based on a combination of its purposes

and forms.

A set of genres tends to be used together within a community. Members of a

community create and/or use a set of genres to organize their activities and achieve their

communicative purposes. Different genres are used in combination to structure

community activities. The set of genres routinely used in a community could be called a

"genre repertoire." Each genre may serve a distinct communicative purpose but it

interrelates with other genres in a genre repertoire. Additionally, genres vary in their

levels of granularity. A genre might be a sub-genre of a larger genre that is composed of

multiple sub-genres. We could look at the genres that constitute a genre repertoire and the

sub-genres that constitute a genre in the context of university teaching as an example. To teach a course in the university, a faculty member creates and uses a variety of genres, including: syllabus, assignment specifications, learning modules or lecture slides, reading guides, and so on. These genres structure this faculty member's course and form a genre repertoire. The genre *syllabus* usually contains multiple sub-genres, such as: a description of the course, students' learning objectives, an overview of topics, a grading rubric, academic integrity policies, and so on. These sub-genres serve the following communicative purposes respectively: telling students what the course is about, informing students' of the learning objectives they are supposed to achieve, giving an overview of the topics that will be covered, indicating the grades for different assignments and exams, informing students of the importance of academic integrity, and so on. The genre *assignment specification* provides students with specific guidelines that help to complete their assignments. Each *assignment specification* may contain another *grading rubric* indicating the criteria used to grade different components of an assignment. The genre *syllabus* structures course activities as a whole, while the genre

assignment specification structures the interactions between this faculty member and students through the submission, grading, and return of assignments in this course.

Whether or not one can understand and use genres enacted in a community appropriately is a capacity that determines whether he is an expert or novice. Previous research found expert users of scientific articles were able to point out the section from which an isolated paragraph belongs to perfectly, but novice users were not able to do so (Dillon, 2008). Another study demonstrates that individuals' level of knowledge about a domain affects how they use journal articles (Bishop, 1999). Knowing the genre of a document allows users to understand the intention and creation context of this document, thus reducing the cognitive effort required to process the information in it. Understanding the intention and context of document creation allows users to judge the utility of a document according to their tasks at hand. They can relate the information in a document to their current situations. Users' knowledge about a genre also allows them to effectively interact with the information this genre materializes. Knowledge about a genre helps individuals to navigate the information within documents that belong to this genre. Genre

knowledge facilitates information use in terms of reading, comprehension, and

interpretation. However, the text in a document may not reveal the intention and creation

context of this document directly. The intention and creation context of a document is

usually expressed by and hence can be detected from authors/creators' languages and the

ways the information content is organized and presented (Dillon, 2008). Acquiring

knowledge about a genre and understanding the intention and creation context of

documents that belong to this genre requires accumulating experiences in interacting with

this genre.

Different genres have different normative scopes. Some are known and used by a

large, loosely defined community (e.g., Web users), while some are known by a relatively

small, restricted community (e.g., a local company) (Rosso and Haas, 2010). Genres aid

in communication because they are used by and shared among community members. As

different communities and individuals move to the web, the genres they use offline are

introduced and modified to structure their online communications. New genres – such as

personal homepages – naturally emerge as community members' online communications become typified over time (Dillon, 2008).

2.4.2   The roles of genres in information seeking and use in contexts

Previous research in information seeking and use has not paid sufficient attention to "the artifacts that materialize and configure information, and the effect of artifacts on the use of information" (Andersen, 2008). Previous research's emphasis on the types of information seeking activities users perform and the resources they use resulted in our limited understanding of the effect of genres on information seeking and use. Andersen (2008) argued studying genres could increase our knowledge of information use because the research emphasis would be placed on the tasks genres help to accomplish, the goals genres help to achieve, and the contributions of genres to human activities. Studying genres could also help to situate a document in a larger system of knowledge and human activities.

Järvelin and Ingwersen (2004) called for more research on task in the information seeking and retrieval area because document genres in the collection might contain

information relevant to users' tasks at hand. They proposed a model that depicts different

constituents of information seeking and retrieval and interactions among different

constituents in contexts. Figure 2.4.2.1 illustrates this model – the *General Analytical*

Model of Information Seeking and Retrieval. In this model, the arrows represent the

interactions among different constituents as well as the needs for more research.
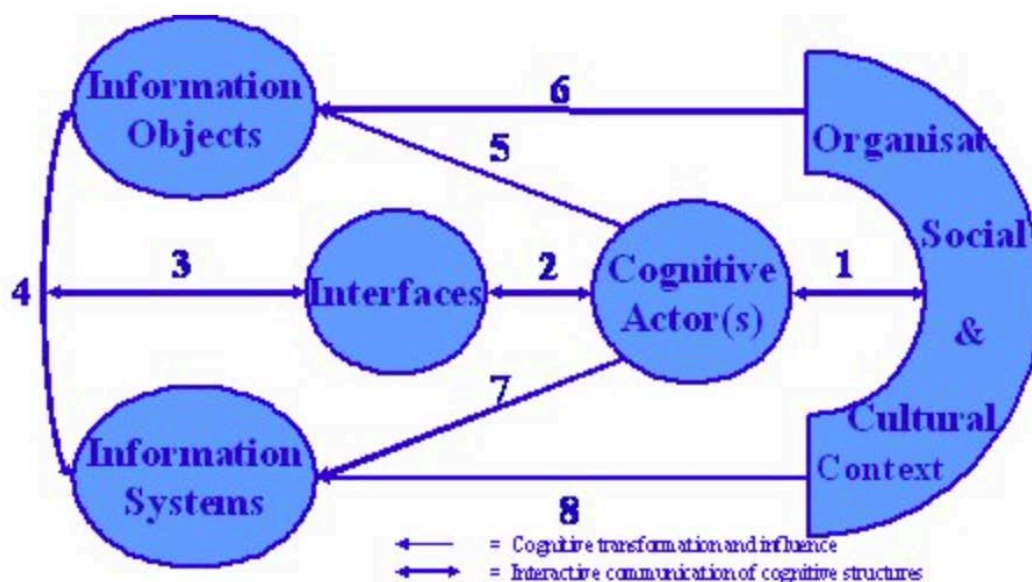
Figure 2.4.2.1 The general analytical model of information seeking and retrieval

(reproduced from Järvelin and Ingwersen, 2004)

Conducting research on the interactions among different constituents could

increase our understanding of information seeking and retrieval. The 6th arrow connects

information objects/documents and the context in which information seeking and

retrieval takes place. This arrow encompasses "document contents and genres and

collections in various languages and media, which may contain information relevant to

the task as perceived by the actor."

A number of previous studies that explicated the interactions between document

genres and users' tasks have been conducted in response to Järvelin and Ingwersen's call

(e.g., Freund, 2008b). Studies on document genre in the context of information seeking

and use were conducted at two levels: among-document and within-document. Both

streams found genres are associated with the tasks users perform. Users' perception of

how useful a document or a specific section of a document is relies on the type of task he

performs and the genre or sub-genre of this document. Genres of documents are

associated with professional tasks that trigger information seeking and use as well as

information tasks users perform to complete these professional tasks. The same applies to

leisure tasks. The associations between tasks and genres exist based on functional

matching. The genre or sub-genre perceived to be the most useful is aligned with the

purpose of a task. The more specific a domain is, the stronger the task-genre association

is (Freund, 2008b; Zhang, et al., 2011).

The task-genre associations at the among-document level have been found in the

following domains: graduate students' information seeking on the web (Roussinov, et al.,

2001), software service consultants' workplace setting (Freund, 2008b), and the Internet

community's use of Canadian e-government information (Freund, 2012). Specifically,

Roussinov and his colleagues (2001) investigated the associations between users'

purposes of seeking information on the web and the genres of the documents that fulfilled

their purposes. Roussinov and his colleagues (2001) identified the genres that were

frequently associated with specific information seeking purposes. For example, genres

including *articles*, *essays*, *bibliographic records*, and *tutorial pages* were frequently

associated with the purpose of scholarly research. Genres including

organizational/business home pages, *search forms*, and *prospectuses* were frequently

associated with the purpose of job-hunting. The associations between users' information

seeking purposes and genres could be exploited to improve web searching. For example,

it might be useful to classify search results into major genre categories and visualize this

genre classification for users to filter search results. Users could limit their search to

specific genres by selecting the genres in which they wish to find information to fulfill

their purposes.

Because genre entails contextual information regarding document creation and

use, genre descriptors can be incorporated into document representation to help users

assess whether a document suits their tasks (Crowston & Kwaśnik, 2003). To use genres

as descriptors to improve web searching, users must be able to identify these genres.

Users also need to have knowledge about specific genres, regardless of whether they are

able to specify their information needs in terms of genres in their queries. When it comes

to web searching, information creators and users who have shared knowledge about

specific genres define these genres. Individual users do not need to know each other to

become users of these genres, but they need to be able to recognize these genres through

typified communicative actions, purposes, forms, or situations (Rosso, 2008). Algorithms

of search systems must be able to automatically classify documents into genres at an

acceptable degree of accuracy to enable users to make use of genre descriptors to improve their searching (Rosso, 2008).

Freund (2008b) investigated the contextual factors that affected software engineers' information searching and selecting behaviors in their workplace and modeled the associations between two of the most important contextual factors – tasks and genres – in a search system to facilitate software engineers' information seeking and retrieval. By visiting software engineers' workplaces and conducting interviews, she found four major contextual factors – including person, project, work task, and problem – affected their information searching and selecting behaviors. These major contextual factors affected information behaviors in terms of: the characteristics of the information that software engineers sought, the criteria they employed to assess the relevance and usefulness of information, and the strategies they adopted to find information useful to their tasks within the accessibility constraints in their environment. Genre was found to be a strategy that software engineers employed to seek the right kind of documents that could help to solve their problems when performing their work tasks. The problems in

their work tasks gave rise to information tasks that required searching and selecting

documents to complete.

Freund's (2008b) results demonstrate there were significant associations between

software engineers' work tasks and information tasks and the genres of the documents

they sought. The associations between different types of tasks and genres were different.

The associations between information tasks and genres were more direct and stronger

than those between work tasks and genres. The associations between work tasks and

genres were established in the work process. Several facets of work tasks – including

type, level of detail, and software engineers' work roles – established the task-genre

associations. For example, in the software engineers' workplace, the genre *cookbook* was

useful to work tasks that required procedural information, such as *installation* and

configuration. The associations between information tasks and genres were established

primarily based on shared communicative purposes. For example, the genre *instructional*

manual was particularly useful to the information task *learning* because it was designed

to teach. The associations between information tasks and genres were also established based on forms and content of genres.

Although the associations between software engineers' work tasks and genres they sought were not direct, modeling such associations in the search system might improve their access to documents useful to their tasks because these associations were very powerful. However, the search system that modeled the task-genre associations did not perform better than the baseline system that did not model these associations in terms of the effectiveness, efficiency, and satisfaction of searching. This was partly due to the low accuracy of the former system's genre classifier. Despite of the failure, Freund (2008b) noticed the former system did improve the precision of the top search results for most of the tasks. The task-genre associations still have great potential for workplace information seeking and retrieval, especially in domains in which community members use documents created within their community.

As Figure 2.4.2.2 illustrates, Freund (2008b) expanded Järvelin and Ingwersen (2004)'s *General Analytical Model of Information Seeking and Retrieval* to explain the
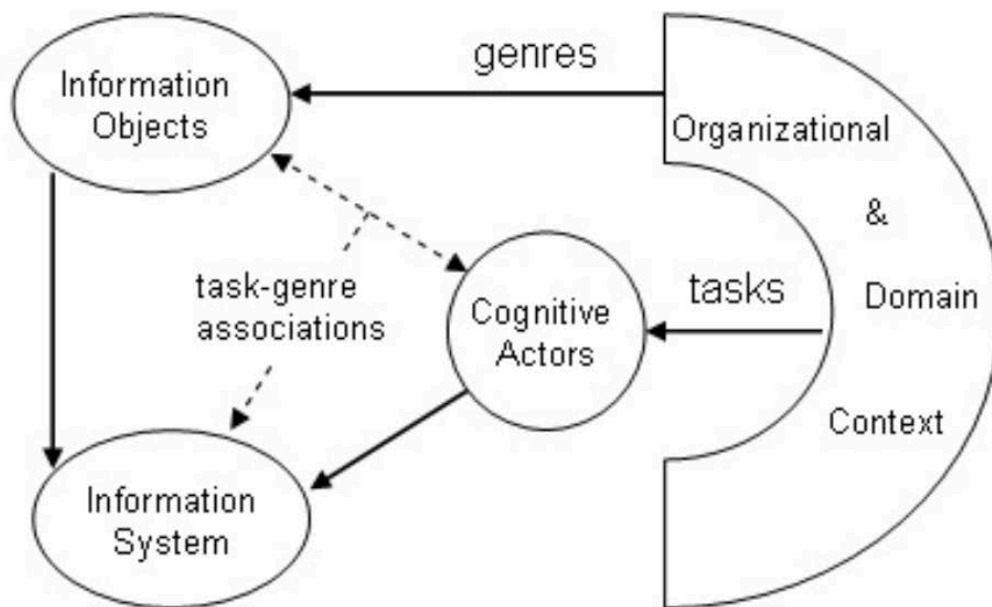
Figure 2.4.2.2 The task-genre association mapped onto the general analytical model of

IS&R (reproduced from Freund, 2008b)

potential benefit that modeling the task-genre associations in the search system might

provide. Tasks are assigned to cognitive actors in an organizational context and a domain.

Cognitive actors who are assigned to perform specific tasks search information to

accomplish these tasks. Other cognitive actors use the genres enacted in the same

organizational context and domain to create documents. Documents created by these

cognitive actors are added to the search system this organization uses. Cognitive actors

who perform the assigned tasks and cognitive actors who create documents share a

similar understanding of communicative purposes, forms, and content of the genres used in their organization. The task-genre associations connect these two types of cognitive actors and help them to communicate with each other. These associations also implicitly connect the tasks that cognitive actors perform and the documents that cognitive actors create because these tasks and documents emerge from the same context. Designers of search systems can model these task-genre associations to strengthen the connections among different constituents of information seeking and retrieval in contexts. Modeling these associations might be the most valuable if documents are used in the contexts in which they are created.

The task-genre associations at the within-document level have been found in the context of scholars' reading of journal articles. In order to help scholars use journal articles, Zhang and his colleagues (2011) investigated the associations between information use tasks and functional units. Functional units refer to the smallest units of information within four major sections of journal research articles. Each section of a journal article – including introduction, methods, results, and discussion – comprised

multiple functional units. For example, the section *introduction* starts with the functional

unit *claim importance of topic*, followed by the functional units *narrow down topic*,

review previous research, *indicate a gap in previous research*, and others. Each unit

serves a distinct communicative purpose. Different functional units within a section of a

journal article interrelate with each other. Zhang and his colleagues (2011) mapped the

functional units to the information use tasks that scholars performed to use the

information in psychology journal articles. These tasks included: *keep up*, *refer to facts*,

refer to arguments, *learn about background*, and *learn how-to*. Using a survey, they

instructed scholars to rate the usefulness of each functional unit to different information

use tasks. Their results demonstrate some functional units were particularly useful to

certain information use tasks. Each task was strongly associated with one or multiple

functional units in a major section. Other functional units in the same section or in other

sections were also useful to a particular task, but to a lesser degree. For example, the

functional unit *support explanation of results* in the *discussion* section of a journal article

was particularly useful to the task *refer to arguments*. The functional units *indicate a gap*

in previous research and *claim importance of topic* in the *introduction* section were also useful to this task, but they were not as useful as the functional unit *support explanation of results*. Zhang and his colleagues' results (2011) could be applied to develop a reading device that presents functional units located in different sections of a journal article according to the information use tasks that scholars wish to perform. This reading device could save the time and efforts scholars spend on locating information in different sections of journal articles.

Some contend the merit of genre identification lies in its contributions to comprehension, an integral part of information use. Knowledge about a genre creates expectations about the structure and flow of information; therefore, it facilitates the navigation of meanings. Thus, domain experts are able to exploit their genre knowledge to locate and use information more effectively than novice users who are unfamiliar with the genres used in a domain (Dillon, 2008; Vaughan & Dillon, 2006).

Regardless of which position one takes, what previous research did not investigate includes the criteria that users employ to assess different genres and how their tasks

might be associated with their criteria. Previous research on task-genre associations investigated these associations through users' perception of usefulness. However, users tend to employ multiple criteria to assess documents. It is important to examine task-genre associations through other perceptions that users might have. Faculty's teaching in the university provides a unique opportunity to investigate task-genre associations because both domain expert and novice users are involved. Faculty tend to be domain experts who have deep knowledge about the genres used in their fields, and their students are transformed from novice users to domain experts through their genre assessments and use.

2.4.3   The roles of genres in credibility assessments

Currently, there is a lack of research on the roles of genres in credibility assessments in the context of information seeking and use. Previous credibility research either limited their investigations to a genre (e.g., Savolainen, 2011) or included a variety of documents without differentiation (e.g., Liu, 2004; Liu and Huang, 2005). Although there were studies that investigated users' perceived credibility of different genres, the

concept *genre* has rarely been explicitly employed. One of the very few studies that

addressed the effect of genres on credibility assessments was conducted by Flanagin and

Metzger (2007). They investigated whether genres of websites affected users' perceived

credibility. In their study, the operational definition of genre was information type. They

investigated users' perceived credibility of four types of website genres, including: news

organization websites, e-commerce websites, special interest groups' websites, and

personal websites. They used both real and fictional websites in their study, and included

a news story reporting the negative effects of radiation on pregnant women who fly in

airplanes in different website genres. They then used a survey to measure three types of

perceived credibility, including: the message of the website (message credibility), the

website as a whole (site credibility), and the sponsor of the website (sponsor credibility).

Each participant was assigned to a website. He read the news story on the assigned

website and made credibility assessments in the questionnaire. Flanagin and Metzger's

(2007) results demonstrate genres of websites affected credibility assessments. Users'

perceived message credibility, site credibility, and sponsor credibility were affected by

website genres. Specifically, the news websites were rated higher than the other two

website genres in message and sponsor credibility. The news and e-commerce websites

were rated higher in site credibility. The credibility of personal websites was the lowest

rated. Additionally, Flanagin and Metzger (2007) found just like genres, features of

websites affected perceived credibility. Thus, the design of websites can enhance

perceived credibility, especially when the sponsor is not well known.

It is important to conduct more research on the associations between genres and

credibility assessments, such as the criteria users employ to make credibility assessments

and the genres of the documents they assess, to increase our understanding of the roles of

genres in credibility assessments.

2.5   Credibility Assessments in the Context of Information Seeking

and Use

2.5.1   Credibility: A multifaceted phenomenon

Credibility assessments involve both subjective perception and objective

judgments. It's not an inherent property of documents or the source of information. It is a

subjective perception users make when they notice and interpret different attributes, such

as sources and authors, in their interactions with documents (Flanagin and Metzger, 2007;

Fogg, et al., 2003). The study of credibility assessments in information sciences stemmed

from users' relevance assessments in the information seeking and use area. Relevance

itself comprises a variety of criteria that go beyond the match between the topic of the

information in a document and users' information needs in a topic. Previous research

consistently demonstrates credibility is one of the most important criteria that users

employ to assess the relevance of the information in a document. Some of the criteria that

constitute relevance are closely related to users' perception of credibility, including:

accuracy, *validity*, *clarity*, and *recency* (Barry and Schamber, 1998). Although some

relevance criteria are closely related to credibility, they are different from credibility. For

example, a piece of information might be credible, but it might not be useful to a user's

task at hand. The information in a document might be recent, but it might not be credible

(Rieh and Danielson, 2007).

Credibility itself comprises a set of criteria. Credibility is a "perceived quality" that is composed of a set of components (Fogg and Tseng, 1999). It originates from individuals' interactions with information objects, sources, or channels at different stages. The scope of credibility is dynamic because the constituent criteria change as the contexts in which credibility assessments take place change. Users employ different criteria to judge whether a document is credible in different contexts. Researchers agree that credibility has two key dimensions – *trustworthiness* and *expertise*. *Trustworthiness* refers to the extent to which a source is perceived as good and moral. *Expertise* refers to the extent to which a source is perceived as knowledgeable and experienced (Fogg and Tseng, 1999; Rieh, 2010). Rieh (2010) argued cognitive authority – which refers to experts whose influence on other people's thinking is deemed legitimate because they are perceived as authoritative – is one of the most important aspects of information credibility. Additionally, credibility is one of the major dimensions of information quality. The quality of credible information tends to be high and good. However, the

information that is perceived as good is not necessarily credible (Hilligoss and Rieh, 2008)

There are several different types of credibility, including: source credibility, presumed credibility, reputed credibility, surface credibility, experienced credibility, cost-effort credibility, message credibility, and so on. Different types of credibility focus on different aspects of human-information interactions in contexts. *Source credibility* refers to the extent to which users believe in the trustworthiness and expertise of document creators or maintainers. Whether a source has expertise in a domain affects the believability of the information in a document. The source of a document tends to play a more important role than other document attributes in users' credibility assessments (Rieh, 2010). *Presumed credibility* derives from users' general assumptions about the things for which they will make credibility assessments. Users' assumptions might originate from their stereotypes or impressions. *Reputed credibility* derives from third parties' recommendation or endorsement. *Surface credibility* derives from users' "simple inspection" of the things they make credibility assessments for. *Experienced credibility*

derives from users' own experiences and knowledge (Fogg and Tseng, 1999). *Cost-effort*

credibility derives from the accessibility of information. Sometimes the information that

requires more time, efforts, and resources to obtain, such as payment or subscription, is

perceived as more credible, especially when it comes to web information (Liu, 2004).

2.5.2 Credibility in the education context

Francke, Sundin, and Limberg (2012; 2011; 2009) conducted a series of studies

that investigated how credibility was negotiated with a focus on participatory,

user-generated genres (e.g. Wikipedia) in the school context. Francke and Sundin (2012)

conducted a study that investigated how credibility was negotiated from teachers' and

librarians' perspectives in the upper secondary school in Sweden. Their study indicates

credibility was socially constructed and negotiated in specific activities. In their context,

credibility was conceptualized in four ways: (1) *Control*: Credibility was established

when a source was controlled and stable. The origin, intention, and sustainability of a

source were critical to its credibility; (2) *Comparing sources*: Credibility was established

based on a claim, rather than a source. Comparing claims from multiple sources helped to

determine the credibility of a claim, especially when it comes to Internet sources; (3)

Relational and partial: Credibility was not absolute. Instead, it was relational and partial.

The credibility of a source depended on the purpose and context of its use; and (4)

Multiplicity: Credibility was associated with the collaborative production of a source and

democratic construction of knowledge, instead of recognized experts who were perceived

as stable. However, a source (e.g., Wikipedia) may not be perceived as credible as a

whole. Instead, it was important to assess the credibility of different entries in a source

individually. Additionally, whether Wikipedia was legitimate to use depended on its use

context and topics. When there was a few alternative sources, especially printed sources,

and when the topics involved "current trends, new technology, and popular phenomena",

Wikipedia could be legitimately used (Francke and Sundin, 2012).

Francke, Sundin, and Limberg (2011) took a socio-cultural perspective to

investigate how students in an upper secondary school assessed the credibility of sources

regarding whether or not to expand nuclear power in Europe. They took an ethnographic

approach and employed mixed methods to collect data, including: interviews, direct

observation, and blogs that students kept. Students were instructed to rank a list of

sources and make an oral presentation. Some of the sources students were instructed to

rank were mandatory, such as Wikipedia articles. The teacher and librarian offered three

lectures on information seeking, credibility, and trust. These lectures covered discussions

about trust, how to use specific databases and search engines, and how to read the history

and discussion pages of Wikipedia entries. Francke, Sundin, and Limberg's (2011) found

students adopted four approaches to assessing the credibility of different sources. These

approaches include: *control*, *balance*, *commitment*, and *multiplicity*. Teachers and

librarians adopted the same approaches when they assessed the credibility of sources

(Francke and Sundin, 2012), except for the approach *commitment*. For example, teachers,

librarians, and students all compared claims in different sources to assess the credibility

of a source. If a source included arguments and counter arguments for an issue, it

balanced different viewpoints. In this way, this source was perceived as credible. The

approach that was uniquely adopted by students was *commitment*. If a person or an

organization responsible for a source was committed to a specific standpoint or an issue

for the benefit of the mankind, students perceived this source as credible. Specifically, the

information provided by organizations involving in activities that affected many people,

such as NGO-type organizations and government agencies, was perceived as credible

(Francke, Sundin, and Limberg, 2011).

Sundin and Francke (2009) investigated how students in an upper secondary

school in Sweden negotiated credibility and cognitive authority when they completed a

group project on gender and equality. In this study, Sundin and Francke (2009) took the

socio-cultural perspective toward credibility assessments. They assumed community

practices, in their research context, students' learning practices, shape credibility

assessments and other information practices. Credibility assessments, in turn, shape

students' learning practices. They also assumed students make credibility assessments

according to the materiality of documents. Students examine the "architectural traits"

surrounding a document when they make credibility assessments (Sundin and Francke,

2009). They took an ethnographic approach to data collection and analysis. As a result,

they identified five themes regarding how students associated credibility and cognitive

authority when they sought information in their learning practices. These themes were

similar to the two studies discussed above (Francke and Sundin, 2012; Francke, Sundin,

and Limberg, 2011). These themes include: (1) The Google/Wikipedia link: Students

often relied on Google to start with their search and the articles in Wikipedia were often

ranked higher in their search results. Students assessed the factuality and intrinsic

plausibility of the information in Wikipedia articles; (2) Forming knowledge: Students

seldom relied on the architectural traits of Wikipedia to make credibility assessments; (3)

Transferred authority: Students perceived documents as credible if authors or responsible

organizations were official and authoritative. Documents created by a group of

collaborators or an organization were perceived as more credible than those created by

individual authors. Documents used by trusted individuals or organizations were also

perceived as credible; (4) The print/digital dichotomy: Print media were often perceived

as more credible than digital media. Students relied on their knowledge of the publishing

and editing history of a medium to make credibility assessments; and (5) Genre-based

credibility assessment: Students were aware of the types of information different genres

contained (e.g., opinions versus facts). Genres such as blog posts contained opinions that

might be built on facts. Genres such as Wikipedia evoked conflicting perceived

credibility because its encyclopedia style ensured its credibility, but its collaborative,

anonymous construction process induced suspicion (Sundin and Francke, 2009).

Francke, Sundin, and Limberg's (2012; 2011; 2009) research reveals genre was

one of the strategies students adopted to make credibility assessments. Genre was

associated with credibility in two ways. The first one was the association between the

print/digital dichotomy and the stability of a medium. The second one was the association

between the type of information a source contained and the genre of this source. Francke,

Sundin, and Limberg's (2012; 2011; 2009) research's had a strong focus on participatory,

user-generated genres. Only a few other genres, such as student papers, were addressed

when they discussed students' perceived credibility of different genres (Sundin and

Francke, 2009). They did not address teachers' and students' perceived credibility of

other genres used in this context. There is a need to bridge this gap. Additionally, faculty

who teach in the current context situate in a rich information environment. The

distinctions between face-to-face and online courses have become blurring. The adoption

of learning management systems and other instructional technologies in both types of

courses blurred these distinctions. The print/digital dichotomy has also become blurring

as more and more documents are available in both print and digital versions. Faculty may

provide documents in digital versions in both types of courses so that students can easily

access to and save these documents. Faculty may also require students to obtain a

physical copy of an important document for references in both types of courses. Thus,

whether or not the print/digital dichotomy is associated with the credibility of genres in

the context of university teaching is worthy of investigation.

2.5.3   The process of credibility judgments and assessments

Scholars rely on different document attributes to make credibility assessments at

different stages of human-information interactions in contexts. Rieh and Belkin (2000)

found scholars – including faculty members and doctoral students from different

disciplines – were concerned about the quality of the information they searched on the

web and whether the author of information was authoritative. Scholars made two types of

credibility judgments in sequence when they searched information on the web. The first

kind of judgment they made was predictive judgment. It referred to the judgment scholars

made before they opened a webpage. Scholars formed expectations about what they were

going to see in a webpage according to their tasks at hand before they opened it. The

second kind of judgment scholars made was evaluative judgment. It was the value

judgment scholars made according to the webpage they opened, the source of this

webpage, their knowledge and personal belief, and other factors. Evaluative judgments

revealed scholars' preferences and the values of webpages they assessed. For example,

scholars may judge whether the information in a webpage was correct and hence

trustworthy.

The prominence-interpretation theory posits credibility assessments consist of two

components, including: (1) Prominence: Users notice the attributes of a document; and

(2) Interpretation: Users judge the document attributes they notice. These components

occur multiple times when users make credibility assessments (Fogg, et al., 2003).

Although the prominence-interpretation theory was developed based on pre-selected,

assigned websites without authentic user tasks, Fogg (2003) indicates five contextual

factors – including users' involvement, tasks, experiences, individual differences, and the

subject content of a website – could affect what document attributes will be noticed and

judged. Three contextual factors – including users' assumptions, domain expertise, and

the environment in which the information will be used – affect their interpretation of the

document attributes they notice.

Recognizing the fact that users encounter documents in diverse formats and forms

in their information seeking processes, Hilligoss and Rieh (2008) developed a unifying

framework that depicts credibility assessments across document types. This framework is

illustrated by Figure 2.5.3.1. This framework indicates credibility assessments take place

at three levels, including: constructs, heuristics, and interactions. The construct level,

which is the most abstract one, refers to how users define and conceptualize credibility.

The heuristics level refers to "general rules of thumb" users apply to make quick

credibility assessments. The interaction level, which is the most specific one, refers to

users' perceptions and interpretations of the document attributes that lead to credibility

assessments. These levels are interdependent because they affect each other in two

directions: from the most abstract to the most specific level, and the other way around.
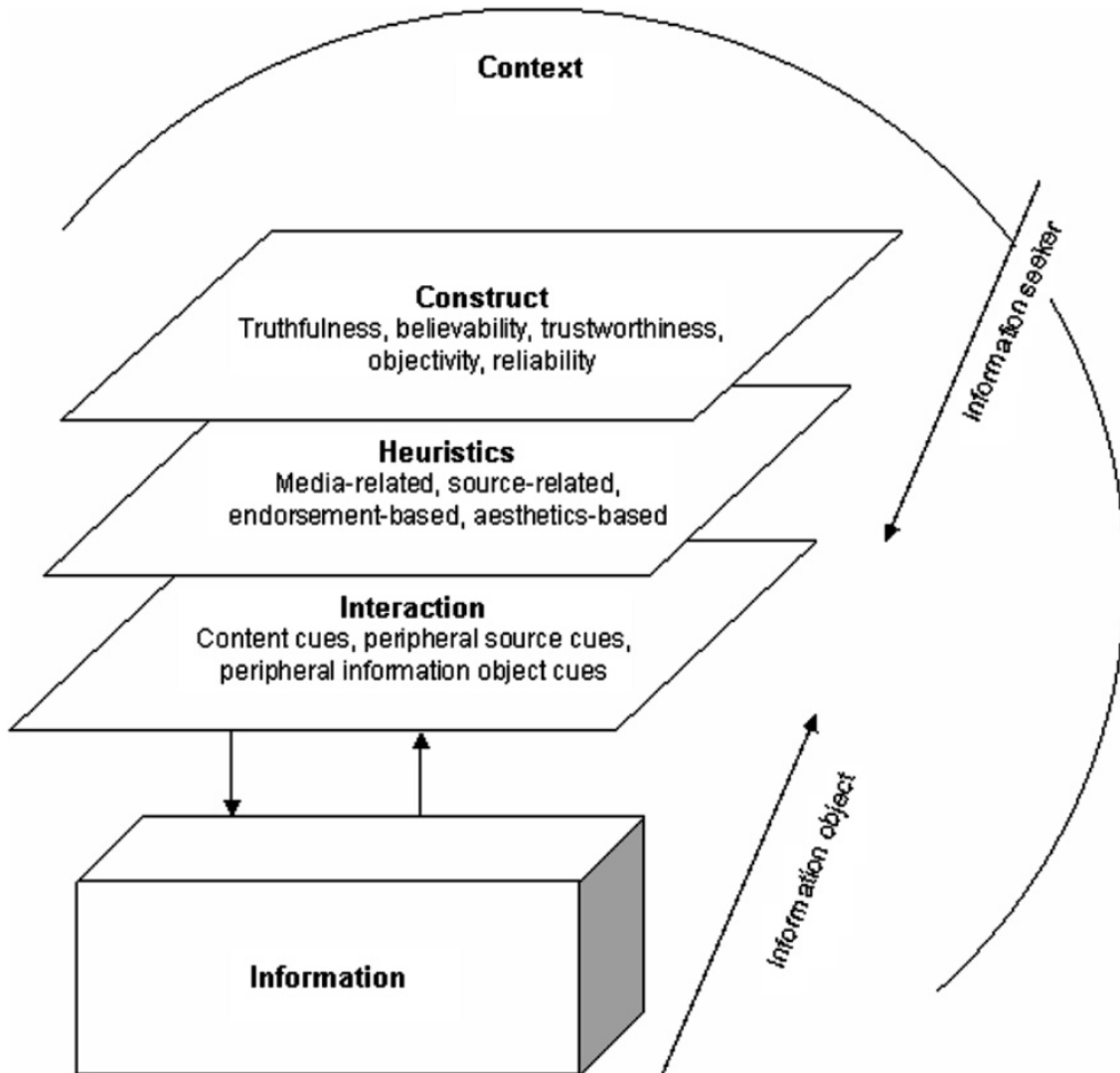
Figure 2.5.3.1 The unifying framework of credibility assessments (reproduced from

Hilligoss and Rieh, 2008)

One common weakness in the above credibility theory and framework is that they did not explicate how contextual factors, including tasks, affect credibility assessments. The other weakness is that they focused on separate document attributes without addressing what a document is in relation to users' contexts. Previous task research indicates different facets of tasks affect information seeking and retrieval differently (Li, 2009; Xie, 2009). Previous credibility research also indicates scholars' consideration of credibility changed at different stages of searching tasks. Their reliance on domain expertise and document attributes also changed as they made progress in their task performance (Rieh & Belkin, 2000). Furthermore, task complexity and personal relevance affected the criteria users employed to assess the credibility of Internet information (Kirkyla, 2010). However, we are only beginning to understand the effect of tasks on credibility assessments. As genre knowledge represents domain expertise and genre is a rich contextual carrier, examining task-genre associations through the perception of credibility might complement the aforementioned weaknesses. Faculty's teaching in the university offers a unique opportunity to investigate task-genre

associations through the perception of credibility because genres used in this context are

diverse and faculty have more freedom in making credibility assessments in their

teaching than in research contexts.

2.5.4   Criteria for making credibility assessments

The criteria constituting credibility often overlap with other criteria users employ

to assess whether a document could be used to achieve their goals. Furthermore, Rieh and

Belkin (2000) found the criteria scholars employed to make relevance judgments changed

in the process. For example, when predicting what they were going to see in a webpage

before opening it, they heavily relied on criteria such as topicality. At this stage, other

criteria – including information quality and cognitive authority – were not frequently

employed. However, after scholars opened a webpage and assessed the information in it,

they heavily relied on the criteria *information quality* and *cognitive authority*.

Rieh and Belkin's (2000) classified the criteria scholars employed to assess the

information quality and cognitive authority of documents into six categories, including:

(1) Characteristics of information objects: Title, content, organization/structure, etc.; (2)

Characteristics of sources: URL organization type, reputation, and one – collective source; (3) Knowledge: Type of knowledge (domain or system) and mode of acquisition (first-hand experience or second-hand knowledge); (4) Situation; (5) Ranking in the search output; and (6) General assumptions. Rieh and Belkin (2000) found the use of the above criteria changed before and after scholars opened a webpage. Some criteria were used in either predictive or evaluative judgments, while some were used in both types of judgments. For example, scholars drew on their knowledge, especially system knowledge, to predict the information quality of a webpage before they opened it. After opening a webpage, characteristics of information objects became more important for scholars' judgments. They assessed characteristics of sources when they made both types of judgments.

Liu (2004) investigated undergraduate and graduate students' perceived credibility of scholarly information on the web. She identified the features that made scholarly information on the web credible or less credible. These features could be classified into five major categories, including: (1) Information content (e.g., whether the

content is consistent with personal knowledge/beliefs); (2) Authorship (e.g., whether or

not an author is affiliated with a prestigious institution); (3) Layout and structure (e.g.,

working links); (4) Website and usage (e.g., referenced by reputable sources); and (5)

Others (e.g., newly updated materials).

Francke, Sundin, and Limberg's (2011) found students in upper secondary

schools in Sweden defined credibility according to their teacher's requirements of

assignments. Students employed eight criteria to assess the credibility of sources. These

criteria include: (1) Authorship: Students assessed the credibility of a source according to

the information about the author(s) they were able to identify, such as the identity of the

author, his expertise, and whether it was possible to contact him; (2) References: Students

assessed the credibility of a source according to the size and strength of references. The

more references a source cited, the more credible it tended to be; (3) Applicability:

Students assessed the credibility of a source according to how they were going to use it.

However, sometimes students were not able to differentiate credibility and applicability;

(4) Currency: Students assessed the credibility of a source according to when it was

published and whether it was updated on a regular basis because the validity of

information changed as time flied; (5) Media properties: Students assessed the credibility

of a source according to the materiality of a medium, such as the extent to which a

website was well-structured for easy navigation; (6) Genre: Students assessed the

credibility of a source according to its genre. They perceived print media as more fixed

and stable, but they perceived digital media as more fluid and unstable. The extent to

which a source contained opinions and the extent to which a source neutrally presented

facts were associated with the genre of a source as well; (7) Rhetoric: Students assessed

the credibility of a source according to the extent to which it drew on arguments and

counter arguments and the extent to which it presented different sides of an issue in a

balanced way; and (8) Social commitment: Students assessed the credibility of a source

according to the extent to which a source was committed to the public good of the

society.

Savolainen (2011) differentiated the concepts *information quality* and *credibility*

by approaching them from two different document attributes – the messages posted to a

Finnish discussion forum and the authors of these messages respectively. Taking an exploratory, qualitative approach, he investigated the criteria participants of the forum naturally employed to assess the information quality of the messages in the discussion threads in two topics and the credibility of the authors of these messages. The discussion topics – the use of natural products and racism – involved assessments about whether the information was correct and trustworthy. He found participants employed both positive and negative criteria to assess the information quality of the messages and the credibility of the authors. However, generally speaking, negative criteria were employed more frequently than positive criteria, especially in the discussion of the use of natural products. Negative criteria were also employed more frequently when participants assessed the credibility of the authors. Although participants employed many criteria to assess information quality and credibility, Savolainen's (2011) findings demonstrate several criteria – including *usefulness/uselessness*, *specificity/unspecificity*, and *objectivity/bias* – played a key role. Other criteria – including *variety*, *reliability*, and *novelty* – were only employed once in a while. When participants assessed the credibility

of the authors, several criteria – including *reputation* and *expertise* – were employed

more frequently than other criteria. Additionally, different attributes of documents, such

as messages and authors, were often assessed together. For example, when evaluating the

information quality of the messages and the credibility of the authors, two criteria –

including *bias of information* and *author reputation* – were frequently employed together.

Table 2.5.4.1 compares the criteria in the assessment instruments discussed in

Section 2.2.2 and those in the credibility research discussed in Section 2.5. In summary,

users employ multiple criteria to make credibility assessments. Credibility assessments

take place before and after users interact with documents. They employ different criteria

to make different types of credibility assessments in different contexts. Although users

draw on a wide range of criteria to assess the credibility of documents, only a few are

employed frequently. This study will identify the criteria faculty employed to assess the

credibility of the documents they used to support their teaching and uncover the

associations among their credibility criteria, the genres of these documents, and the tasks

they performed to use these documents. This will increase our knowledge of how faculty

make credibility assessments in their task performance as well as how the credibility of

different genres were assessed.

Table 2.5.4.1 Criteria in the assessment instruments in education and credibility criteria in information science

Tree Structure (Mhouti, et al., 2013)	LOR I (Leacock and Nesbit, 2007)	LOEM (Kay and Knaack, 2008)	The Unifying Framework of Credibility Assessments (Hilligoss and Rieh, 2008)	The Prominence Interpretation Theory (Fogg, et al., 2003)	Evaluative Judgments of Information Quality and Cognitive Authority (Rieh, 2002)
Academic quality	Content quality	Content: Accuracy, quality	Interaction: Content cues	Accuracy of information; Bias of information; Information clarity	Characteristics of information objects: Content
Pedagogical quality: Pedagogical strategies; Didactic quality: Content of the educational tool	Learning goal alignment	Interactivity: Constructive activity; Design: Emphasis of key concepts		Usefulness of information	
Pedagogical quality: Pedagogical strategies; Didactic quality: Content of the educational tool	Feedback and adaptation	Design: Personalization; Engagement: Feedback			
	Motivation			Company motive; Identity of site sponsor	Characteristics of sources: URL domain type, Type of source
Technical quality: Design	Presentation design	Design: Layout, Quality of	Heuristics:	Information	Characteristics of information

		graphics; Engagement: Aesthetics	Aesthetics-based; Interaction: Peripheral information object cues	design/structure	objects: Organization/structure, Presentation, Graphics
Technical quality: Browsing	Interaction usability	Interactivity: Level of interactivity; Usability: Overall ease of use, navigation	Heuristics: Aesthetics-based; Interaction: Peripheral information object cues	Design look; Functionality of site	Characteristics of information objects: Functionality
	Accessibility				
	Reusability				
Technical quality: Technical ingenuity	Standards compliance				Knowledge: System knowledge
			Heuristics: Source-related; Interaction: Peripheral source cues	Name recognition & reputation	Characteristics of sources: Source reputation, Author/creator credentials
			Heuristics: Endorsement-based; Interaction: Peripheral source cues	Affiliations	
			Heuristics		General assumptions

2.6   Scholarly Information Practices

2.6.1   Scholarly information practices in the research context

Scholars engage in a variety of information practices to find and use information to support their research. Scholars in different disciplines perform different information activities to cope with information (Palmer, et al., 2009). For example, previous research found social scientists performed six information activities when they sought information, including: starting, chaining, browsing, differentiating, monitoring, and extracting. In addition to these information activities, chemists performed two other activities – verifying and ending (Ellis, 1993). These information activities were interdependent. The distinctions among these information activities have gradually disappeared because modern information systems support various types of information activities and multi-tasking. A set of information activities often takes place when scholars interact with information in their own contexts. Thus, Du (2014) proposed to employ the concept *information journey* to investigate different stages of

human-information interaction in context, including information seeking, information

judgments, and information use.

When scrutinizing the information activities previous research identified, one may

find scholars were concerned about the credibility of information. They assessed

individual documents as well as a collection of documents, such as a special issue of a

journal. They made credibility assessments when they performed different information

activities in their research process. For example, scholars in humanities, scientists, and

interdisciplinary research performed *direct searching* to *verify facts*, *check the accuracy*

of information in hand, and *used quotes and references* (Palmer, et al., 2009). For

interdisciplinary scholars, conducting confirmatory searching was particularly important

because it helped them to "interpret, verify, and anchor the new material" (Palmer, 2005,

p. 1144). Assessing the relevance and usefulness of the information in a document

encompassed multiple information activities.

Some information activities were preformed more frequently by a broader

discipline of scholars. For example, scholars in humanities were involved in browsing

and rereading more frequently, while scholars in sciences were involved in co-authoring

and data sharing more frequently. However, assessing information was an information

activity commonly performed by scholars in humanities, sciences, and interdisciplinary

research (Palmer, et al., 2009). A few information activities, such as chaining, were

performed to identify older information for both research and teaching endeavors.

Although Palmer and her colleagues' (2009) analysis of scholarly information practices

were situated in the context of scholarly research, one may reasonably expect faculty

engage in the same or similar information activities in their teaching contexts.

Only a few studies have investigated faculty's information seeking and use in the

context of university teaching. Borgman and her colleagues (2005) investigated

geography faculty's information seeking behaviors and their use of information resources

in order to design digital libraries that support research and teaching in geography.

Borgman and her colleagues (2005) interviewed nine geography faculty members who

taught undergraduate courses to conduct their investigation. Their results demonstrate

geography faculty were subject experts who had a deep understanding of the resources

available in their university and discipline. They were active information seekers who

scanned their environments to identify information useful to their research and teaching

in their everyday practices. However, most of them were better at articulating their

information seeking in support of their research than teaching. Geography faculty

identified the information useful to their teaching when they sought information to

support their research. They used both online and printed resources, including the

websites maintained by government agencies and professional societies in their

disciplines. They used both primary and secondary sources for information. Raw data

were the primary source they used. These included numeric data, field notes, and archival

materials. The secondary source they used included journal articles. Most importantly,

geography faculty heavily relied on images and maps. Their primary data source and

research output were images and maps.

Borgman and her colleagues (2005) further found faculty members who taught in

physical geography and human geography used different types of documents to support

their teaching. Physical geographers heavily relied on textbooks, especially in

introductory courses. They sought information to complement the textbooks they used. In contrast, human geographers relied on multiple scholarly monographs and created their own reading materials according to journal articles and other types of documents. They used a wide variety of documents to supplement their teaching. Additionally, physical geographers relied on online resources to supplement their teaching materials, but they were concerned about the reliability of these resources. Human geographers relied on libraries and genres with broader normative scopes (e.g., magazines and newspapers) to supplement their teaching materials.

Borgman and her colleagues (2005) argued research and teaching should be integrated because geography is a research-based discipline. However, research and teaching are not always integrated because there are professionally oriented courses and disciplines in the university. Faculty who were practitioners in specific professional fields also teach, but they do not conduct scholarly research. They may perform the same or different information activities to identify information useful to their teaching as faculty who teach and conduct scholarly research. It is important to conduct more research to

understand how faculty in different disciplines seek and use information, and documents

useful to their teaching.

2.6.2 Scholars' document selection and use decisions

Wang and Soergel (1998), and Wang and White (1999) conducted a longitudinal

study to investigate how scholars assessed documents according to bibliographic records

in a database and how they used the information in the retrieved documents in their

research projects. Figure 2.6.2.1 illustrates the document selection model their studies

first developed. In this model, a set of document information elements (DIEs) represented

a document in a bibliographic record. Scholars perceived DIEs and interpreted these

DIEs based on the set of criteria they employed to assess a document. These criteria were

employed to assess the value of a document. Scholars employed a set of criteria to assess

a document based on the perceived DIEs, including: *topicality*, *orientation/level*,

discipline, and so on. Among all, criteria including *recency* and *authority* were associated

with the perception of credibility.

Scholars' perceived utility of a document produced the value of this document.

The value of a document formed the basis for scholars' document selection decisions.

The value was judged based on scholars' expected utility of documents. There were five
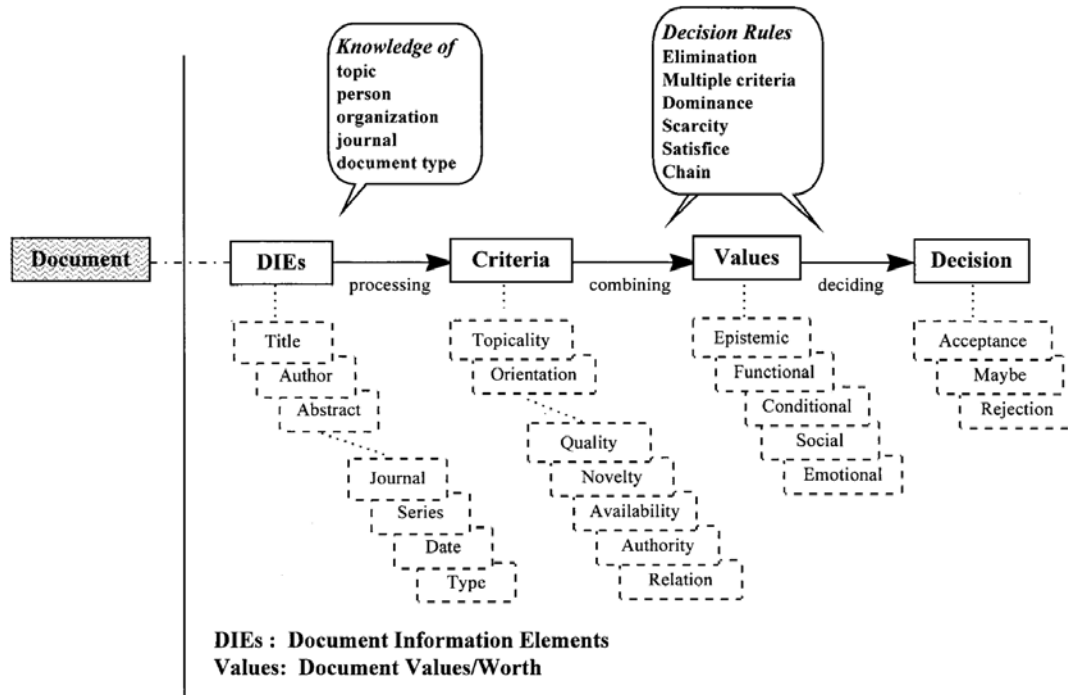
Figure 2.6.2.1 Document selection model (reproduced from Wang and Soergel, 1998)

types of document values, including: epistemic value, functional value, conditional value,

social value, and emotional value. Among all, functional value, which referred to the

perceived utility of a document in contributing to scholars' tasks at hand, was the most

frequently mentioned one. Scholars relied on their personal knowledge to judge DIEs and

make document selection decisions. Scholars' personal knowledge encompassed different

aspects of a topic and the creation context of a document. For example, scholars knew

who were involved in the discussion of a topic, issues involved in the discussion of a

topic, how a topic was related to other topics, and so on.

Scholars applied six rules to make document selection decisions, including:

elimination rule, multiple-criteria rule, dominance rule, scarcity rule, satisfice rule, and

chain rule (Wang and Soergel, 1998). First, the elimination rule referred to situations in

which one aspect of a document sufficed for a rejection. Scholars tended to exaggerate

one document attribute when they rejected a document, despite of the positive document

values that were also perceived. Second, the multiple-criteria rule indicated that scholars

tended to employ multiple criteria together to assess a document. Third, the dominance

rule referred to situations in which scholars compared different documents and selected to

use the ones that outperformed other available options in at least one aspect. Fourth, the

scarcity rule referred to situations in which scholars compromised when there were only a

few options available. Fifth, the satisfice rule referred to situations in which scholars

stopped accepting or using relevant documents because they felt what they had selected

or used was sufficient. Sixth, the chain rule referred to situations in which scholars used

documents that were on a special chain. These include using documents that critique the

ones they already used, individual documents in a collective volume, and documents used

by other authors (Wang and Soergel, 1998).

The document selection model demonstrates the process that scholars went

through to arrive at their decisions regarding whether or not to accept a document. This

process involved general document assessments as well as credibility assessments.

Subsequently, Wang and White (1999) interviewed some of their original participants to

investigate the process of making document use decisions and the criteria they employed

to decide whether or not to use a document. They expanded their model by including

scholars' document use decisions. Figure 2.6.2.2 illustrates this model. In this model,

document use as a decision-making process was divided into three stages, including:

selecting, reading, and citing. Scholars selected documents they retrieved or obtained

through a variety of channels, read the selected documents, and referenced the documents

they read in their written research output. A document that was finally cited in a scholar's

written research output passed through all these stages. Scholars employed a set of

criteria at each stage to make document use decisions. Almost all of the criteria they
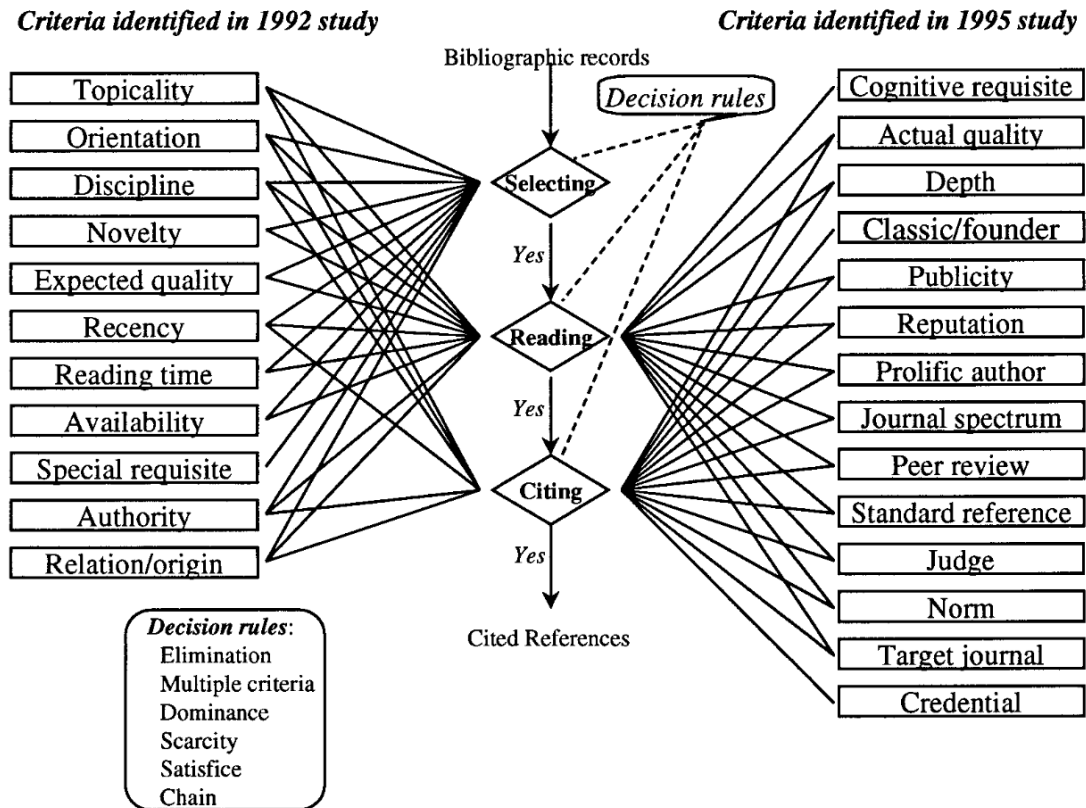
Figure 2.6.2.2 Document use model (reproduced from Wang and White, 1999)

employed to make document selection decisions were also employed to make document

use decisions. Additional criteria were employed to make document use decisions,

including: *actual quality*, *depth*, *publicity*, and so on. Interestingly, more criteria were

associated with the perception of credibility when they made document use decisions,

such as: *classic/founder*, *reputation*, and *peer review*. It seemed credibility played a more

important role in scholars' document use decisions than in selection decisions. Scholars

employed different criteria at different stages of document use. For example, criteria

including *classic/founder*, *standard reference*, and *credential* were only employed when

scholars made citing decisions but not selecting and reading decisions. Overall scholars

employed more criteria at the later stages of document use. They became more and more

discriminatory as they made progress in their research. Additionally, they applied the

aforementioned six rules in all stages of document use, but more rules were applied at the

reading and citing stages.

The document selection model and document use model demonstrate the

differences in document assessments at different stages of human-information

interactions in contexts. Document assessments made at the information seeking stage

and at the information use stage were related but distinct decisions. Document selection

and use decisions involved different sets of criteria, but the rules scholars applied to

assess documents when making these two decisions remained identical. As scholars'

understanding of the documents they obtained and the topics they were working on increased, they became more differentiated.

One of the weaknesses of the document selection and use models was that document use was reduced to three information activities that scholars performed at three different stages. The facet *task stage* was addressed, but scholars' goals of using information were neglected. Furthermore, scholars' perceived document values were not captured and compared at different stages of document use. The associations between the criteria scholars employed and the document values they perceived were not analyzed, neither. Hence, the contributions of the information in different documents to scholars' research were not understood.

2.6.3   Use of genres in the context of scholarly research

Fry and Talja (2007) applied Whitley's theory of the intellectual and social organization of sciences to explain the variations of communication practices in different disciplines through the analytic lens of genres. They argued the social and cultural dimensions of disciplines affected scholars' use of three Internet genres in their

communication. In their research, each academic discipline was qualitatively measured based on two dimensions, including mutual dependence and task uncertainty. Mutual dependence referred to the extent to which researchers in a discipline relied on each other to make intellectual contributions. Task uncertainty referred to the extent to which the research outcome was clearly connected to the collective goal of a discipline. These two dimensions represented two crossing continuums. Each discipline was positioned at different places of the continuums according to its degrees of mutual dependence and task uncertainty. A high degree of mutual dependence often came with a low degree of task uncertainty, and vice versa. For example, the discipline high-energy physics, which was concerned about the matter of the universe, was positioned at high degree of mutual dependence and low degree of task uncertainty. The discipline high-energy physics had relatively uncontroversial, shared problems and goals. It relied on large-scale equipment to run experiments and produce results. International collaborations frequently took place in this discipline (Fry, 2006).

The dimensions of mutual dependence and task uncertainty affected the use of three Internet genres in scholarly communication. For example, high-energy physicists rarely used the genre scholarly mailing lists because they used access-controlled discussion groups to communicate with their colleagues in their everyday practices. In contrast, the discipline social/cultural geography, which was concerned about people's relationships with space and culture, was positioned at low degree of mutual dependence and high degree of task uncertainty. Social/cultural geographers heavily relied on theories and methods from other disciplines such as sociology and anthropology. Because of its multi-disciplinary nature, scholars in this discipline had to coordinate their research with scholars in related disciplines. The mailing lists that social/cultural geographers used were very public and scholarly (Fry, 2006).

The use of genres reflects not only a community's communication patterns, but also its information needs. Different genres have different values to a community. Some genres are closely related to a community's dominant information needs, while some are peripheral to its needs (Freund, 2012). For example, technical reports and patent literature

are primarily used in sciences, but these are rarely used in social science and humanities.

Scholars in humanities heavily rely on archival and audio-visual materials, but these are rarely used in social sciences and sciences (Palmer, et al., 2009). Different genres play different roles in scholars' research. The same genre (label) might have different communicative purposes, forms, and content in different disciplines. A genre might be used differently in different disciplines. For example, social and cultural geographers use mailing lists to keep up with what is going on in related fields, while literature and cultural studies scholars use mailing lists to position their work in the ongoing scholarly dialog (Fry and Talja, 2007). Such differences could be attributed to the fundamental differences in the nature of their research and the organization of their work environments (Fry & Talja, 2007; Palmer & Cragin, 2008).

Journal articles were the most heavily investigated genre in the context of scholarly research. Previous research found different components of journal articles were useful throughout researchers' research process. Some components were used to identify relevant information, while some were read and integrated into researchers' intellectual

output (Bishop, 1999). Specifically, the components of journal articles served five purposes for scholars' reading, including: (1) Orientation: Quickly understand the aboutness and value of the paper; (2) Providing an overview: Find out important details and understand how the paper is laid out; (3) Directing attention: Choose what to read in-depth, what to skim, and what to skip; (4) Comprehension: Make sense of the information in the paper; and (5) Triggering further reading: Identify gaps in the work or adding additional information.

Because researchers in information science have not paid equivalent attention to genre use in faculty's teaching as what they have paid to scholarly research, what we need is not only the set of genres used in their teaching, but also an approach that allows us to systematically identify the genres in use and characterize these genres in the context in which they are used. Developing an approach to systematically identifying and characterizing the genres faculty use to support their teaching in different disciplines could help us to investigate the associations between faculty's tasks and the genres used for their task performance. Because the use of genre is grounded in social practices where

community members or individuals interact with each other (Crowston, 2010), adopting

"empirical, bottom-up methods applied in natural information environments" (Freund,

2008b) could help to explain the roles and functions of genres in communicative

practices.

Chapter 3 Methodology

3.1 Overview

This chapter describes this study's methodology. This study took a mixed-method approach to data collection. Qualitative citation analysis and semi-structured interview were employed in sequence to collect data. Data collection encompassed a bottom-up approach to identifying and characterizing the genres participants used to support their teaching. This study first identified the genres they used in the courses they selected for this study based on the citations in their teaching materials (e.g., syllabi, lecture slides, assignment specifications, and lab notes). Customized genre repertoires that documented the genres of the documents they used were created in Excel format to facilitate the interviews. In the interviews, participants first answered questions about their courses. They were then instructed to identify the genres of the documents they used and verify the genre repertoires. Ten genres were then selected for in-depth interviews designed to collect data about the tasks they performed to use and the criteria they employed to assess these genres.

The interviews were fully transcribed. Qualitative content analysis and

co-occurrence analysis were employed in sequence to analyze the interview transcripts.

Open coding was first employed to analyze the data about the courses and identify the

general criteria participants employed to select documents for their courses, the

information use tasks they performed to use the selected genres, and the assessment

criteria they employed to assess these genres. The information use tasks they performed

to use and the criteria they employed to assess the selected genres were then

differentiated among different documents that belong to the same genres to reflect the

granularity of their information use and document assessments. Co-occurrence analysis

was then conducted to identify the criteria associated with specific tasks and the

associations among tasks, criteria, and genres. Table 3.1.1 presents an overview of the

data this study collected, data collection and analysis methods.

This chapter starts with this study's sampling principle, followed by a description

of the recruiting strategies. It then describes the data collection methods and procedures

in detail. This chapter concludes with how the data were analyzed.

Table 3.1.1 Overview of data collection and analysis methods

Data	Data source	Collection method	Output	Analysis method	Result
About courses	- Teaching materials - Participants' verbal account	- Semi-structured interviews	- Data in the spreadsheet in Excel	- Qualitative content analysis - Descriptive statistics: Frequency	- Data in the spreadsheet in Excel
About participants	- Faculty profiles on the university website	- Documentation	- Data in the spreadsheet in Excel	- Descriptive statistics: Frequency	- Data in the spreadsheet in Excel
Most of the document genres in use	- Teaching materials - Participants' verbal account	- Qualitative citation analysis - Semi-structured interviews	- Customized genre repertoires in Excel - Interview transcripts	- Qualitative citation analysis - Qualitative content analysis	
General criteria participants employed to select documents	- Participants' verbal account	- Semi-structured interviews	- Interview transcripts	- Qualitative content analysis	- Coding scheme of predictive criteria and general criteria
Genres selected for in-depth interviews	- Customized genre repertoires	- Semi-structured interviews: In-depth interviews	- Interview transcripts	- Qualitative content analysis	- Classification scheme of the selected genres
Tasks performed to use	- Participants' verbal	- Semi-structured	- Interview transcripts	- Qualitative content	- Coding scheme of

the selected genres	account	interviews: In-depth interviews		analysis: Open coding	teaching tasks and information use tasks
Criteria employed to assess the selected genres	- Participants' verbal account	- Semi-structured interviews: In-depth interviews	- Interview transcripts	- Qualitative content analysis: Open coding	- Coding scheme of evaluative criteria and assessment criteria
Associations among tasks, criteria, and the selected genres	- Interview transcripts			- Differentiating the tasks performed and assessments participants made at different levels of granularity - Co-occurrence analysis - Descriptive statistics: Frequency	- Tables in a Word file - Summary table of the associations among tasks, criteria, and genres

3.2   Sampling Principle

This study attempted to include a variety of courses in the sample to uncover

possible variations of credibility-genre, credibility-task, and task-genre associations that

respectively answer the three research questions. It assumed courses were crucial

contextual factors that shaped faculty's document assessments, the tasks they performed,

and the genres they used. University courses varied in their sizes, student levels (e.g.,

undergraduate, masters, or Ph.D.), course levels (e.g., introductory or advanced), course

orientation (e.g., theoretical or practical), course requirements (e.g., required or elective),

and delivery modes (e.g., face-to-face, blended, or distant). Different courses required

different sets of genres. Including a variety of courses in the sample helped to diversify

teaching contexts. Thus, this study attempted to recruit faculty members from as broad a

range of academic disciplines as possible to ensure a diversity of teaching contexts. These

covered social sciences, humanities, and sciences.

3.3   Recruiting Participants

This study adopted several strategies to recruit participants, primarily snowballing and e-mail recruitment. To start with the recruitment, the researcher's academic advisor introduced this study and the researcher to several faculty members in other disciplines. The researcher sent recruiting e-mails to faculty members who agreed to participate in this study to explain the research procedure. The recruiting e-mail is attached in Appendix 2. The researcher's academic advisor's referral has helped to recruit two participants initially. Recruiting e-mails were also sent to faculty members who have won the teaching recognition awards at the university in 2011-12 and faculty members in several schools and departments to recruit participants. This has helped to recruit more participants. However, the response rate was low. Thus, the researcher's academic advisor helped to recruit more faculty members in other disciplines again. After the initial participants completed their participation, they were instructed to refer to several faculty members who might be interested in participating in this study at the end of the interviews. The researcher presented the faculty directories on their departments or schools' websites to the interviewees to help them make a referral using her laptop. In

order to include a variety of courses, the interviewees were instructed to refer to faculty

members both inside and outside their schools. The researcher then contacted the faculty

members participants referred for recruitment. As a result, a total number of 29 faculty

members participated in the feasibility study and formal study. Although more than 30

faculty members were recruited, several did not complete their participation. The number

of participants recruited from each discipline is presented in Table 3.3.1. Table 3.3.2

presents the number of participants recruited by different recruiting strategies.

Table 3.3.1 Number of participants recruited from each discipline

Disciplines	N	%
Social Sciences	18	62.07
Sciences	7	24.14
Humanities	4	13.79
Total	29	100.00

Table 3.3.2 Number of participants recruited from different recruiting strategies

Recruiting Strategies	N	%
Academic advisor's referral	4	13.79
Snowballing/Interviewees' referral	9	31.03
Recruiting from e-mails outside the school	2	6.90
Recruiting from e-mails within the school	14	48.28
Total	29	100.00

3.4 Data Collection

3.4.1 Qualitative citation analysis

Since most of the documents faculty used were referenced in their teaching

materials, analyzing the citations in their teaching materials to identify the genres in use

helped this study to capture most of the genres participants used in the courses they

selected for this study. Teaching materials contained rich contextual information

regarding the use of genres since faculty tended to organize and use documents in a

specific logical and chronological order. What were required or optional, and when and

where specific documents were used were clearly indicated in faculty's teaching

materials. Hence, this study identified the documents participants used and the genres of

these documents by analyzing the citations in their teaching materials.

To identify the genres participants have used, they were instructed to select a

course they were teaching or have taught within the last year when they agreed to

participate in this study. They were invited to share their teaching materials with the

researcher or grant her access to their courses on Blackboard, a learning management

system. The researcher downloaded their teaching materials from Blackboard and

analyzed the citations to identify the documents they have used in their courses. Then, the

researcher created entries in spreadsheets in Excel to organize the documents she

identified and determined the genres of these documents. To reflect the granularity and

roles of genres in use, the entries were created based on the ways participants referred to

and used documents in their teaching materials. Each entry represented a document,

which might be identified as a genre (e.g., the "about page" of a website, a book chapter,

or a monograph). The entries were created using the following facets: (1) Bibliographic

information: Titles, publishing years, authors, and sources of the documents (e.g.,

publishers, conferences, or titles of the books or journals where the identified book

chapters or journal articles were published); (2) Genres of the documents that the

researcher determined based on participants' descriptions in their teaching materials, the

original documents, the bibliographic records provided by WorldCat or the university

library, or the researcher's own identification. If the researcher was not able to identify

the genres or if she had questions about specific genres, the genre labels were marked in

red. The genres marked in red were discussed first in the interviews when the

interviewees were instructed to identify the genres of the documents they used at the

beginning of the interviews. The facet *genre* was shaded in yellow to enhance

participants' understanding of what document genre was and facilitate their genre

identification; (3) Purpose, when, and where the documents were used in the courses; and

(4) Hyperlinks to the original documents or bibliographic records.

The facets outlined above were used to capture and characterize the contexts in

which specific genres were used. These facets were developed and adapted based on the

six structural dimensions of communicative actions that genre invokes, including:

purpose (why), content (what), participants (who/m), form (how), time (when), and place

(where) (Yates & Orlikowski, 2002). In a few cases, the information the citations

revealed was not sufficient to identify the documents in use. For example, sometimes the

only thing the researcher was able to find in a lecture slide was a quote or summarized

content with an in-text citation (last name of the author and the publishing year of the

document). The researcher relied on the quote or content to search the document on the

web. After the researcher found the document that might have been used, she tried to

identify the genre of this document and marked the entry for this document in yellow.

During the interviews, the participants were instructed to identify whether they actually

used the document. Additionally, in skill-oriented courses, teaching materials contained

links that directed students to websites or webpages for software application downloads.

These documents were excluded from the qualitative citation analysis this study

conducted as the use purpose was not for information. Documents used for information,

such as tutorials, guides, and technical documentation, were included because faculty

used these documents to inform students of software application usage.

After identifying the documents participants used in their courses, the researcher

reviewed their teaching materials, the original documents, and the bibliographic records

again to ensure the accuracy of entries and the intra-consistency of the genre labels. The

entries created based on a course's unique teaching materials formed a genre repertoire.

The researcher used the PivotTable function to create a frequency report of the genres in

another spreadsheet named "Frequency" in the same Excel file. The genre repertoires and

frequency reports, which revealed the range of the genres used in a course and use

patterns, were used to facilitate the interviews. Each participant received a customized

genre repertoire before the interview. Figure 3.4.1.1 illustrates an example of a genre

repertoire created based on the citations in the teaching materials of an undergraduate

course in humanities.

3.4.2   Semi-structured interviews

Credibility assessments and information use involve mental and physical

activities taking place at different time and space. It was challenging to capture faculty's

credibility assessments and information use when these activities took place. Eliciting

confessional accounts could help this study to capture activities that were not directly

observable and accessible. Thus, this study employed semi-structured interviews to

collect data about the credibility assessments faculty made and the information use tasks

they performed regarding the genres of the documents they used in their courses. The

interview guide is attached in Appendix 3.

	A	B	C	D	E	F	G	H	I	J	K	L
1	Title	Year	Author	Source	Genre	Purpose	Unit Title	When	Where	Where	Links	Instructor
2	Panoramas literarios. España. 2nd	2013	Kienzle, B. M	Heinle	Anthology	Required		23-Jan.; 28	Syllabus	Materials		
3	WordReference.com	2013	Kellogg, Mich	WordRefe	Online Dictionary	Link			Syllabus	Materials	http://www.wordreference.co	
4	Real Academia Espanola	2013	Real Academ	Real Acad	Online Dictionary	Link			Syllabus	Materials	http://www.rae.es/rae.html	
5	Comunicación no verbal	2008	laura vazque	YouTube	Comedy	Link	Hablando de gestos	28-Jan-13	Blackboard	Announcement	http://www.youtube.com/wat	
6	Foro para la Fase 1 del proyecto fi	N/A	N/A	Google+	Forum	Link		31-Jan-13	Blackboard	Announcement	https://plus.google.com/com	
7	Una interpretación del personaje (	2012	Kristen	KristenAm	Drawing	Link	Imágenes de "La Ce	4-Feb-13	Blackboard	Announcement	http://theoritorium.files.word	
8	Aquí podéis ver una imagen de la	N/A	N/A	Artehistor	Book Image?	Link	Imágenes de "La Ce	4-Feb-13	Blackboard	Announcement	http://wa3.www.artehistoria.	
9	Y aquí podéis ver otra edición de l	2007	Exposiciones	Biblioteca	Book Image?	Link	Imágenes de "La Ce	4-Feb-13	Blackboard	Announcement	http://www.bne.es/es/Activid	
10	Dark Moor - Canción del Pirata	2010	Daniel Cantú	YouTube	Neo-classical Metal/Symp	Link	Tarea y enlaces	20-Mar-13	Blackboard	Announcement	http://www.youtube.com/wat	
11	Tierra Santa - La cancion del pirat	2009	PitorDark	YouTube	Heavy Metal/Power Meta	Link	Tarea y enlaces	20-Mar-13	Blackboard	Announcement	http://www.youtube.com/wat	
12	CANCION DEL PIRATA- ESPRONCE	2008	rumboso2	YouTube	Folk Song?	Link	Tarea y enlaces	20-Mar-13	Blackboard	Announcement	http://www.youtube.com/wat	
13	El artículo de Azorín es una reflex	2013	Wikipedia	Wikipedia	Online Encyclopedia Entr	Link	Tarea para el lunes	3-Apr-13	Blackboard	Announcement	http://es.wikipedia.org/wiki/	
14	yo voy soñando caminos	2013	Mangrana Fo	YouTube	Folk Song?	Link	Avisos varios	8-Apr-13	Blackboard	Announcement	http://www.youtube.com/wat	
15	Yo voy soñando caminos - Jose Ra	2009	José Ramón	YouTube	Folk Song?	Link	Avisos varios	8-Apr-13	Blackboard	Announcement	http://www.youtube.com/wat	
16	Historia de España 11: II Repúblic	2010	artehistoriac	YouTube	Documentary	Link	Tareas para este mi	15-Apr-13	Blackboard	Announcement;	http://www.youtube.com/wat	
17	EXILIADOS	2010	Thesis	YouTube	Documentary	Link	Tareas para este mi	15-Apr-13	Blackboard	Announcement;	http://www.youtube.com/wat	
18	Cervantes TV	2013	Instituto Cer	Instituto C	TV Website	Link	¡Feliz día del libro!	23-Apr-13	Blackboard	Announcement	http://cervantestv.es/directo?	
19	Historia de la Literatura Hispanica	N/A	SpanishArts.	SpanishArt	Web page	Link	Bibliografía para pre	30-Jun-13	Blackboard	Assignments	http://www.spanisharts.com/	
20	Literatura Espanola	N/A	N/A	Euskalnet	Book Chapter?	Link	Bibliografía para pre	30-Jun-13	Blackboard	Assignments	http://www.euskalnet.net/tz/	
21	SPAN 4153. Section 001. Spanis	2012	Lauer, A. R.	The Unive	Syllabus	Link	Bibliografía para pre	30-Jun-13	Blackboard	Assignments	http://faculty-staff.ou.edu/L/	
22	SPAN 4163. Sect. 001. Survey o	2012	Lauer, A. R.	The Unive	Syllabus	Link	Bibliografía para pre	30-Jun-13	Blackboard	Assignments	http://faculty-staff.ou.edu/L/	
23	esta página es sobre el arte en Es	The page cannot be found			?	Link	Bibliografía para pre	30-Jun-13	Blackboard	Assignments	http://civycultura.osu.edu/ar	
24	Manual de literatura española	1980-	Pedraza Jime	Pamplona	Manual		Bibliografía para pre	30-Jun-13	Blackboard	Assignments	http://summit.syr.edu/vwebv	
25	La urraca cruza la carretera	N/A	A. A. Buero V	N/A	Book Chapter?	Reading	Lecturas para el mie	24-Apr-13	Blackboard	Content	Full text	
26	Poemas de Blas de Otero: Hombre	1950	Blas De Oter	N/A	Poem	Reading	Lecturas para el mie	24-Apr-13	Blackboard	Content	Full text	
27	Poemas de Blas de Otero: Pido la	1955	Blas De Oter	N/A	Poem	Reading	Lecturas para el mie	24-Apr-13	Blackboard	Content	Full text	
28	Poema Insomnio de Dámaso Alon	1944	Hijos de la ir	N/A	Poem	Reading	Material adicional pa	17-Apr-13	Blackboard	Content	Full text	
29	Platero y yo	1917	Juan Ramón	N/A	Prose	Reading	Material adicional pa	10-Apr-13	Blackboard	Content	Full text	
30	Soledades, galerías y otros poema	1907	Antonio Macl	Soledades	Poem	Reading	Material adicional pa	8-Apr-13	Blackboard	Content	Full text	
31	Abril florecía	1903	Antonio Macl	Soledades	Poem	Reading	Material adicional pa	8-Apr-13	Blackboard	Content	Full text	
32	El monte de las ánimas	1861	Gustavo Ado	N/A	Romantic Tale	Reading	Materiales para la c	20-Mar-13	Blackboard	Content	Full text	
33	Leandro Fernández de Moratín y E	N/A	N/A	N/A	Biography?	Reading	Materiales para la c	6-Mar-13	Blackboard	Content	Full text	
34	El sí de las niñas - Leandro Fernár	2011	SpanishLitFil	YouTube	Literature Film?	Link	Materiales para la c	6-Mar-13	Blackboard	Content	http://www.youtube.com/wat	
35	Cartas marruecas	1789	José Cadalso	N/A	Epistolary Novel	Reading	Materiales para la c	4-Mar-13	Blackboard	Content	Full text	

Figure 3.4.1.1 An example of customized genre repertoires

The interviews started with questions regarding the courses participants selected for this study. Data regarding their course development, their teaching experiences, their familiarity with the documents they used, the number of students they had, student major, and student level were collected. Then, the researcher presented the genre repertoires to participants. The researcher explained what genre is by providing the definition this study adopted and using the genre *textbook* as an example. The researcher told participants that she wanted to understand their perspectives. She then instructed them to identify the genres marked in red. Participants were then instructed to review other genre labels and describe whether or not they agreed with the genre labels the researcher pre-determined. The researcher corrected the genre labels that participants thought were problematic. After going through all of the genres, participants were instructed to indicate if there were any errors in their genre repertoires. The researcher then created new frequency reports of the genres and saved different versions of genre repertoires in her laptop.

The numbers of genres participants used varied substantially. The more documents they used, the wider the range of genres in use tended to be. The number of

genres used in the courses in social sciences and humanities was higher than the number

of genres used in the courses in sciences. To make the interviews manageable, it was

necessary to consistently select genres across different disciplines for in-depth

investigations. In general, ten genres were selected for the subsequent interviews: two

that were the most heavily used in a course, four that appeared the most frequently, and

four that appeared the least frequently.

This selection rule was developed based on how heavily the genres were used and

how frequently the genres appeared in a course. The degree of use was determined based

on the facets *when* and *where* in the genre repertoires. If there was only one genre that

had been used heavily in a course, this genre was selected for the subsequent interview

questions asked in in-depth interviews. Because several participants used many

documents from multiple sources (e.g., journal articles), there was no single document

that was heavily used in their courses. In these cases, only the most frequently appearing

and the least frequently appearing genres were selected for in-depth interviews. When the

most frequently appearing and the least frequently appearing genres overlapped, fewer

than ten genres were selected. Because there were multiple genres of which the

frequencies were equally low, it was necessary to develop a rule to consistently select

genres for in-depth interviews. To this end, participants' order of participation in this

study was used to select genres that received the same lowest frequencies.

The selection rules were developed to ensure the diversity and comparability of

task-genre associations across courses in different disciplines. The most heavily used

genres did not necessarily receive the highest frequency count. For example, textbooks

tended to be the most heavily used genre. However, the frequency of textbooks tended to

be low because faculty usually used one or a few textbooks in a course. If this study

selected genres for in-depth interviews solely based on frequency, the credibility

assessments participants made for and the information use tasks they performed to use

the most important genre they used to support their teaching – such as textbooks – would

not have been included in the data. Thus, it was important to consider the degree of use

when selecting genres for in-depth interviews. The genres that received the highest

frequencies might have been used in different classes of a course over the semester, but

sometimes the frequency count was high only because faculty used the same genre in

numerous instances for a specific purpose in a small section of a lecture.

The researcher used the AutoFilter function to display the selected genres

one-by-one and asked participants their purposes in using the selected genres, how they

used these genres, and the advantages and shortcomings in using these genres in their

courses. For example, one of the most frequently used genres in the genre repertoire

illustrated by Figure 3.4.1.1 was poem. As Figure 3.4.2.1 demonstrates, the researcher

displayed all of the poems this participant used and asked him his purposes in using these

poems and the advantages and shortcomings in using these poems in his course in the

interview.

	A	B	C	D	E	F	G	H	I	J	K
1	Title	Year	Author	Source	Genr	Purpos	Unit Title	When	Where	Where	Links
26	Poemas de Blas de Otero: Hombre	1950	Blas De Oter	N/A	Poem	Reading	Lecturas para el mi	24-Apr-13	Blackboard	Content	Full text
27	Poemas de Blas de Otero: Pido la p	1955	Blas De Oter	N/A	Poem	Reading	Lecturas para el mi	24-Apr-13	Blackboard	Content	Full text
28	Poema Insomnio de Dámaso Alons	1944	Hijos de la ir	N/A	Poem	Reading	Material adicional p	17-Apr-13	Blackboard	Content	Full text
30	Soledades, galerías y otros poemas	1907	Antonio Mac	Soledades	Poem	Reading	Material adicional p	8-Apr-13	Blackboard	Content	Full text
31	Abril florecía	1903	Antonio Mac	Soledades	Poem	Reading	Material adicional p	8-Apr-13	Blackboard	Content	Full text
38	Soneto de Luis de Gongora	N/A	Luis de Góng	N/A	Poem	Reading	Material para la clas	18-Feb-13	Blackboard	Content	Full text
39	Cántico espiritual, Llama de amor v	N/A	San Juan de	N/A	Poem	Reading	Material para la clas	11-Feb-13	Blackboard	Content	Full text
40	Soneto V	N/A	Garcilaso de	N/A	Poem	Reading	Material para la clas	6-Feb-13	Blackboard	Content	Full text
41	Soneto XIII	N/A	Garcilaso de	N/A	Poem	Reading	Material para la clas	6-Feb-13	Blackboard	Content	Full text
42	Madrigal	N/A	Gutierre de (	N/A	Poem	Reading	Material para la clas	6-Feb-13	Blackboard	Content	Full text
46	Romance de Abenámar	N/A	Romancero v	N/A	Poem	Reading	Lecturas para la cla	30-Jan-13	Blackboard	Content	Full text
47	Romance del prisionero	N/A	Romancero v	N/A	Poem	Reading	Lecturas para la cla	30-Jan-13	Blackboard	Content	Full text
48	Romance del enamorado y la muer	N/A	Romancero v	N/A	Poem	Reading	Lecturas para la cla	30-Jan-13	Blackboard	Content	Full text
49	Fonte frida	N/A	Romancero v	N/A	Poem	Reading	Lecturas para la cla	30-Jan-13	Blackboard	Content	Full text
50	Blanca nina	N/A	Romancero v	N/A	Poem	Reading	Lecturas para la cla	30-Jan-13	Blackboard	Content	Full text
52	Fragmento del cantar III	N/A	N/A	N/A	Poem	Reading	LA POESÍA ÉPICA Y	23-Jan-13	Blackboard	Content	Full text

Figure 3.4.2.1 An example of displaying the selected genres in the interviews

Taking the naturalistic approach, the interview questions were designed to capture the inherent complexity of naturally performed information use tasks and naturally made credibility assessments. Participants' credibility assessments were encompassed in the document assessments they made for the selected genres. For example, a participant described her purposes in using the genre *news articles* in her course,

"*Sometime there are kind of hot controversial or interesting things that I want [students] to discuss or think about. Many times I will find a hypothetical case and use that in class. "Okay, what would you do if this happened?" What is the law? What could you do? So, to keep those practical examples fresh, I'm always looking for those kind of things and when I find one, I stick in the notes so that I have examples that are still current.*"

She described the shortcoming of using *news articles* in her course,

"*There could be a little bit of concern about how accurate they are. They are written by reporters not lawyers in many cases, so they are reporters'*

understanding of the law or the situation. I would say 95 or 98% of the

time I think they're accurate. Those aren't the editorial ones. So I guess,

it's so current, are they accurate?"

3.5   Data Analysis

The interviews were fully transcribed by two professional transcription services.

The researcher listened to the recordings several times and used the corresponding genre

repertoires to correct the errors in the transcripts. Two courses that were collected in the

feasibility study were removed from data analysis because these two cases were

conducted to design the interview questions and develop the research procedure.

Additionally, the data of these two courses were not complete. As a result, a total number

of 28 courses, which were contributed by 27 participants, were analyzed.

3.5.1   Analyzing the data about participants and their courses

When recruiting participants and conducting interviews, data about their rank,

gender, and the semesters when they taught their courses were collected from their

teaching materials and their profiles on their schools or departments' websites. A

spreadsheet in an Excel file, which was named "*Course Information*", was created to

document these data. The following facets in the spreadsheet documented these data: (1)

Real course ID; (2) Fake course ID; (3) Rank; (4) Gender; and (5) Terms.

This spreadsheet was expanded to document the results of analyzing the data

about participants and their courses collected from the interviews. At the beginning of the

interviews, participants were instructed to respond to the interview questions designed to

collect contextual information about the courses as this information might inform data

analysis and aid in the interpretation of the data. These questions asked whether or not

they developed their courses from scratch, how many times they have taught the courses,

how familiar they were with the documents they used in their courses, whether their

courses were required or elective, how many students they had, majors and levels of their

students, and so on. Their responses to these questions were carefully read and compared

to inductively identify and develop coding categories. For example, in responding to the

question that asked his document familiarity, a participant described, "*Pretty familiar,*

actually. When I was a student taking a similar course, I used the same textbook, so I've

read it and worked through it, and so I'm pretty familiar with that." The coding category

"*very familiar*" was developed and the code was applied to this response. This category

was used to code other participants' responses to this question. Another participant

described, "*I think I'm very familiar with them, yeah, I read them.*" However, he then

asked, "*You mean the reading materials or do you mean the materials or the concepts*

that I need to cover in the course?" The researcher said, "*You were already familiar with*

the concepts you need to cover, right? But for the –" He asked, "*These actual documents,*

how familiar am I?" The researcher said, "*Yeah.*" He said, "*I'm pretty familiar. I mean I*

read all of them." He went on to say "*Well, not the whole, probably the only exception*

would be the two books. I haven't read all of it. I only read a part of it." Because he only

read some of the documents he used in his course, he was not completely familiar with

the documents he used. The coding category "*partially familiar*" was developed and

applied to his response. This category was used to code other participants' responses to

this question.

In the transcripts, participants' responses were analyzed and coded using the

"*Insert-Comment*" function of the Word, as figure 3.5.1.1 illustrates. The results were

then documented in the aforementioned spreadsheet in Excel. The following facets

documented the results: (1) Teaching experience: The number of times participants have

taught their courses; (2) Course development (e.g., from scratch, inherited, or partially

inherited); (3) Document familiarity (e.g., very familiar, partially familiar, or not very

familiar); (4) The exact or approximate number of students; (5) The level of students (e.g.,

undergraduate, masters, or Ph.D.); (6) The major of students; and (7) Course requirement

(e.g., required, elective, or highly recommended). These data were further verified,

analyzed, and reported in Section 4.2.1.

Figure 3.5.1.1 An example of analyzing and coding participants' responses to the

interview questions regarding their courses

3.5.2   Analyzing the general criteria

One of the interview questions asked participants the general criteria they used to

select the documents for their courses. Their responses to this question varied

substantially. Some directly described how they selected specific genres and why they

used specific genres, such as textbooks. As a participant described, "*I have never found

the perfect textbook for this class, one perfect textbook. Currently I'm using two

textbooks. One is more theoretical and one is more practically oriented...*" Some

described their approaches to course design. As a participant described, "*I initially try to

introduce students to the different theories that exist in language variation and change,

the different patterns of variation, stylistic variation. After we go through all the different

theories, we start examining empirical studies.*" Thus, their responses to this question

were carefully read and compared to inductively identify the approaches they took to

designing their courses and the general criteria they employed to select documents.

Different coding categories were developed and revised to encompass new approaches or

criteria. For example, it was decided that some courses were "*textbook-based*" and some

participants came up with "*topics or perspectives first*." These categories and the real IDs

of the courses that fell into different categories were documented in a Word file in order

to develop a complete picture of how participants selected documents for their courses.

A coding scheme that classified the general criteria they employed to select

documents was developed as a result of the analysis. In this coding scheme, the general

criteria were classified and abstracted to higher-level criteria – predictive criteria –

because the general criteria derived from participants' predictive assessments (Rieh and

Belkin, 2000). To ensure consistency, this coding scheme was revised according to the

coding scheme that classified the criteria participants employed to assess the genres this

study selected for in-depth interviews. The coding scheme of predictive criteria and

general criteria was presented in Table 4.3.3.1.1. A complete codebook that detailed the

definitions of different general criteria with examples was developed and attached in

Appendix 4. The results of analyzing participants' responses to the question that asked

the general criteria they used to select documents were reported in Section 4.3.3.1.

3.5.3 Developing the genre classification and coding schemes of tasks and criteria

3.5.3.1 Classifying the selected genres

Section 4.3.1.1 describes how participants identified the genres of the documents

they used in the interviews. The genres selected for in-depth interviews were first

gathered together from different interview transcripts and corresponding genre

repertoires. These genres were then classified according to participants' identifications

and descriptions. Table 4.3.1.2.1 presents the classification scheme of the selected genres.

Textbook was the most heavily used genre for most of the courses. Participants

employed many criteria to select textbooks because it was a major decision to make.

Some participants viewed textbooks as an integral part of teaching. They thought they

cannot teach without textbooks. Thus, textbook and textbook chapter warranted a distinct

category in the genre classification. Because several participants who used the books they

wrote as textbooks viewed their work as scholarly books, the scholarly books they wrote

were grouped together with other academic, research genres, such as monograph and research-based journal articles.

The selected genres were classified to give an overview of the genres included in data analysis and give a snapshot of the diversity of the genres used in the courses included in this study. The genre classification helped to understand the similarities and differences in the selected genres. The genre classification was not used to conduct co-occurrence analysis because this study took a bottom-up approach to identifying the genres in use. Genres could be identified from either the researcher or participants' perspectives, and this study wished to preserve both. Additionally, this study intended to analyze the selected genres based on the tasks that these genres were used to perform in the co-occurrence analysis. Preserving both participants and the researcher's perspectives helped to uncover the similarities and differences in the genres used to perform a task. For example, two participants used the books they wrote as textbooks for their courses viewed their books as scholarly books. As one of them described, "*I think of a textbook as more by its apparatus. That's the MIT's word... When I think about textbook, I go back*

to high school and I think it's got the questions from the chapters and review topics and

that wasn't the intention of [title of his book]." The researcher asked him what he meant

by a scholarly book. Was it because his target audience was the academic people? He

responded, "*Partly the audience and partly the treatment of the material. I would say a*

practitioner book is a one that is written very much for do this, do this, do this. It's much

more of how, as opposed to a scholarly book, which is much more about why." His book

was used in a MOOC course in which approximately 2000 practitioners enrolled. It was

his intention to shift these practitioners' thinking from how to why. He wanted to

advocate his perspectives about why, and he viewed advocacy as an integral part of

scholarship. Thus, he identified his book as a scholarly book. However, this study wished

to uncover the similarities and differences in assessing the genres used to perform the

same tasks, regardless of participants' perspectives. In this case, this study wanted to

know whether participants employed the same criteria to assess the genres they used to

provide foundational text. Did this scholarly book share common characteristics with the

standard textbooks used in other courses? Thus, participants' identification of and

perspectives about the selected genres were preserved for the researcher's analysis and

interpretation.

3.5.3.2 Identifying and classifying information use tasks

One of the interview questions asked participants their purposes in using the

selected genres. Another interview question asked them how they used the selected

genres. These two questions helped to collect data about the information use tasks they

performed to use the documents belong to the selected genres. Their responses to these

questions were analyzed to identify the information use tasks they performed. The

information use tasks this study identified were then classified into teaching tasks.

Participants' responses were carefully read and compared to develop and revise coding

categories. Sometimes the information use tasks they performed were also identified from

their identifications and descriptions of the genres of the documents they used and their

responses to the interview questions that asked them the advantages and shortcomings in

using the selected genres.

A set of information use tasks was identified from the transcripts. Most of the

coding categories were developed using *in vivo* terms. For example, in answering the

question that asked his purposes in using clicker assessments in his course, a participant

responded,

"*One is to motivate reading – pre-class reading – so those usually occur at*

the beginning of the class, and they are questions geared towards just

making sure people did the reading. And then the other form of clicker I

did was concept tests, which would occur during class. And so usually I

would lecture on a topic for a little while and then stop and post a question

and have them answer individually and then after they answer individually

they would talk. So it was an active learning activity where they would talk

within their group and then after they talked within their group they would

answer again just with whatever their new answer was or same answer. So

that was more of a both to help them think but also for me to understand

how well they are understanding during class."

The coding category *motivate reading* was developed based on and applied to the first sentence of this transcript snippet. The coding category *understand students' learning situations* was developed based on and applied to the rest of the snippet. These coding categories were documented in a spreadsheet in Excel for subsequent analysis of other transcripts. The coding categories that were identified and developed were used to analyze other participants' responses to the same questions. The coding categories were applied and revised accordingly. For example, in answering the question that asked her purposes in using polling (the clicker assessments), a participant described, "*One is to keep them involved. Another reason is to help them apply the information that we've just talked about in a practical situation... I also use them to check have they got the concept, can I move on, or do I need to spend more time for it.*" Multiple information use tasks were identified from this snippet and the coding categories that have been developed were used to analyze this snippet. The category *engage students* was applied to the first sentence. The category *apply the learning content* was applied to the second sentences.

The category *understand students' learning situations*, which was developed from the

aforementioned snippet, was applied to the third sentence of this snippet.

Some coding categories were developed into long phrases that encompassed

multiple similar or related task goals. For example, the task *provide*

theoretical/contextual information was originally developed based on situations in which

participants used documents to provide contextual, background information that helped

their students to understand the major learning content, such as the information about the

war in which the poems that students were learning were created and the authors who

created these poems. It was later expanded to include situations in which participants

used documents that contained theories to help their students understand the major

learning content because theories were used as background information. The information

use task *provide suggested readings/more information* has also been expanded. It was

originally developed based on situations in which participants used textual documents

(e.g., book chapters or journal articles) as optional readings for students who were

interested in specific topics. It was later expanded to include situations in which

participants used other genres (e.g., news articles and websites) for students who were

interested in learning more about specific topics. These situations shared similar task

goals in that the documents that contained more information on specific topics were used

for students' interests. The task *connect with the real world/make a connection(s)* was

originally developed based on situations in which participants used documents to help

their students relate the learning content to what was happening in the real world.

However, there was a case in which a participant used specific genres to illustrate two

different kinds of connections – the connections between different genres and between

different eras. As he described his purposes in using contemporary songs,

> "*I would say, two basic reasons. One, like I mentioned before, because it's*
>
> *a way for students to see how the literary texts that are the focus of our*
>
> *work in the classroom are not separated from the rest of existence, but that*
>
> *they have influence on other artists such as musicians. So it's a way to*
>
> *connect different genres, the literary genre with the musical one. At the*
>
> *same time, since this is a history of literature course, sometimes we are*

working with texts that are several centuries old. And it's a way to show

students how these texts that might be 300, 400 years old are still

influencing artists today, contemporary artists to write their songs... So it's

a way to make the connection of past literally works with our

contemporary world."

The connections he wished to illustrate did not occur frequently in the courses

included in this study. Additionally, he shared common goals with other participants who

wanted their students to connect the learning content to real-world events in that they

wanted their students to make a connection(s). Thus, the task "*connect with the real*

world" was expanded to "*connect with the real world/make a connection(s).*"

Some tasks were originally developed as a broad category, but were later divided

up and defined narrowly. For example, the task *look up* was divided into two coding

categories, including *look up/provide references* and *look for examples/problems*.

Participants in the science disciplines described how they designed and assigned work

examples or problems for students to work on in detail. It seemed looking for examples

or problems was a common but important task to the science disciplines. Additionally,

they looked up the data in reference genres (e.g., databases and handbooks) when

designing and solving problems. Looking for work examples or problems was different

from looking up the data because they involved different types of information. Thus, the

task *look up* was divided up according to the types of information participants were

looking for.

Because the information use tasks were identified and developed using *in vivo*

terms, it has caused confusion regarding who performed the tasks. Thus, the information

use tasks were renamed to reflect instructors' perspectives. For example, the information

use task *understand an area/a topic* was renamed as *enable students to understand an*

area/a topic. The task *explore interests* was renamed as *enable students to explore*

interests. The task *find job* was renamed as *help students find jobs*. Some information use

tasks remained the same because both participants and students performed these tasks.

For example, the task *look up/provide references* were not revised. A participant

frequently looked for different types of reference information when she designed

problems for students to work on. As she described,

"When I make up problems, in order to make sure that they work, I usually

end up using properties out of handbooks like these. I take it as a point of

pride that I don't just make up a density. I use a real density so if I say it's

an eight weight percent solution of formic acid and water, I don't just say

it has a density of 1.2g/cm^3. I look up the density, so it's a real problem

and that's important to me personally."

Students who took her course learned how to look for different types of

information in reference genres to solve problems. As she described,

"We have to search for information a lot as chemical engineers and so in

these classes when they first learn how to start searching for information.

They're used to being given a problem from chemistry or from physics or

from math where all of the information that they need to solve that

problem is in that textbook. Once you get into real life and you're a real

chemical engineer, if you have a problem, there is no one book that you

can go to and it's not going to tell you all of the information you need to

solve that problem... So they need to learn how to go looking for

information."

The task "*have fun*" was not renamed because the interview transcripts indicate

that in some cases, both participants and students enjoyed entertaining, funny videos.

Additionally, some information use tasks were renamed because the original categories

were too long. These often resulted from combining *in vivo* terms from different

transcript snippets. Thus, it was important to make these tasks concise. For example, the

task *walk through the process/provide procedural instruction* was renamed as *walk*

students through the process. The task *structure the course/lecture* was renamed as

structure the course.

After identifying and renaming the information use tasks, they were classified into

teaching tasks according to the common goals they shared because this study took the

goal-based approach (Freund, 2008b). For example, the information use tasks *to present*

reality, *provide multimodal information*, *connect with the real world/make a connection*,

and *help students visualize the goals* were grouped together and called the teaching

task *make the learning content real and concrete* because the goal of these tasks was to

present real objects, events, or problems, and make the learning content concrete and

tangible. The information use tasks *look up/provide references*, *look for*

examples/problems, *help students find jobs*, *enable students to get citation information*,

and *provide guidelines for writing* were grouped together and called the teaching

task *obtain reference information* because the goal of these tasks was to obtain different

types of information to accomplish specific tasks. The coding scheme of teaching tasks

and information use tasks is presented in Section 4.3.2 in Chapter 4. A complete

codebook that detailed the definitions of teaching tasks and information use tasks with

examples was developed and attached in Appendix 5.

3.5.3.3 Identifying and classifying assessment criteria

One of the interview questions asked participants the advantages and shortcoming

in using the selected genres. This question helped this study to collect data about the

criteria they naturally employed to assess the documents belong to the selected genres.

Their responses to these questions were analyzed to identify their assessment criteria.

Sometimes the criteria were also identified from their identifications and descriptions of

the genres of the documents and their responses to the interview questions that asked

their purposes in using the selected genres and how they used these genres. The

transcripts were carefully read and compared to develop and revise coding categories.

A number of previous studies on credibility and relevance assessments were

consulted to identify the assessment criteria and develop coding categories, including: (1)

The unifying framework of credibility assessments (Hilligoss and Rieh, 2008): For

example, the criteria *public acceptance/endorsed usage* and *source* were adopted and

adapted from this study; (2) The criteria participants of an Internet Discussion Forum

employed to assess the information quality of the messages and the credibility of the

authors (Savolainen, 2011): For example, the criteria *recency*, *objectivity*, and *specificity*

were adopted and adapted from this study; (3) The criteria scholars employed to assess

information quality and cognitive authority on the Web (Rieh, 2002): For example, the

criteria *presentation* and *organization* were adopted and adapted from this study; (4) The

relevance criteria users employed in different contexts (Barry and Schamber, 1998): For

example, the criteria *tangibility* and *depth* were adopted and adapted from this study; and

(5) Topics of users' comments when they assessed the credibility of e-commerce

websites: For example, the criterion *functionality* was adopted and adapted from this

study (Fogg, et al., 2003).

Additional criteria were inductively identified from the transcripts. For example,

the criterion *association with authoritative knowledge* was developed from a participant's

assessment of one of the textbooks he used. This textbook incorporated the official body

of knowledge that the leading professional organization in his field developed. It was one

of the reasons of why he perceived this textbook as credible. As he described,

> "*One of them is actually called the guide with project management body of*
>
> *knowledge and that is the official textbook for the field... However, that is*
>
> *a standard report basically, so that textbook is really not what you can*
>
> *easily learn from... So that is where the other two textbooks come in is that*

the [author] textbook the main textbook. The [author] textbook is one of

the best that takes apart the standard texts and actually teaches people

about how to think about them... [The author] actually takes excerpts from

that body of knowledge book and incorporates it into her textbook and

then describes a lot of other, she has one case study after another... If the

textbook is not only aligned closely with the authoritative material, but at

the same time is open to practitioner views on the whole process, then to

me that makes a good textbook."

In some cases, it was difficult to identify the criteria participants employed and develop coding categories. Several coding categories were developed very late. For example, when identifying the genre of a video, a participant described, "*It's an example of someone breaking copyright.*" She later elaborated, "*The wedding entrance dance is an interesting video because you can think about how we all use music and how we all break copyright law. So here's something that just seems like we would all do this and nowadays some of the video we record and you put online and you do all these things and*

not realize that you're breaking copyright." Intuitively, it seemed she did not employ any

criteria, but she related the content of the video to what she was teaching. There were

multiple similar instances in the transcripts. Thus, the criterion *relevance* was developed

as a coding category. It refers to participants' concerns about the relevance of documents

to what they were teaching, especially those that seemed irrelevant intuitively.

The criteria this study identified and developed tended to be neutral. Participants

employed these criteria to assess the documents belong to the selected genres. The results

of their assessments were positive, negative, or both. For example, employing the

criterion *recency* resulted in *updated* or *outdated*. Sometimes the advantages and

shortcomings were two sides of the same coin. Participants accepted the shortcomings

and took advantages of the selected genres. As a participant described the advantages and

shortcomings in using biographies in his course, "*One person's life experience is a*

limited, it's a constrained prospective, one bigger picture, so that's a limit. It's also a kind

of strength because students can get in a sense a more depth about how someone's life

was shaped by the thing we were talking about, so yeah that's a strength and weakness in

different ways."

The criteria that have been identified were documented in a spreadsheet in Excel.

These criteria were used to analyze and code other transcript snippets. These criteria were

revised to encompass new situations or divided up into different criteria. For example, it

was difficult to differentiate the criteria *coverage* and *completeness of information*. The

researcher was struggling with whether to merge or divide up these two categories. The

textbooks participants used contained most of the information they needed, but almost all

of the textbooks were incomplete. These two criteria could apply to these situations.

However, maybe one criterion was enough. After reading the following transcript

snippet, the researcher decided these two criteria should be defined differently because

they involved different situations. As a participant described the shortcomings in using

one of the textbooks in her course,

> "*I think that the first textbook I don't like it because it's too, it's too – how*
>
> *can I put this? The synthesizer missed some main points. You know, so like*

when I first read it and I was looking through some of the things and so

some of the areas because I had read it either when I was a graduate

student or read the original article of it, and then I'm reading the summary

of it in the textbook and I'm thinking oh, but they forgot. This is a pretty

big point here."

The researcher decided the criterion *coverage* refers to participants' concerns

about whether the documents they used, usually the major texts for their courses, covered

the most important topics or basic concepts they thought should be there. The criterion

"*completeness*" refers to participants' concerns about whether the information in a

document was complete without missing important points.

Similar decisions were made for the criterion *publishing and review process*.

Originally it included participants' concerns regarding whether the documents they used

have been reviewed and edited. It was expanded to include participants' concerns about

their interactions with the authors and how the authors responded to their feedback or

questions. However, after reading the transcript snippets multiple times, the researcher

thought the above situations were very different. Reviewing and editing usually took

place before a document was published, and its purpose was to ensure the quality and

accuracy of the information. Participants' interactions with authors tended to take place

after a document was published, although there was a case in which a participant was on

the editorial board of a textbook and he interacted with the author. In several cases,

participants commented on the documents they used (e.g., book reviews) and interacted

with the authors. They did not serve as editors or reviewers, although their comments

might help to improve the documents. Thus, the criterion *publishing and review process*

was divided into two criteria, including *being reviewed and edited* and *interaction with*

authors.

After identifying the criteria participants employed to assess the documents

belong to the selected genres, these criteria were renamed to make them concise. Some

criteria were too long because they combined different *in vivo* terms that shared the same

meanings. For example, the criterion *currency/timeliness* was renamed as *recency*. The

criterion *whether the knowledge is fixed/truthfulness* was renamed as *truthfulness*. The

criterion *topic variety/diversity* was renamed as *topic variety*. The criterion *completeness*

of information was renamed as *completeness*.

The criteria were then abstracted to a higher-level and classified into several

evaluative criteria because these criteria derived from participants' evaluative

assessments (Rieh and Belkin, 2000). The criteria were classified according to the

definitions of document genres and credibility this study adopted, the credibility research

this study reviewed in *Chapter 2*, and participants' descriptions. The evaluative criteria

include: *suitability*, *credibility*, *information quality*, *cost effectiveness*, *personal*

preferences, and *others*. Criteria including *student/course level match*, *applicability*, and

content orientation were classified under *suitability* because these were related to the

match between the documents and the courses. Because *credibility* has two key

dimensions, including *trustworthiness* and *expertise* (Fogg and Tseng, 1999; Hilligoss

and Rieh, 2008), criteria classified under *credibility* were further classified according to

these two dimensions. For example, criteria including *source*, *authorship*, and *research*

effort were classified under the dimension *expertise* because they were related to how

knowledgeable and skillful a source was (Fogg and Tseng, 1999). Because

trustworthiness could be perceived from either the information or the source of a

document (Fogg and Tseng, 1999; Hilligoss and Rieh, 2008), criteria classified under

trustworthiness were further classified according to from which they were perceived. For

example, because trustworthy information tends to be "reliable, unbiased, and fair"

(Hilligoss and Rieh, 2008), criteria including *objectivity*, *validity*, *accuracy*, and

factuality were classified under *trustworthiness of information*. Additionally, the genre of

a document could be identified based on its socially recognized communicative purposes,

common aspects of forms and content (Crowston & Kwaśnik, 2003). The criterion *intent*

was viewed as representing the communicative purposes of genres. *Intent* was classified

under one of the dimensions of credibility – *trustworthiness of a source* – because a

trustworthy source was "honest, careful in choice of words, and disinclined to deceive"

(Hilligoss and Rieh, 2008). It was also determined that *information quality* had two

dimensions – *form* and *content*. Thus, the criteria classified under *information quality*

were further classified into these two dimensions. For example, the criteria *presentation*

and *organization* were classified under *form* because how information was presented and

organized shaped the form of the genre of a document. The criteria *clarity*, *completeness*,

and *coherence* were classified under *content* because the extent to which the information

was clear, complete, or coherent was related to participants' perceived quality of the

content of the genre of a document.

After classifying the criteria into evaluative criteria, the dimensions

of <u>*information quality*</u>, including *form* and *content*, were employed as coding categories

to analyze some of the transcript snippets that were coded by the criteria *presentation* and

quality of sub-genres/information elements. Previously, the criterion *presentation* was

broadly defined as participants' concerns about how the information in the documents

they used was presented and expressed. It encompassed multiple situations, including

participants' concerns about whether the documents contained pictures or used humors,

the font, and the formats of documents. Some of the instances that were previously coded

by the criterion *presentation* were related to the *form* aspect of a genre. As a participant

described, "*I think the advantage of a FAQ is that they are questions, so it is hopefully*

the question that students are thinking of when they think about that topic, or that they

should be thinking of. So it's a nice format for a resource." It was better to code these

instances by the dimensions *form*. Thus, the coding of some of the snippets was revised.

The definition of the dimension *form* was inductively developed from the transcript

snippets. The definition of the criterion *presentation* was revised and defined narrowly. It

refers to participants' concerns about the visual design and layout of the documents.

As well, all of the transcript snippets that were coded by the criterion *quality of*

sub-genres/information elements were reviewed and the coding of some snippets were

changed to *information quality: content*. Previously, the criterion *quality of*

sub-genres/information elements was broadly defined. It included participants' concerns

about whether specific sub-genres or information elements (e.g., work examples,

definitions, and theories) and documents as a whole were good. However, there were

some instances that fit the higher-level category better. For example, a participant

described the video lesson she used, "*Because I made them. I mean it's not me in the*

lecture it's another professor, but I shot the video, so I already know it. I know it's good

content." She was assessing this video lesson as a whole, not a specific sub-genre or

piece of information in it. Thus, the coding of this snippet was revised from *quality of*

sub-genres/information elements to *information quality: content*. Other snippets were

also revised if higher-level criteria and dimensions fit the instances better. The definition

of the criteria *quality of sub-genres/information elements* was revised and the definition

of the criteria *information quality: content* was inductively developed to reflect the

granularity of participants' assessments.

The coding scheme of evaluative criteria and assessment criteria is presented in

Section 4.3.3.2 in Chapter 4. A complete codebook that detailed the definitions of these

criteria with examples was developed. This codebook is attached in Appendix 6.

3.5.4   Differentiating information use tasks and document assessments at different

levels of granularity

Participants' responses to the interview questions that asked their purposes in

using the selected genres, how they used these genres, and the advantages and

shortcomings in using these genres varied in their levels of granularity. Sometimes all of

the documents belong to the same genre were used to perform the same tasks. As a

participant described, "*All the photographs are just illustrations of real objects that*

exemplify some of the principles we're studying." Sometimes the documents belong to the

same genre were used for several distinct purposes. For example, a participant classified

the journal articles he used into three categories, including: about methods or

methodology, about trends, and examples. As he described, "*A lot of those articles are*

actually either methods articles or about methodology or they're about trends. You can

see something fashion waves and ISR, to talk about where the field is going and what's

happening. And the other ones are just examples." Sometimes different documents were

used for different purposes, although they were identified as belonging to the same genre.

As a participant described,

> "*Each one has a different purpose. Two of them are on professional*
>
> *development. Well, actually this is professional development, national*
>
> *award certification. Grant money is certainly professional development.*
>
> *This reflective practice is goals for professional growth. It's a*

self-reflective piece for them to use, looking at their own growth. And the

others are guides that librarians can use as they are developing their

programs."

It was important to differentiate information use tasks and document assessments

at different levels of granularity because sometimes different documents were used to

perform different information use tasks and different criteria were employed to assess

documents used to perform different tasks, although they belong to the same genre. For

example, a participant described his purposes in using textbooks in his course,

"*The first book was basically a text for the course. The chapters in the*

book lined up with the teaching modules for each week. It had built-in

exercises. So it was – in terms of the student building this portfolio with

their own topic. There were some exercises in the book, some I made up

separately and they are there too, but the [author] book was really the

structure of the class to a large extent. The other book was an optional

book. People who wanted to focus more on mixed methods could use that.

I would give optional readings out of that but I didn't require those

readings."

This snippet indicates he used two textbooks. One was the major text for this

course. The major text was used to structure the course because it contained built-in

exercises that helped students to build their portfolios. The other textbook was optional.

Three information use tasks were applied to this snippet, including *provide foundational*

text, *structure the course*, and *provide suggested readings/more information*. Two criteria

were applied to this snippet. The criterion *contain important sub-genres/information*

elements was applied to "*It had built-in exercises.*" The criterion *emphasis* was applied to

"*People who wanted to focus more on mixed methods could use that.*" Additionally, it

was important to differentiate different types of assessments participants made.

Sometimes they described their perceptions of a genre generally. They did not make their

assessments based on specific documents. For example, in responding to the question that

asked the advantages and shortcomings in using journal articles in his course, the above

participant described,

"…They're not like textbooks that you just unthinkingly say, Oh, there is a

methods paper. They said to do it this way, so that's okay. Somebody else

may say, well, no, this is the way it should be. What's theorizing? There's a

whole debate over like what theory is not theorizing. That kind of thing

goes on back and forth. So if you just read one article and think that's the

truth rather than understanding that's part of discussion within the field.

That in methodology, they're different points of view, different approaches,

different school…"

The criterion *truthfulness* was applied to this snippet because he was describing

the danger of treating journal articles as the ultimate truth. He was not describing a

particular a journal article. Later he said regardless of what genre a document was, it was

important to critically think about it. It was important to differentiate among his general

assessments and the assessments he made for specific documents. Therefore, the

interview transcripts were re-analyzed to differentiate the information use tasks

participants performed to use and the criteria they employed to assess different

documents belong to the same genres at different levels of granularity. The general

assessments they made for specific genres were also differentiated from the assessments

they made for specific documents. Tables in a Word file were created to document this

analysis. Figure 3.5.4.1 illustrates an example of such analysis. It was the result of

analyzing the above participant's responses described in this paragraph.

Course ID	Textbook	In use: Required	Emphasis Applicability Contain important sub-genres/information elements Public acceptance/Endorsed Usage Source	Foundational text/Provide learning content Structure the course
		In use: Optional	Emphasis	Provide suggested readings/more information
		In use: General	Whether the knowledge is fixed/Truthfulness	

Figure 3.5.4.1 An example of differentiating at different levels of granularity

Differentiating the information use tasks participants performed to use and the

criteria they employed to assess different documents or a genre was not always

straightforward. Sometimes participants' document assessments were made at both genre

and individual document levels. It was difficult to make decisions regarding whether or

not to differentiate among different documents. For example, a participant assessed the

textbooks she used at the genre level, but she used a specific document as an example to

describe her assessments. As she described,

"In each case the author has a deep understanding of the law and

understands what's in the law and what's not in the law, and does a very

good job of explaining to someone who hasn't yet read the law what's

there. So for example the first author has a really nice textbook. It's not so

huge but talks about copyright for librarians and educators. And he really

focuses on the areas of the law that you need to know and talks about in a

way that makes sense to a practitioner."

Although she used a specific document as an example, her assessments were

made at the genre level because she was describing the common characteristics of the

textbooks she used. However, in responding to the question that asked her the advantages

and shortcomings in using these textbooks in her course, her assessments were made for

specific documents, not at the genre level. As she described,

"The [second author] book is no longer in print and so I use his website

for the readings. I have students do it off the website which is not geared,

it's not an e-book, the way we think of e-books. It's really the pages from

the book. The [third author] textbook is available as an e-book so that's a

nice advantage and I think the [first author] textbook might also be an

e-book; there might be an e-book version. Also an advantage is that the

[second author] and [third author] textbooks are free."

Although she described the advantages and shortcomings of using different

documents, she employed the same criteria to assess these documents. It would have been

great if all of the textbooks were available as real e-books and for free. Therefore, the

textbooks she used were assessed at the genre level. The assessments she made and the

information use tasks she performed were not differentiated at the document level.

3.5.5   Co-occurrence analysis

Finally, co-occurrence analysis was conducted to identify the associations among

tasks, criteria, and the selected genres and abstract the associations to higher-levels. The

associations were identified primarily based on the co-occurrences of tasks and criteria

and participants' rationale (e.g., "*because*" and "*so*"). A document or a set of documents

belong to the same genre was used to perform one or more information use tasks, and

multiple criteria were usually employed to assess this document or genre. However, not

all of the criteria were associated with all of the tasks performed to use this document or

genre. Certain criteria were particularly associated with a task. For example, a set of

tutorials that a participant found on YouTube was used to provide real-world examples

that explained the concepts in the textbooks. These tutorials were also used to let students

have fun because they were interesting and entertaining. In this case, the criterion

tangibility co-occurred and was associated with the tasks *provide an example(s)* and

explain/illustrate/demonstrate. The criterion *affect* co-occurred and was associated with

the task *have fun*. It was important to identify the criteria associated with the task

performed to use a document or genre. Thus, the transcripts were re-analyzed to identify

the associations among tasks, criteria, and the selected genres.

The co-occurrence analysis was conducted based on information use tasks

because tasks initiated document/genre use and assessments. All of the documents or

genres used to perform the same information use task were first gathered together with

the criteria participants employed to assess these documents or genres. A Word file was

created to document the process and results of the co-occurrence analysis. Criteria

associated with a task were identified and marked in blue. The criteria associated with a

task were then abstracted to corresponding evaluative criteria and dimensions according

to the coding scheme of evaluative criteria and assessment criteria. The criteria associated

with a task in different instances were then added up to calculate how frequent different

task-criterion associations took place. The genres used to perform the same task were also

grouped together and added up to identify their associations with this task and the

associated criteria. For example, in answering the question that asked her purposes in

using demonstrations/comedies in her course, a participant responded, "*It was good to*

present real thing, real comparison, just see the real variation that exist in real life." The

information use task – *to present reality* – was applied to this snippet. In answering the

advantages and shortcomings in using demonstrations/comedies in her course, she

responded, "*The advantages is that we know you always want to present something that*

is more concrete to students, and that can be tangible to them so they can be able to

really have a grasp of the idea we are talking about in class." The criterion *tangibility*

has been applied to this snippet, as Figure 3.5.5.1 illustrates.

Figure 3.5.5.1 An example of co-occurrence of an information use task and a criterion

This co-occurrence indicates the information use tasks *to present reality* was

associated with the criterion *tangibility*. Thus, the criterion *tangibility* was marked in

blue. According to the coding scheme of evaluative criteria and assessment criteria,

tangibility was classified under one of the dimensions of credibility, that is,

trustworthiness of information. Thus, the criterion *tangibility* was transformed to

trustworthiness of information. The frequency of the criterion *tangibility* and the

frequency of *trustworthiness of information* were calculated, as Figure 3.5.5.2 illustrates.

- **Course ID**: Demonstration/Comedy (Tangibility, Form, Affect) ➔ Credibility: Trustworthiness of information*1(Tangibility*1)

Figure 3.5.5.2 An example of the co-occurrence analysis: Marking the associated

criterion in blue and abstracting it to corresponding evaluative criterion and dimension

All of the criteria associated with a task were added up to calculate how frequent

a criterion was associated with a task. The corresponding evaluative criteria and/or

dimensions were also added up to calculate how frequent an evaluative criterion and/or

its dimensions were associated with a task, as Figure 3.5.5.3 illustrates. In this way, the

criteria associated with a task were systematically abstracted to corresponding evaluative

criteria and/or dimensions. Such abstraction allowed this study to identify patterns of

task-criterion associations at different levels of granularity. This study was able to find

out the evaluative criteria, the dimensions of evaluative criteria, and the assessment

criteria associated with a task. The abstraction also allowed this study to identify the

assessment criteria and/or dimensions that were more frequently associated with a task.

- **Course ID** Demonstration/Comedy (Tangibility, Form, Affect) → Credibility: Trustworthiness of information*1(Tangibility*1)

- **Course ID** Documentary (Affect, Tangibility, Intent, Whether it's informative, Contain important/unusual ideas/perspectives, Length/Amount of information) → Credibility: Trustworthiness of information*1(Tangibility*1)

- **Course ID** Interview (Tangibility, Form) → Credibility: Trustworthiness of information*1(Tangibility*1), Information quality: Form*1(Form*1)

- **Course ID** Photo (Tangibility, Affect) → Credibility: Trustworthiness of information*1(Tangibility*1)

Figure 3.5.5.3 An example of marking the associated criteria in blue and grouping

documents/genres used to perform the same information use task together

All of the genres used to perform a task were also added up to calculate

frequencies of different genres and identify the similarities and differences in the genres

used to perform a task. This study then created summary results based on the frequencies

of genres and criterion-task associations for each task. Figure 3.5.5.4 illustrates an

example of the summary result for a task. It was the summary result of analyzing the

genres of the documents used to perform the task *to present reality* and the criteria

associated with this task. The summary results for different tasks were then organized in

a table in Word to calculate how frequent different evaluative criteria were employed to

assess the genres used to perform a task and identify the dimensions and/or assessment

criteria frequently associated with this task.

- To present reality – Multimodal genres, Internet genres, Professional genres (Tutorials, Demonstration/Comedy, Documentary, Interview, Photo, Example Charts, Statistical Data, Search Results, Blog Post, Instructional Material, Authoritative references*2, Webpage, Political Speech) – Credibility: Trustworthiness of information*10 (Tangibility*8, Degree of formal*2), Information quality: Form*6(Form*4, Organization*2), Credibility: Expertise*5(Source*3, Position*2), Suitability*3(Specificity*2, Originality: Primary*1), Information quality: Content*2(Depth*2), Public acceptance/Endorsed usage*2

Figure 3.5.5.4 An example of the summary result for a task

Sometimes a lot of criteria were identified as being associated with a task. For

example, many criteria were decided as being associated with the task *provide*

foundational text because it tended to be the major decision to make and it involved a lot

of sub-decisions. Participants had a lot of concerns regarding the foundational texts they

used. Identifying the co-occurrences of tasks and criteria and determining the criteria

associated with a task were not always straightforward. Sometimes it required more

reasoning and interpretation to determine whether a criterion was associated with a task,

especially when multiple information use tasks were performed to use a document or a

genre and multiple criteria were employed to assess this document or genre. For example,

a participant described his purposes in using tutorials in his course,

> "*In most of those cases, they provide real-world examples of the concepts*
>
> *that we're talking about in class, so the primary goal is to try to make the*
>
> *material in the textbook which is sometimes the abstract to try to make it*
>
> *more concrete and more relevant for the students. So that's the primary*
>
> *motivation. The second one is I'm realistic enough to know that the*
>
> *information industry is so loaded with jargon that if you're just exposed to*
>
> *it one time, you can't retain it. So my teaching strategy is to come at them*
>
> *from multiple directions and to have redundant materials. And so if I could*
>
> *find an entertaining video that illustrates the same concepts I talked about*
>
> *in the book, I think that's going to help a student retain the material*
>
> *better.*"

Multiple task codes were applied to this snippet, including: *provide an*

example(s), *connect with the real world/make a connection(s)*,

explain/illustrate/demonstrate, *provide multimodal information*, and *improve students'*

understanding. Multiple criterion codes were applied to this snippet and his subsequent

responses, including: *tangibility*, *presentation*, *source*, *affect*, *length/amount of*

information, and so on. It was confusing which criteria were associated with which task.

This snippet was read several times when conducting the co-occurrence analysis. Because

most of the tutorials were used to provide real-world examples to explain the concepts in

the textbooks and these examples was used to perform other information use tasks,

provide an example(s) and *explain/illustrate/demonstrate* served as umbrellas tasks that

initiated other tasks. Thus, it was decided that the criterion *tangibility* and all of the other

criteria were associated with these two umbrella tasks. However, it was decided that other

tasks were only associated with the criteria that co-occurred. For example, using tutorials

that gave real-world examples helped students to *connect with the real world* because it

made the learning more concrete and relevant to them. Thus, the criterion *tangibility* was

associated with this task. Because later he described, "*There are certain people who learn*

things by watching videos... Sometimes it's just an overview for the student that really

presents materials that are discussed in the book, but presents them in a more dynamic

manner", it was decided the criterion *presentation* was associated with the task *provide*

multimodal information. Thus, this criterion was marked in blue, abstracted to

corresponding evaluative criterion and dimension, and grouped together with other

documents/genres used to *provide multimodal information* for further analysis when

conducting the co-occurrence analysis.

There were several cases in which participants' assessments were excluded from

the co-occurrence analysis. Documents or genres that were assessed negatively and hence

were not used to perform a task were excluded. For example, in responding to the

question that asked her the advantages and shortcomings in using journal articles in her

course, a participant expressed her negative perceptions of books and book chapters. As

she described,

"*I feel they are more interesting than just writing, reading just dry book*

chapters. They are more interesting because they are a whole piece on

their own where you start with an introduction, literature review, then

questions, research questions, how data is collected, so you have so many

things to learn from a journal article. I feel like after a while, I think

students would love to read more journal articles than just dry book

chapters about the background of language variation and change and

theories and stuff like that and how you know their applicability or not.

This way they see how everything is applied."

This snippet indicates she was assessing journal articles and book chapters

simultaneously. She employed the same criteria, including *affect* and *completeness*, to

assess these two genres. Journal articles were perceived positively, whereas book

chapters were perceived negatively. Journal articles were able to help students apply what

they have learned, but book chapters were not able to do so. Thus, journal articles were

included in the analysis of the criteria associated with the task *help students apply the*

learning content, but book chapters were excluded from this analysis. These dry book

chapters were included in the analysis of the criteria associated with the task *provide*

theoretical/contextual information because they were used to provide theoretical,

background information.

A similar exclusion decision was made for the assessments a participant made for

several of the documents he inherited. In responding to the question that asked his

purposes in using the documents cited in the lectures he inherited from another instructor,

a participant described,

"*To be honest, I didn't find them very, very. I mean they are okay, but I*

didn't feel they were that necessary because what these external resources,

the point they are trying to make is not the main point that I try to

emphasize in the lecture. So these are just really background information

about why you should learn it, why the database skill is important, kind of

just to justify... It's not really critical in the lecture... If I were to create my

own slides, I might not use them."

Although the task code *provide theoretical/contextual information* was applied to

this snippet, this entry was excluded from the analysis of the criteria associated with this

task because he was assessing the function of these documents in the lectures he

inherited, and he might not have used these documents if he had developed his course

from scratch.

Chapter 4 Results

4.1   Overview

This chapter reports the results of this study. Section 4.2 summarizes the data

about participants (e.g., their rank, teaching experiences, and document familiarity) and

their courses (e.g., disciplinary identities, course development, and course requirements).

These illustrate the ways participants and their courses varied and help to interpret the

results. Section 4.3 first describes participants' identification of the genres of the

documents they used and presents an overview of the selected genres. It then presents an

overview of teaching tasks and information use tasks. It goes on to report participants'

approaches to course design and their predictive assessments. What follows is an

overview of evaluative criteria and assessment criteria they employed. Section 4.4

presents the main results of this study, including a summary table of the associations

among tasks, criteria, and genres, and a description of these associations. The description

of the associations was structured based on tasks because the co-occurrence analysis was

conducted based on tasks.

4.2   Participants and Their Courses

4.2.1   Participants who contributed to this study

Twenty-seven participants taught the twenty-eight courses this study analyzed.

One of them contributed two courses. The rank of participants was quite diverse. There

were ten assistant professors, four associate professors, and seven professors. Others

included an assistant professor of practice, three associate professors of practice, and two

research associate professors (one was also a professor of practice).

Participants' teaching experiences varied. It was the first time that ten of them

taught the courses they selected for this study. It was the second time that five

participants taught the courses they selected. Eight participants taught their courses from

three to ten times. Three participants taught their courses more than twenty times. There

was a special case in which the participant re-taught the course he selected since 1998.

Thus, it was his first time to teach this course since a long time ago.

Most participants were very familiar with the documents they used in their

courses. Four participants were partially familiar with the documents they used. In one of

these cases, a participant just started to teach. He inherited another instructor's teaching

materials and used the documents this instructor used. He was not familiar with the

textbooks he inherited, but he read the rest of the documents he inherited. In other three

cases, participants either switched to new textbooks or just started to use a new textbook.

They were not very familiar with the new textbooks, but they were familiar with the rest

of the documents because they have used these documents in the past. Two participants

were not very familiar with the documents they used. One was not very familiar with the

documents he used when he was teaching the course, but he became very familiar when

he participated in this study as he was going to teach it again. The other was not very

familiar with the textbook he used, but the content was so basic to him. This textbook

was assigned by his department.

4.2.2   Overview of the courses

The courses included in this study varied in a number of different ways, so while

they were not representative of university teaching practices in general, they did reflect a

wide range of characteristics. Most of the courses (17 out of 28) belong to social sciences.

Eight courses belong to sciences, and three belong to humanities. Some courses targeted

students in specific academic programs or departments; some were open to students in

different programs in the same school; still some were cross-listed in different programs

in different schools. Most of the courses were taught in the semesters of spring 2013 and

fall 2012. Other courses were taught in the semesters of summer and fall 2013.

The courses included in this study varied in their requirements. There were ten

required and ten elective courses. Three courses were highly recommended. These

courses were not required, but almost all of the students in specific academic programs

took them. Two courses were elective within specific requirements. Students chose to

take these courses to fulfill requirements. As a participant described, "*In arts and*

sciences, the undergraduates are required to take one lab course, so I was hoping to get

economics or mathematics students to take this class to fulfill that requirement." Three

courses were both required and elective. These courses were required for certain students,

but elective for other students. As a participant described, "*For the first three years, it*

was elective and now it's required for graduate students. It's an elective for seniors."

The courses included in this study were developed in four ways, including: *from scratch*, *partially inherited*, *inherited*, and *department determined*. First, most of the courses were developed *from scratch*. Participants determined what documents to use. They obtained the documents they used by a variety of means (e.g., active searching, keeping up on a regular basis, or shared by other people). Some participants used the documents that previous instructors used when they started to teach, but they have gradually replaced the inherited documents with the ones they obtained by themselves. Second, the documents used in several courses (5 out of 28) were *partially inherited*. Participants used some of the documents previous instructors used, while adding their own documents. Third, *inherited* referred to the situation in which the documents a participant used were completely obtained from other instructors. In this study, only one participant completely inherited another instructor's teaching materials and used the documents another instructor used. Fourth, *department determined* referred to the situation in which the department determined the textbook for the course. In this study, only one course fell into this situation. It was a course the math department developed for

general undergraduate students upon the request of the university when the liberal arts

core was redesigned about 20 years ago. Students probably were not going to use this

textbook again.

The majors of the students who took the courses included in this study were quite

diverse. Their majors included: library and information science, information management,

political science, chemical engineering, Spanish, journalism, math, higher education,

computer science, linguistics, advertising, architecture, and so on. In some courses, there

were students from other programs or schools, transferred students, students from other

universities or colleges, athlete students (e.g., football players), and non-traditional

students. As a participant described, "*Sometimes we'll accept graduate students that we*

call non-traditional. And by non-traditional, I mean that their first degree, their

bachelor's degree is not in chemical engineering." The levels of students were very

diverse. There were eleven undergraduate courses, seven master courses, and two

doctoral courses. There were four courses that had both Ph.D. and master students, and

three courses that had both undergraduate and master students. There was a Massive

Open Online Course (MOOC) that was open for practitioners in a specific field. The

courses included in this study varied in the number of students. Three courses were

particularly small. There were 5 – 8 students in these courses. Sixteen courses had 10 –

25 students. Five courses had 30 – 60 students. Three courses were particularly large.

There were 80 – 200 students in these courses. There were about 2000 students in the

MOOC.

4.3 The selected genres, tasks, and criteria

4.3.1 Participants' genre identification and the selected genres

4.3.1.1 Participants' identification of genres

In the interviews, participants were instructed to review and identify the genres of

the documents they used. The genres of the documents this study identified were revised

according to their identifications. The genres in the genre repertoires were substantially

revised. Overall, participants demonstrated a deep understanding of the genres they used.

Most of the time they were able to identify the genres without looking at the original

documents. They were able to directly correct the genre labels they thought were

problematic when they saw the titles of the documents. For example, the researcher

accessed to an original document deposited on the University Library's website when

creating a genre repertoire for a participant. The researcher coded the genre of this

document according to the bibliographic record, which was a report. In the interview, the

participant identified it as a journal article. As she described, "*[The author]'s report is

written in the style of a journal article. That's because he didn't actually publish it but if

we are taking genre to be more about what type of paper it is and what its purpose is,

then it was written as if it were a journal article.*" Some participants have looked at the

genre repertoires before the interviews. They already noticed the genres. They indicated

the genres they thought were problematic. For example, a participant described the songs

he used, "*I wouldn't call it a folk song because I associate a concept of folk song with

more traditional music, whereas all three of these are contemporary songs. They are all

twentieth or twenty first century adaptations of older texts.*"

In some cases, participants had difficulties in identifying the genres of the

documents they used. They explained these documents in detail and developed their own

genre labels. As a participant described,

> "*This is a journal – Physics Today is written mainly for doctoral physicists, but it's supposed to be simple articles, so it's a little hard to describe. IEEE Spectrum is an example of one in the Engineering sphere. These are very high level, popular journals, but there are graphs and serious concepts in there. But they're written kind of at a lower level than a research article. They're probably peer-reviewed, but they're not original research reports, so we would generally call them high-level review article. A review article unfortunately is supposed to be long and cover everything. Maybe a better word is – They're survey articles, or something like that.*"

After identifying the genres of several documents or developing their own genre labels, participants were able to quickly identify the documents belong to the same genres. Sometimes the genres of a lot of documents were revised as a group in the interviews. For example, a participant who used the book he wrote as the textbook put a lot of links

in his lectures. All of the documents these links connected to were in the same form, and

these documents were host on his book's website. These documents were identified as

belonging to the same genre and revised as a whole. As he described, "*The reading*

supplement… It's supposed to give an overview of our field, followed by major resources

within that you could gain deeper knowledge about it, which to me is an annotated

bibliography." The genres of these documents were revised to "*annotated bibliography.*"

Sometimes participants' genre identification evolved in the identification process;

in a few cases, throughout the interview processes. Sometimes they changed the genres

they previously identified to better differentiate among different genres. There was a case

in which the participant changed the genre label he used in his teaching material. In his

study guide, he described a document as "*Advertorial on metro Ethernet from*

FiberlineTV." Thus, this document was coded as *advertorial*. In the interview, he

changed it to *technical marketing video*.

Different participants classified genres at different levels of granularity. For

example, a participant viewed different types of laws, including case law and docket

reports, as law. As she described, "*Actually I have this students sing along with the slides and they learn the law because it's a cute little song about the law on children's regulations on television. Yes, that to me would be law. To me, a court decision is the same as law. Law can be something that congress has passed. It could be a judicial opinion. We all call that law*." The other participant classified docket reports and laws into two different categories.

In the identification process, participants actively reflected on their use of different genres. For example, they mentioned although they were aware of the genres they used, they did not always use different genres differently. As a participant described, "*If I think about pathfinders, I'm looking for a list of resources. But in other cases, I'm just looking for a resource I can point students to. That might be an article. It might be a website. That might be a blog post... I understand that the format's different... that creation process is different. But in how I'm using them, I'm probably using them pretty similarly.*"

4.3.1.2 Overview of the selected genres

After participants went through all of the entries and completed their identification, ten genres were selected for in-depth interviews. Table 4.3.1.2.1 presents an overview of the selected genres. In this classification, several genres were classified in multiple categories because in these cases, the same genre labels had different identities in different courses. For example, poems were classified twice in Table 4.3.1.2.1 because they were used differently in different courses. It was classified as an *example genre* because in a course in education, the poem format *Where I am From* was used as an example of homework assignment. The participant wanted students to think about their own identities and write in this format. Poem was also classified under *others* because in a course on Spanish literature, poetry was one of the most important literary genres that represented different eras. Students had to learn this important literary genre. Another example is handbook. Handbook was classified as a review genre because a participant in linguistics said the handbooks she used were similar to encyclopedias. Handbook was also classified as a reference genre because a participant used it to find chemical property information.

Table 4.3.1.2.1 An overview of the selected genres

Pattern Codes	Genre	Sub-type
Textbook genres	Textbook	
	Textbook chapter	
Academic, research genres	Book	
	Book chapter	
	Non-fiction book	
	Scholarly book	
	Academic publication	
	Monograph	
	Journal article	
	Conference paper	
	Law review article	
	Unpublished doctoral thesis	
	Masters thesis	
Professional publications	Practitioner journal article	
	Magazine article	
	Journal/Magazine article	

	Essay	
Opinion-based genres	Editorial	
	Book review	
	Blog post	
Review genres: Present the status quo or an overview of a topic	Encyclopedia entry	
	Online encyclopedia entry	Wikipedia
	Annotated bibliography	
	Handbook	
	Handbook chapter	
	Review article	
Report genres: Create by professional organizations or groups for specific purposes	Report	Internal research report
		Research report
		Advocacy report
News genres: Report the latest information	News article, news report, news video	
Research news genres: Report the research for the public or they are popular	News Article about Study/Study Reports	
	Articles from RSS feed	
	Survey Article	
Reference genres: To look up	Handbook	

information or data	Database	Online property databases
		Concept test database
	Specialized search engine	
	Resource website	
	Data website	
	Documentation	
	Job search website	
Resource genres: Resources or sources for information	Website	
	Subject guide	
	Authoritative references	
	FAQ	
	Bibliography	
	Webinar	
	Online resource	
	Bibliographic information (Web page with book information)	
Instructional, multimodal genres	Educational video, instructive video, video	
	Training video	
	Video lecture, Video lesson	

	Online training course	
	Comedy	
	Talk	General
		Interview
		Keynote speech
Audio genres	Song	Contemporary song
		Traditional song
	Podcast	
Procedural genres	Demonstration	
	Tutorial	General
		Chapter overview tutorial
	Guide, online guide	
	Manual	
	Handbook	
Professional genres	Professional organizations' websites	
	Listservs	
Image genres: Visual documents	Photo	
	Chart and graph	
	Image, online image, picture/image	Logo

Law genres: Law, case law, and documents that have the force of law	Law	
	Docket report	
	Executive order	
Professional work genres: Use in the work practices	Code of ethics	
	Guidelines	
	Standard	
	Recommendation, recommendation report	
	Rating rubric/standards, rubric	
Example genres: Professional work genres used as an example(s) and genres used as an example	Collection development policy	
	Framework document	
	Lesson plan	
	Copyright license	
	License agreement	
	Example deliverable	
	Example chart	
	Advertisement (e.g., banner ad)	
	Search result	
	Response to reviews	
	Overview report: Explanatory document	

	Project website	
	Poem	
Genres about people	Genres that summarize subject experts' contributions	Biography
		Technical report
		Survey article
	Self-represented genres: Actors' own representation	Memoir
		Political speech
Genres used for writing and citing	Book/Product information page	
	Reference guidelines	
Instructional webpages	Instructional material	
	Webpage	
Case genres	Case study	
	Case story on a website	
Teaching tool	Clicker assessment	
Others	Website about search terms	
	Statistical data	
	Documentary	
	Poem	
	Lecture slides	

4.3.2 Overview of teaching tasks and information use tasks

Table 4.3.2.1 presents the teaching tasks and information use tasks participants

performed to use the documents belong to the selected genres. Each teaching task

consists of several information use tasks. The teaching task *prepare the course* refers to

situations in which participants used documents to plan their courses, such as deciding

how to structure their courses. *Teaching about the field* refers to situations in which

participants used documents to help students acquire important knowledge and develop

skills in specific fields. This knowledge includes learning what was considered as

foundational, influential thinkers, important or unusual perspectives, professional

organizations, conceptual vocabulary or terminology, and code of ethics. Several courses

had the lab component. Students developed skills in the lab when they performed specific

tasks. *Enhancing students' understanding* refers to situations in which participants used

documents to help students better understand the learning content. They used documents

to provide an example(s), explain or demonstrate the learning content in different forms,

provide theoretical or background information, or present what the authoritative figures

said to enhance students' understanding. *Making the learning content concrete and real*

refers to situations in which participants used documents to make the learning content

tangible and realistic. They used documents to present a real problem, object, or person.

They also present the learning content in different forms. They also used documents to

associate the learning content with what was happening in the real world and help

students visualize the goals they were heading to. *Obtaining reference information* refers

to situations in which participants used documents or provided students with documents

to find different types of information that helped to accomplish specific tasks, such as

solving a problem or writing a literature review. *Developing students' advanced learning*

skills refers to situations in which participants used documents to help students develop

higher-level learning skills, including critical thinking and applying what they have

learned. *Enhancing students' participation* refers to situations in which participants used

documents to encourage students to actively participate in the learning process. *Pointing*

students to resources refers to situations in which participants provide students with

different types of documents, such as documents from which specific approaches or

concepts originated. *Improving teaching immediately* refers to situations in which

participants used documents to obtain feedback from students and understand how they

were learning in order to adjust their teaching immediately. *Encouraging students to read*

refers to situations in which participants used documents to help students reflect on their

reading habits so that they could improve. They also used documents to ensure students

read the required readings. *Continue to learn* refers to situations in which participants

provided students with documents that contained information on specific topics or what

was happening in specific fields to keep learning.

Table 4.3.2.1 Teaching tasks and information use tasks

Teaching tasks	Information use tasks
Prepare the course	Structure the course
	Prepare lectures
Teach about the field	Provide foundational text
	Enable students to understand an area/a topic
	Complement/Supplement other resources
	Enable students to explore interests
	Provide learning content
	Expose students to influential thinkers
	Expose students to important perspectives
	Introduce a professional organization
	Teach the highest expectations

	Highlight a topic(s)
	Prepare students for the job
	Draw on scholarship
	Develop students' conceptual vocabulary/terminology
	Walk students through the process
	Facilitate lab practices
	Balance research and practices
Enhance students' understanding	Provide an example(s)
	Explain/Illustrate/Demonstrate
	Improve students' understanding
	Provide theoretical/contextual information
	Present different authorities
Make the learning content real and concrete	To present reality
	Provide multimodal information
	Connect with the real world/make a connection(s)
	Help students visualize the goals
Obtain reference information	Look up/Provide references
	Look for examples/problems
	Help students find jobs
	Enable students to get citation information
	Provide guidelines for writing
Develop students' advanced learning skills	Help students apply the learning content
	Develop students' critical thinking skills
Enhance students' participation	Trigger discussion
	To engage students
	Have fun
Point students to resources	Provide authoritative references
	Provide original sources
	Provide access

Improve teaching immediately	Get timely feedback
	Understand students' learning situation
Encourage students to read	Motivate reading
	Enable students to reflect on self-learning
Continue to learn	Provide suggested readings/more information
	Keep up

4.3.3   Criteria for making predictive and evaluative assessments

4.3.3.1 Course design and predictive criteria

One of the interview questions asked participants the general criteria they

employed to select documents for their courses. This section summarizes participants'

responses to this question. It describes participants' approaches to designing their courses

as well as the criteria they employed to select documents. These help to understand why

certain tasks were performed, why certain genres were used, and why certain criteria

were employed.

Some participants directly described the textbooks they used because selecting

textbooks was a major decision to make. They tried to understand what textbooks were

available by consulting with instructors who taught the same courses in the past or

colleagues who taught related courses in their departments or programs. They also

consulted the syllabi of similar courses in other universities to understand the textbooks

other instructors used. Several courses belong to well-established fields. These courses

tended to be introductory. Participants had many textbooks to choose from. There was

consensus about what topics or concepts should be included. Participants did not have to

determine the topics they were going to cover in their courses. As a participant described,

"*Since it's an introductory course and the discipline of information security has some*

good history, there are processes that are already detailed, that everybody knows about

that. Everybody agrees security professors need to know about encryption for example, so

every single security book will cover encryption." Some participants selected textbooks

while determining the topics they were going to cover. Selecting textbooks helped them

to determine the topics and developed teaching goals. As a participant described, "*I chose*

the textbook first and then I tried to identify the instructional objectives with heavy

reference to the textbook because I wanted it to be a lot of consistency between the

instructional objectives and the textbook."

Several participants determined the topics or perspectives they wanted students to

learn before they selected documents for their courses. As a participant described, "*I have*

in mind a progression of the discussion over the course through semester. So, I pick

materials that will fit with the progression that I have in mind that are accessible to

students." However, not all of the topics and documents were pre-determined. A

participant set up the topics and selected documents for the first part of her course. She

allowed students to determine the topics of the second part and found documents on these

topics later. As she described, "*I set up the first six or seven weeks of readings and then*

based on the student interest, I put together the rest of the semester. So the readings that

came after week 7 came out of students' interests."

Most of the courses were based on one or two textbooks. Most of the textbooks

participants used were written by subject experts in their fields. Three participants used

the books they wrote as the textbooks for their courses. Regardless of who the authors

were, the textbooks participants used often served as the structural and conceptual

foundation for their courses. Participants selected other documents based on the

textbooks they used. They searched documents to provide students with examples that

supported the content of the textbooks. As a participant described,

> "*To be honest, I have no criteria. To be honest, I don't think about*
>
> *what's my criteria. What I do is I developed the course. I'm usually*
>
> *looking for examples. I've usually got a textbook as I've mentioned to*
>
> *you a couple of textbooks. Usually the basis of it is one of the texts.*
>
> *They're reading the text and I'm describing the text to them. Beyond that,*
>
> *I usually bring examples of that off the web or I may take examples*
>
> *from my personal archives.*"

Using examples helped to improve students' understanding. The examples

participants drew on came from multiple sources, including: the textbooks they used,

their personal collections, and the results of their online searching. As a participant

described, "*If I needed examples of good graphs, I tended to look in the textbook to see if*

there were good examples and if not then I would go to the Internet and see what

examples were available either from the general lab or from the scientific literature and

just try to find examples that made the point I wanted to make."

Regardless of the extent to which a specific field was developed, there might be

many ways to perform a work task. Two participants brought in standards and best

practices as examples to support the textbooks they used. As a participant described,

"I try to make sure that we have a mixture of examples from different

kinds of sources and I think that is really where project manager people

find it very helpful. They want to know what people do and they want to

know how it is done out there and what are the right ways to do things,

so it is a combination of trying to make sure that I make people aware

of the best practice."

Several courses were based on a set of individual pieces in different documents,

such as journal articles or textbook chapters. This partly resulted from the scarcity of

matching textbooks. Sometimes participants did not have many options for textbooks

because the subjects of their courses were either too broad or too specific. There were no

matching textbooks. As a participant who taught a specific subject in physics described,

"I struggle to find text materials. At this point, there really aren't good text materials.

There are resources, but real text materials at the right level and so on, really don't exist.

Readings may be too high level, too low level, too long, too short - the readings aren't a

perfect match." In these cases, participants first decided the topics they wanted to cover

or the perspectives they wanted students to learn. They then looked for documents that

covered these topics or conveyed the perspectives they desired.

Participants also selected documents based on what they planned to do in class,

including the discussions they wanted to have and the assignments they wanted students

to do. As a participant described, "*It's something that arise a very detailed and more*

structured explanation of an issue that I can do in a class." Furthermore, the approaches

that some participants took to select documents fell into two categories, including

combining research and practice, and *research-oriented*. Some courses were

professionally oriented. The documents participants selected had both theoretical and

practical components, but the emphases on these components varied. Several courses

were research-oriented. The documents participants selected emphasized theories,

empirical research, and methodologies.

Table 4.3.3.1.1 illustrates the predictive criteria and general criteria participants

employed to select documents for their courses.

Table 4.3.3.1.1 Predictive and general criteria

Predictive criterion	Dimension	General Criterion
Topic-related criteria		Foundation
		Recency
		Breadth
		Students' interests
Suitability		Student/Course level match
		Coverage
		Usefulness
		Length/Amount
Credibility	Trustworthiness of information	Accuracy
		Being reviewed and edited
	Trustworthiness of a source	Writing style
	Expertise	Source
Information quality	Form	Presentation
	Content	
Relevance		Personal relevance
		Connection-building
Cost effectiveness		Availability
		Cost
Others		Affect
		Attention maintenance

Participants employed four *topic-related criteria* to select the topics they were

going to cover and the documents that contained information on these topics, including:

foundation, *recency*, *breadth*, and *students' interests*. First, participants wanted students to

acquire foundational knowledge of the subjects. Such knowledge was acquired by

learning the most important theories, research, concepts, or texts. As a participant

described, "*One goal was for students to read some of the foundational or early research*

on digital media, digital communications, kind of user interaction with the Internet, so

some of the early works are from the 1980s and 1990s... Yeah, kind of the canonical texts

that I think every student who is interested in users' interaction with digital media should

know." Second, participants selected documents that contained information on recent

issues or hot topics in their fields. These topics might involve important issues and reflect

what students will be working with in the near future. As a participant described, "*Some*

of it has to be reflective of current, what's going on currently in higher education. So for

example there's an article in here from the New York Times 'My Life is an Undocumented

Immigrant', so undocumented students, that's a growing student population and so I

included that because it was important to reflect current issues that are going on." Third,

participants wanted to select documents on different aspects of a subject. Students were

able to understand the range and variation of issues in specific fields. As a participant

described, "*The third goal was to provide a survey of the set of issues or concerns that*

researchers in this area tend to be focused on." Fourth, participants selected documents

that allowed students to explore their interests. They selected topics students might be

interested in. As a participant described his general criteria, "*Topic areas they may be*

interested in, so they can get a feel of what the area is like."

Participants also considered <u>*suitability*</u> when they selected documents. Among all

of the general criteria, *intellectual level* was the most frequently mentioned criterion.

Participants were concerned about the match of intellectual levels between documents

and their courses or students. Selecting documents at the appropriate level helped

students to read easily. As a participant described, "*I know that they are going to contain*

material that is at the right level for my students." Participants also selected documents

that covered most of the topics they wanted to or should cover in their courses. As a

participant described, "*I wanted to pick a textbook that contained the materials that I*

needed to cover." Two participants were concerned about the *length/amount* of information in the documents they were able to use. As a participant described, "*I want at least that level of introduction, plus fair amount of work examples and homework that I assign.*" Furthermore, several participants considered the *usefulness* of a document to students and themselves. As a participant described his general criteria, "*Are they likely to be used? Are they something the students will actually be able to make use of?*"

Participants also considered *credibility* when they selected documents. Overall, criteria related to *credibility* were not frequently mentioned. These criteria were only mentioned by two participants who directly talked about the textbooks they used. As a participant described, "*Well the primary resource is textbook and so basically content and I would say simplicity of language but mathematical and logical accuracy.*" This participant considered *credibility* and *information quality* at the same time. As he described, "*Everything is written in 12 point fonts not 9 point fonts. The language is as simple as it can be you know so it's much more readable and tutorial.*"

Several participants were concerned about the *relevance* of documents to them

and students. A participant who used the book he wrote as the textbook for his course

brought in the documents that were *personally relevant* to him. These documents also

served as examples of his perspectives. Several participants looked for documents that

allowed students to build connections. Participants wanted students to relate what they

were learning to different things because this helped to improve their understanding. As a

participant described, "*The criteria was to select materials that will either help students*

understand better aspects of that texts or the related contexts, the historical context, the

cultural context, the political context or that will illustrate themes, topics, aspects of that

work in other cultural and artistic expressions."

Several participants were concerned about how <u>*cost effective*</u> it was to obtain

documents, especially textbooks. They considered the accessibility of documents to them

as well as students' cost. For example, a participant described her general criteria, "*If I*

am to be perfectly honest, first and foremost easy availability." Several participants

considered how much it cost students to purchase the textbooks they wanted to use. They

reduced students' cost by using textbooks that were freely available online. Even if

students wanted to purchase a hardcopy, it would not cost them a fortune. As a participant

described, "*Another reason I chose it is because the book is available for free online in*

PDF format. So students could save a little bit of money, but also the book, if you buy it

from Amazon.com, it is maybe $35, so it's not very expensive." Another participant

reduced students' cost by using the textbooks they will be able to reuse. As she described,

"*There are two different textbooks that people use in our department. I use one of the sort*

of two different textbooks that folks use because I wanted to keep it similar to what other

people in the department were using for the other classes, so the students won't have to

buy any books."

Participants also employed *other criteria* to select documents for their courses,

including *affect* and *attention maintenance*. A participant set up several criteria to assess

multimodal documents. He employed three criteria – including *length/amount*, *affect*, and

attention maintenance – to select videos. As he described, "*They have to be relatively*

concise resources. So if it's videos, they have to be under five minutes for most part. I

mean, there are some exceptions there, but for the most part I try to keep them very short,

that they have to be loud enough to maintain their attention, the entertainment factor has

to be there." The criterion *affect* was mentioned by several participants. It was employed

to select different things, including videos and issues for discussions. As a participant

described, "*It's more newsy kinds of things which shows them that these issues are*

exciting and interesting."

In conclusion, textbooks were frequently mentioned when asking participants the

general criteria they used to select documents for their courses. This suggests the genre

textbook was frequently associated with faculty's teaching tasks. Some of the general

criteria participants pre-determined were frequently mentioned with specific genres. For

example, the criterion *student/course level match* was frequently mentioned when

participants selected textbooks. Additionally, although criteria related to <u>*credibility*</u> were

not frequently mentioned when participants designed their courses, it did not

mean <u>*credibility*</u> did not play a role. It might serve as the pre-requisite for other criteria.

Thus, criteria other than <u>*credibility*</u> became their major concern. For example, the

participant who emphasized easy availability later described the advantages and

shortcomings of using one of the textbooks she had been using since she was a student in

detail. In this case, easy *availability* was built upon *experienced credibility*.

4.3.3.2 Overview of evaluative criteria and assessment criteria

Table 4.3.3.2.1 presents the criteria participants employed to assess the documents

belong to the selected genres. These criteria derived from their evaluative assessments of

how the selected genres functioned in their task performance (Rieh and Belkin, 2000).

The assessment criteria they employed were classified into several evaluative criteria,

including: suitability, credibility, information quality, cost effectiveness, personal

preferences, and others. *Suitability* concerns the match between the documents and the

courses. For example, the criterion *contain important/unusual perspectives* concerns

whether the documents contained the perspectives participants wanted students to

know. *Credibility* concerns whether the information in or the source of the documents

was trustworthy, or whether the source had expertise (Fogg and Tseng, 1999; Hilligoss

and Rieh, 2008). *Information quality* concerns participants' perceived goodness of forms

and content of the documents. *Personal preferences* concern participants' preferences for

specific genres because they thought the topics in these genres were diverse, interesting,

or really important. _Cost effectiveness_ concerns the extent to which the documents were

easily available for participants and students. The criteria *public acceptance/endorsed

usage* and *affect* were classified under _others_. *Public acceptance/endorsed usage* refers to

participants' concerns about whether the documents have been widely used or used by

subject experts who were affiliated with prestigious schools. *Affect* refers to the extent to

which the documents participants used evoked emotional reactions. The documents were

perceived as interesting, fun, engaging, or challenging.

Table 4.3.3.2.1 Evaluative criteria and assessment criteria

Evaluative criterion	Dimension	Assessment Criterion	Value
Suitability		Student/Course level match	
		Applicability	
		Emphasis	
		Specificity	
		Coverage	
		Content orientation	Overview
			Technical
			Theoretical
			Scholarly
			Conceptual

			Practical
			Business
	Originality		Primary
			Secondary
	Length/Amount	Length/Amount of information	
		Intensity of information	
	Usefulness		
	Contain important sub-genres/information elements		
	Whether it provides supplementary information		
	Contain important/unusual perspectives		
	Whether the instructor's and author's perspectives were aligned		
	Relevance		
	Readability		
Credibility	Trustworthiness of information	Tangibility	
		Accuracy	
		Objectivity	
		Factuality	
		Validity	
		Being reviewed and edited	
		Degree of formal	
		Recency	
		Truthfulness	
		Association with authoritative knowledge	
	Trustworthiness of a source	Honesty	
		Intent	
		Interaction with authors	

		Investment	
		Stability	
		Functionality	
		Writing style	
	Expertise	Source	
		Authorship	Collective
			Single
		Breadth of Perspectives	Multiple
			Narrow
		Research effort	
		Position	
Information quality	Form	Organization	
		Presentation	
	Content	Clarity	
		Coherence	
		Completeness	
		Depth	
		Whether it's informative	
		Quality of sub-genres/information elements	
		Quality of supplementary materials	
Personal preference		Topic importance	
		Topic variety	
		Topic interestingness	
Cost effectiveness		Cost	
		Availability	
		Copyright concerns	
Others		Affect	
		Public acceptance/Endorsed usage	

4.4 The associations among the selected genres, tasks, and criteria

This section describes the associations among tasks, the selected genres, and criteria in detail. Each sub-section starts with a description of the task, followed by a description of the associations between this task and the genres used to perform this task and between this task and criteria. Table 4.4.1 presents the results of the co-occurrence analysis. It illustrates the associations among tasks, the selected genres, and criteria. A complete table that presents the results of the co-occurrence analysis is attached in Appendix 7. Table 4.4.1 was structured based on tasks because the co-occurrence analysis was conducted based on tasks. The column *the selected genres* illustrates the genres of the documents participants used to perform the corresponding tasks. The column *evaluative criteria* illustrates the criteria associated with the corresponding tasks. The column *dimensions or criteria that stood out* illustrates the dimensions of evaluative criteria or specific assessment criteria that were more often associated with the corresponding tasks. For example, the task *complement/supplement other resources* were often associated with the criterion *depth*. Because participants used and assessed the

documents belong to the selected genres at different levels of granularity, N refers to the

frequency of occurrence. N in the column *the selected genres* does not refer to the

number of documents or genres. It refers to how often a genre was associated with a task.

N in the column *evaluative criteria* refers to how often a criterion was associated with a

task. N in the column *dimension(s) or criteria that stood out* refers to how often a

dimension of a criterion or a criterion was associated with a task.

Participants usually employed multiple criteria to assess the documents belong to

the selected genres in their task performance. Most of the teaching tasks were associated

with a variety of criteria. *Suitability*, *credibility*, and *information quality* were the major

criteria participants employed. *Credibility* played different roles in different teaching

tasks and information use tasks. It played a leading role in the teaching task *develop

students' advanced learning skills* and *continue to learn* as it was the most often

associated criteria when participants performed these tasks. In information use tasks such

as *provide an example(s)* and *help students apply the learning content*, *credibility* also

played a leading role. It was more often considered. Different dimensions of *credibility*

played different roles in different information use tasks as well. *Trustworthiness of information* was an important concern when participants performed the following tasks: *provide an example(s)*, *to present reality*, *connect with the real world/make a connection(s)*, *look up/provide references*, *look for examples/problems*, and *develop students' critical thinking skills*. *Expertise* was an important concern when participants performed the following tasks: *expose students to influential thinkers*, *introduce a professional organization*, *provide an example(s)*, *explain/illustrate/demonstrate*, *present different authorities*, *help students visualize the goal(s)*, *look for examples/problems*, *help students apply the learning content*, and *provide authoritative references*.

The roles of *suitability* and *information quality* also varied in different tasks. Overall, *suitability* played a more important role in the teaching tasks *prepare the course* and *teach about the field* than other evaluative criteria. *Information quality* played an important role when either the *form* or *content* aspect of genres was important for task performance. For example, the *form* aspect of genres were important to perform the following information use tasks: *explain/illustrate/demonstrate*, *improve students'*

understanding, *provide multimodal information*, and *to engage students*. The selected

genres had different forms that enabled participants to perform these tasks.

Participants used different genres to perform different tasks. The genres used

to *prepare the course*, *improve teaching immediately*, and *encourage students to read*

were not very diverse. Most of the genres used to perform these tasks were specifically

created for the teaching context, the research context, and the professions participants

were teaching. *Suitability* played a more important role in these tasks than other

evaluative criteria. *Credibility*, especially the dimension *expertise*, played a more

important role in the information use tasks that involved professional organizations and

the documents they created. The genres used to *enhance students' understanding*, *make

the learning content real and concrete*, and *continue to learn* were very diverse.

Overall, *credibility*, especially the dimension *trustworthiness of information*, played an

important role in tasks that involved diverse genres. *Information quality*, especially the

dimension *form*, was an important concern in tasks that involved multimodal genres and

image genres.

Table 4.4.1 Summary table of the co-occurrence analysis

Teaching tasks	Information use tasks	The selected genres (N)	Evaluative criteria (N)	Dimensions or criteria that stood out (N)
Prepare the course	Structure the course	Textbooks*8 (including one scholarly book)	Suitability*7 Information quality*4 Credibility*1	Suitability*7(Coverage*5) Information quality: Form*4(Organization*4)
	Prepare lectures	Textbooks*2, Books*2, Book chapters*1, Conference papers*1, Lecture slides*1	Suitability*3 Credibility*2 Information quality*2	
Teach about the field	Provide foundational text	Textbooks*20, Scholarly book*1, Law*1, Charts and graphs*1, Poems*1	Suitability*47 Information quality*29 Credibility*24 Cost effectiveness*5 Public acceptance/Endorsed usage*4	Suitability*47(Coverage*11)
	Enable students to understand an area/a topic	Mainly articles, individual pieces, including: Journal articles*4, Book chapters*4, Magazine articles*2, Review article*1, Law review article*1, Blog post*1, Website*1, Monograph*1	Suitability*11 Credibility*7 Information quality*4, Personal preferences*2 Cost effectiveness*1	Suitability*10(Content orientation: Overview*6)

	Complement/Supplement other resources	Textbooks*4, Book chapters*3, Journal articles*3, Book*1, Review article*1, Conference papers*1, Handbook*1, News*1, Blog post*1, Instructional material*1, Chapter overview tutorials*1, Demo*1, Video*1, Online encyclopedia entry*1, Image*1, Online image*1	Information quality*16 Suitability*13 Credibility*13 Public acceptance/Endorsed Usage*1 Affect*1	Information quality: Content*10(Depth*7)
	Enable students to explore interests	Textbooks*3	Suitability*5 Information quality*3 Cost effectiveness*2	
	Provide learning content	Research reports*3, Rubrics*3, Textbook chapters*2, Journal articles*2, Survey article*1, Educational video*1, Guide*1, Standard*1, Recommendation*1, Law*1	Credibility*20 Suitability*13 Information quality*7 Public acceptance/Endorsed usage*4 Cost effectiveness*3 Affect*1	Credibility: Expertise*9(Source*9)
	Expose students to influential thinkers	Journal articles*1, Conference papers*1, Technical report*1, Review article*1, Keynote speech*1, Biography*1	Credibility*9 Suitability*6	Suitability*6(Contain important/unusual perspectives*5); Credibility: Expertise*8

Expose students to important perspectives	Textbooks*4, Book reviews*4, Book chapters*2, Journal articles*3, Conference papers*2, Magazine articles*2, Editorials*2, Blog posts*2, Documentaries*2, News*1, Instructional material*1, Master thesis*1, Ph.D. dissertation*1, Memoir*1, Keynote speech*1	Credibility*27 Suitability*26 Information quality*1 Public acceptance/Endorsed usage*1	Suitability*26(Contain important/unusual perspectives*22) Credibility: Expertise*13
Introduce a professional organization	Professional organizations' websites*2, Internal research report*1, Rating rubrics/Standards*1	Credibility*4 Suitability*2	Credibility: Expertise*4(Source*4)
Teach the highest expectations	Guidelines*1, Standards*1	None	
Highlight a topic(s)	Magazine Article*1	None	
Prepare students for the job	Guide*2, Standards*1, Recommendations*1, Video lecture*1, Code of ethics*1, Executive order*1, Rating rubrics/Standards*1	Suitability*4 Credibility*4 Public acceptance/Endorsed usage*4 Information quality*2	Public acceptance/Endorsed usage*4
Draw on scholarship	Academic publications*1	Suitability*1 Credibility*1	

	Develop students' conceptual vocabulary/terminology	Academic publications*1, Books*1, Guides*1, Standards*1, Recommendations*1	Public acceptance/Endorsed usage*3 Suitability*1 Credibility*1	
	Walk students through the process	Tutorial*2, Guide*2, Handbook*1, Video lessons*1	Suitability*8 Information quality*4 Credibility*2	
	Facilitate lab practices	Textbook*2, Tutorial*2, Handbook*1, Documentation*1	Suitability*5 Information quality*4	
	Balance research and practice	Journal articles*1	Suitability*2	
Enhance students' understanding	Provide an example(s)	Demonstrations/Comedies*3, Rubrics*3, Book reviews*3, News*3, Textbooks*2, Book chapters*2, Magazine articles*2, Videos*2, Professional organizations' websites*2, Project websites*2, Memoirs*2, Framework documents*2, Journal articles*2, Example deliverables*1, Book*1, Copyright license*1, License agreement*1, Research report*1, Lesson plan*1, Collection	Credibility*43 Information quality*16 Suitability*15 Affect*4 Public acceptance/Endorsed usage*1	Credibility: Trustworthiness of information*19(Tangibility*9), Credibility: Expertise*16

		development policy*1, Blog post*1, Instructional material*1, Video lesson*1, tutorials*1, Advertisement*1, Search results*1, Speech video*1, Poems*1, Documentaries*1, Response to reviews*1		
	Explain/Illustrate/Demonstrate	News*5, Demonstrations or comedies*4, Book chapters*2, Journal articles*2, Tutorials*2, Pictures/Images*2, Photos*1, Internal research reports*1, Report*1, Law*1, Professional organizations' website*1, Website*1, Statistical data*1, Bibliographic information*1, Webpages*1, Executive order*1, Rating rubrics/Standards*1, Response to reviews*1, Documentaries*1, Political speech*1, Magazine articles*1, Essay*1, Articles from RSS feed*1, Review article*1, Blog post*1, Instructional material*1, Instructive videos*1	Credibility*21 Information quality*17 Suitability*15 Affect*5 Public acceptance/Endorsed usage*1	Information quality: Form*13(Form*9) Credibility: Expertise*11(Source*8)
	Improve students'	Pictures/Images*3, Essays*2, Journal	Information quality*12	Information quality: Form*9

	understanding	articles*1, Magazine articles*1, Blog post*1, Instructional material*1, Online training courses*1, Tutorials*1, Talk*1	Credibility*11 Suitability*10 Public acceptance/Endorsed usage*1	(Form*6)
	Provide theoretical/contextual information	Biographies*2, Memoirs*1, Documentaries*2, Statistical data*1, Book review*1, Editorial*1, Magazine articles*1, Journal articles*1, Book chapters*1, Book*1, Academic publications*1	Suitability*7 Information quality*6 Credibility*4 Affect*2 Personal preference*1	
	Present different authorities	News*3, Editorials*2, Executive order*1, Webpages*1	Credibility*6 Suitability*1	Credibility: Expertise*5(Source*5)
Make the learning content real and concrete	To present reality	Authoritative references*2, Tutorials*1, Demonstrations/Comedies*1, Documentaries*1, Interviews*1, Photos*1, Example charts*1, Statistical data*1, Search results*1, Blog post*1, Instructional material*1, Webpages*1, Political speech*1	Credibility*13 Information quality*8 Suitability*1 Public acceptance/Endorsed usage*2	Credibility: Trustworthiness of information*10 (Tangibility*8)
	Provide multimodal	Training videos*2, Tutorials*2,	Information quality*7	Information quality:

	information	Demonstrations/Comedies*1, Interviews*1, Instructive videos*1, Podcast*1, Video lessons*1, Talks*1, Videos*1	Suitability*2 Credibility*2	Form*7(Form*6)
	Connect with the real world/make a connection(s)	News*5, Journal articles*2, Contemporary songs*1, Traditional songs*1, Blog posts*1, Tutorials*1, Comedy*1, Code of ethics*1, Articles from RSS feed*1	Credibility*8 Suitability*3 Affect*2 Personal preference*1 Information quality*1	Credibility: Trustworthiness of information*8(Recency*6)
	Help students visualize the goals	Rubrics*3, Technical marketing videos*1, Guidelines*1, Interviews*1	Credibility*4	Credibility: Expertise*3 (Source*3)
Obtain reference information	Look up/Provide references	Handbook*5, Online property databases*4, Specialized search engine*1, Database*1, Resource website*1, Documentations*1	Credibility*13 Information quality*8 Public acceptance/Endorsed usage*2 Suitability*1	Credibility: Trustworthiness of information*8(Being reviewed and edited*7)
	Look for examples/problems	Textbooks*8, Concept test database*1	Credibility*11 Information quality*5 Suitability*3 Cost effectiveness*2	Credibility: Expertise*5(Source*5)
	Help students find jobs	Listserv*2, Professional organization's	Credibility*1	

		website*2, Website for job search*1		
	Enable students to get citation information	Book/Product information page*1	Information quality*1	
	Provide guidelines for writing	Reference guidelines*2, Guide*1	None	
Develop students' advanced learning skills	Help students apply the learning content	Academic publications*1, Memoirs*1, Demonstrations/Comedies*1, Journal articles*1, Clicker assessments*1	Credibility*6 Information quality*2 Personal preference*1 Affect*1	
	Develop students' critical thinking skills	Book reviews*3, Journal articles*2, Law*2, Videos*2, Documentary*1, Book chapter*1, Clicker assessments*1, Editorial*1, Demonstrations/Comedies*1, Photos*1, FAQ*1	Credibility*19 Suitability*10 Information quality*1 Affect*1	Credibility: Trustworthiness of information*12
Enhance students' participation	Trigger discussion	Clicker assessments*1, Podcast*1, Video*1	Suitability*4	
	To engage students	Pictures/Images*2, Instructional videos*2, Clicker assessment*2, Advertisements*1, Speech video*1, Documentaries*1, Poems*1, Magazine articles, News*1	Information quality*7 Credibility*6 Affect*3 Suitability*2	Information quality: Form*6(Form*4, Presentation*2)

	Have fun	Demonstrations/Comedies*4, Videos*2, Pictures/Images*1	Affect*5 Credibility*4 Information quality*3 Public acceptance/Endorsed usage*1	Affect*5
Point students to resources	Provide authoritative references	Authoritative references*2	Credibility*8 Suitability*3 Public acceptance/Endorsed usage*2	Credibility: Expertise*4(Position*2, Source*2)
	Provide original sources	Conference Papers*2, Book chapter*1, Law*1, Websites*1, Practitioner journal article*1	Suitability*6 Public acceptance/Endorsed usage*2 Credibility*1	Suitability*6(Original: Primary*6)
	Provide access	Subject guides*1, Annotated bibliographies*1	Cost effectiveness*1	
Improve teaching immediately	Get timely feedback	Clicker Assessments*3	Credibility*2 Information quality*1 Suitability*1	
	Understand students' learning situation	Clicker Assessments*2	None	
Encourage students to read	Motivate reading	Clicker Assessments*1, Essay*1	Information quality*1	
	Enable students to reflect on self-learning	Clicker Assessments*2	Credibility*1	

Continue to learn	Provide suggested readings/more information	News*3, Textbooks*2, Handbooks*1, Scholarly book*1, Book chapters*2, Journal articles*2, Websites*2, Professional organizations' websites*2, Bibliographic information*2, Online encyclopedia entry*1, Encyclopedia entry*1, Books*1, Handbook*1, Conference papers*1, Survey articles*1, Executive order*1, Blog posts*1, Online resources*1, Annotated bibliographies*1, Bibliography*1, Webinars*1, Biographies*1, Memoirs*1, Documentaries*1	Credibility*20 Suitability*16 Information quality*11 Cost effectiveness*4	Information quality: Content*11(Quality of sub-genres/information elements*6, Depth*5), Credibility: Trustworthiness of information*10(Recency*6, Accuracy*3, Objectivity*1)
	Keep up	Professional organizations' websites*3, Research reports*2, Journal articles*1, Conference Papers*1, Articles from RSS feed*1, Website for job search*1	Credibility*8 Suitability*4 Information quality*2 Public acceptance/Endorsed usage*1 Cost effectiveness*1	

4.4.1   Teaching task: Prepare the course

This teaching task consists of two information use tasks participants performed

when they prepared to teach. The genres used to *prepare the course* were not diverse.

Textbooks were the genre commonly used to perform the two information use tasks.

Participants did not employ many criteria to assess the genres used for this task. Criteria

including *suitability*, *information quality*, and *credibility* were employed when they

structured their courses and *prepared lectures*. *Suitability* was more often considered.

4.4.1.1 Information use task: Structure the course

Participants consulted the organization of the content in the documents to

structure their courses. The documents they used framed their courses, including students'

assignments and class activities. Textbooks, including a scholarly book written by a

participant, were the only genre used to *structure the course*. This task was frequently

associated with the criteria *coverage* and *organization*. The documents participants used

to structure theirs courses covered most of the information they needed. Regardless of

whether the information in the textbooks was well-structured, they consulted it to

structure their courses. As a participant described, "*The textbook is very organized about which subjects should come first and which should come second. I use the textbook to plan my lectures a little bit, but I sometimes would not go in sequential order, sometimes pick and choose topics*."

4.4.1.2 Information use task: Prepare lectures

Participants consulted and used different documents to *prepare lectures*. The genres used to perform this task include textbooks, books, book chapters, conference papers, and lecture slides. Most of these belong to academic, research genres. Although textbooks were used to perform this task, overall participants did not heavily rely on textbooks to *prepare lectures*. This probably was because they treated textbooks as a self-study guide. They expected students to read the textbooks before the class. Several participants mentioned they did not want to repeat the content in the textbooks in the class. They wanted to emphasize important learning content or worked on difficult problems in the class. They also wanted to save class time for group activities. Thus, they used genres that complemented textbooks to *prepare lectures*. They integrated the

information in the textbooks and genres used to perform this task in their lectures.

Overall, the task *prepare lectures* was not associated with specific criteria more

frequently. It probably resulted from the broad definition of this task. It includes

situations in which participants copied the formula in the textbooks and synthesized the

information in books and conference papers to create their lectures. Different situations

involved different criteria. Thus, this task was not associated with specific criteria more

frequently.

4.4.2   Teaching task: Teach about the field

Participants performed a range of information use tasks to teach about specific

fields. The genres used to perform the information use tasks belong to this teaching task

varied. Some tasks involved a narrow range or genres, while some involve a wider range

of genres. For example, the genres used to *provide foundational text*, *enable students to*

explore interests, and *facilitate lab practices* were not diverse, but the genres used to

complement/supplement other resources and *expose students to important perspectives*

were relatively diverse. Participants employed many criteria to assess the genres they

used to *teach about the field* because it was a core task. *Suitability*, *credibility*,

and *information quality* were their major concerns. However, *cost effectiveness*, personal

preferences, and *public acceptance/endorsed usage* were also considered. *Suitability* was

more often considered in information use tasks such as *provide foundational text* and

enable students to understand an area/a topic. When preforming the task

complement/supplement other resources, *information quality* was participants' major

concern. *Credibility* played a leading role in tasks such as *provide learning content* and

expose students to influential thinkers. *Credibility* and *suitability* seemed to play

equivalent roles when participants performed the tasks *expose students to important*

perspectives. Additionally, the dimension *expertise* stood out in the tasks including

provide learning content and *introduce a professional organization* as it was more often

associated with these tasks.

4.4.2.1 Information use task: Provide foundational text

Participants used documents to help students learn foundational knowledge or

basic concepts of specific fields or subjects. These documents contained the major

learning content for their courses. Participants tended to assign these documents as required readings. The genres used to perform this task were not diverse. The major genre used for this task was textbooks. This includes a scholarly book written by a participant. Several other genres were used to preform this task. These genres were related to the subjects of the courses or the professions participants were teaching. For example, in a course about the laws in the news profession, different types of laws were used as foundational texts.

This task was associated with many criteria because selecting foundational texts tended to be a major decision. Participants considered *suitability*, *information quality*, *credibility*, and other criteria when performing this task. *Suitability* was way more often considered. Documents used as foundational text should match the subjects, topic coverage, and intellectual levels of the courses, students' levels, and course activities. *Coverage* was the most frequently associated criterion for this task. Participants used documents that contained most of the information they needed as foundational texts because it's "*all in one place*" and "*it just makes things simpler.*"

Documents used as foundational texts allowed students to refresh what they have learned.

However, almost all of the participants used different documents in combination because

"*no one book does everything*." As a participant described, "*The shortcoming of any*

textbook is that the author's taste and the professor's taste are never exactly in agreement

so there might be some topics that I feel should have been covered whereas other topics

that are covered that I don't think should have."

4.4.2.2 Information use task: Enable students to understand an area/a topic

Participants used documents to help students understand specific areas or topics.

Most of the genres used to perform this task were articles, individual pieces. These

include: journal articles, book chapters, magazine articles, review article, law review

article and blog post. Most of these were classified as academic, research genres. The

topics of these genres were relatively specific and focused. *Suitability* played a leading

role in this task. Among all, the criterion *content orientation: overview* was more often

associated with this task. Participants tended to use documents that gave overviews of

specific topics or areas when performing this task.

4.4.2.3 Information use task: Complement/supplement other resources

Participants used documents to complement or supplement a document they used,

usually the major textbooks. The genres used to perform this task were relatively diverse,

including: textbooks, book chapters, journal articles, book, review article, conference

paper, instructional material, chapter overview tutorials, video, online encyclopedia entry,

and so on. *Information quality* played a leading role in this task because participants used

documents that contained in-depth information or documents that had different forms to

complement the textbooks they used. The criterion *depth* was more often associated with

this task because it was often performed when there was a lack of in-depth information in

the major textbooks. As a participant described, "*It was more that [author of the textbook]*

did not really say that as much in depth and so I felt that it was important to bring a

practitioner's view of how that worked you how an organization does that."

Participants were also concerned about *credibility* and *suitability* when they

performed this task. These two evaluative criteria played equivalent roles in this task, but

the criterion *recency* was more often associated with this task than other criteria. This was

because this task was also performed when the topics participants wanted to teach were

so recent that the major textbooks did not cover. As a participant described, "*This is one*

of the topics which is fairly recent, so it's not in the textbook. And so I've been giving

them conference papers to read or to look at and that's hard to get a good overview."

4.4.2.4 Information use task: Enable students to explore interests

Participants used documents to help students find out the topics they might be

interested in. All of the genres used for this task were textbooks, and *suitability* was the

most often associated criterion. This was because the subject coverage of the textbooks

was broad and they provided overviews of specific subjects. Textbooks gave students a

little bit of information on different topics. This helped students to identify the topics they

might be interested in and decide whether to dig in. As a participant described, "*[The*

textbooks] give broad coverage of IR. They allow the students to explore their interests."

4.4.2.5 Information use task: Provide learning content

Participants used documents that contained the content they wanted students to

learn, such as concepts or terminology. The genres used for this task include: research

reports, textbook chapters, journal articles, survey articles, rubrics, guides, standards,

recommendations, educational videos, and so on. These genres tended to be individual

pieces, rather than big, whole documents. _Credibility_ played a leading role in this task.

The criterion *source*, which was classified under the dimension *expertise*, was more often

associated with this task. The authors or professional organizations that created some of

the genres used for this task were reputable or had subject expertise. As a participant

described, "*Those are very reputable taskforces and I wanted them to understand what*

was happening in the field."

4.4.2.6 Information use task: Expose students to influential thinkers

Participants used documents written or spoken by experts whose thinking was

recognized as important in the historical context of specific fields. The genres used for

this task include: journal articles, conference papers, technical report, review article, and

keynote speech. Most of the genres were influential thinkers' publications. Participants

did not employ many criteria to assess these genres. Participants were only concerned

about _credibility_ and _suitability_. _Credibility_ played a leading role as it was more often

associated with this task. Although *suitability* was less often associated with this task

than *credibility*, the criterion *contain important/unusual perspectives* was often associated

with this task. Participants used documents created by subject experts to help students

know these experts. Some of these documents were perceived as classic in specific fields

because these experts' thinking was influential. Participants introduced influential

thinkers as well as their perspectives simultaneously. As a participant described, "*Just to*

show that [the author] is a well known person in computer security... [The author] has

been writing this column for I think 20 or 30 years and so there are a lot of interesting

cases that I'm wanted to introduce the students to [the author]'s writings because he has

important things to say."

4.4.2.7 Information use task: Expose students to important perspectives

Participants used documents that contained ideas or perspectives they wanted

students to know. These ideas and perspectives were perceived as important or unusual.

Sometimes the unusual perspectives a document contained were against the main stream.

Additionally, not all of the perspectives participants wanted students to know were valid.

The genres used for this task were diverse, including: textbooks, book reviews, journal

articles, book chapters, blog posts, documentaries, maters thesis, master thesis, Ph.D.

dissertation, memoir, and so on. The textbooks used to perform this task were written by

authors who approached the subjects participants were teaching from unique perspectives.

These textbooks were not similar to standard textbooks used as foundational texts.

Genres such as book reviews, editorials, and blog posts were opinion-based.

Participants were primarily concerned about *credibility* and *suitability* when

performing this task. These two evaluative criteria played equivalent roles in this task.

The criterion *contain important/unusual perspectives* was often associated with this task

because the documents participants used contained important or unusual perspectives. As

a participant described the documentaries he used, "*They have a particular perspective,*

but I think it's an important perspective as students need to get." One of the dimensions

of *credibility*, that is, *expertise*, also played an important role in this task. This was partly

because some of the perspectives participants wanted students to know were perceived as

narrow, limited. These perspectives were "*slices of the field.*" They were "*not the entire*

pie." In some cases, the perspectives participants wanted students to know were well

researched or discussed in the documents.

4.4.2.8 Information use task: Introduce a professional organization

Participants used documents to help students understand these organizations and

what they did. The genres used for this task include: professional organizations' websites,

internal research report, and rating rubric/standards. These genres were created or

maintained by professional organizations. *Credibility* and *suitability* were the only criteria

associated with this task. *Credibility*, especially the criterion *source*, was more often

associated with this task. The professional organizations participants introduced were

perceived as having subject expertise. As a participant described, "*So a lot of these are*

organizations that are involved in developing of the new technology and I find exposing

them to the website is a good way for students to be aware of what does that organization

really do because they're important players in the cellular industry."

4.4.2.9 Information use task: Teach the highest expectations

Participants used documents to help students understand what the best looked like.

Students were encouraged to achieve the best. The genres used for this task were

guidelines and standards. These genres contained visions that will guide students to

navigate through the daily dilemma they will face in the future once they become

working professionals in the fields. As a participant described, "*It's important to have a*

vision of what's the best that this can be and then try to figure out how to get there rather

than not even being able to envision where you're trying to go. So the guidelines are a

path to get to that bigger vision and if you don't use something like that then it becomes

just instantaneous decision making." No criteria were identified as being associated with

this task.

4.4.2.10 Information use task: Highlight a topic(s)

Participants used documents to emphasize the importance of a topic(s). This task

was only performed once, and the genre used for it was a magazine article. As the

participant described, "*The Asian women in STEM careers – I pick that because there's*

not a lot of information that talks about Asian women in STEM and is one of the few

pieces that I could find. I picked that to highlight that particular topic." No criteria were

identified as being associated with this task.

4.4.2.11 Information use task: Prepare students for the job

Participants used documents to help students become professionals in specific

fields. One way to help students become professionals was to use documents they will

use in their professional practices in the future. The genres used to perform this task

include guides, standards, recommendations, video lecture, code of ethics, executive

order, and rating rubric/standards. Most of these were classified under professional work

genres. *Public acceptance/endorsed usage*, *suitability*, and *credibility* played equivalent

roles in this role. *Public acceptance/endorsed usage* refers to participants' concerns about

whether a document has been widely used or used by subject experts who were affiliated

with prestigious schools. Participants tended to use widely used genres (e.g., standards)

for this task because professionals in the fields used these genres. It was important for

students to learn from these genres. *Credibility* played a role in this task partly because

the documents that professionals used were created by professional organizations that had

subject expertise. As a participant described, "*If it comes from a source like NIST, then*

people will say, Okay, this is the way it should be done because these guides have a lot of

credibility."

4.4.2.12 Information use task: Draw on scholarship

This task was only performed once by a participant. He taught students scholarly

content because he wanted students to learn from scholarly work. The genre used for this

task was academic publications. As he described, "*I want to draw on scholarship, and I*

want to expose students to scholarship as a way of putting all the other things into a

context." The criteria associated with this task include *suitability* and *credibility*. The

content of the academic publications he used was perceived as scholarly, and these

publications were created by scholars who have been dedicated to the subject for a long

time. As he described, "*Their reading were by scholars who have spent years studying*

these things. So, students are getting the best available accounts of the things they're

reading about."

4.4.2.13 Information use task: Develop a conceptual vocabulary/terminology

Participants used documents to help students develop conceptual vocabulary or

terminologies. Understanding and being able to use terminologies allowed students to

interact with professionals in the fields. Only two participants performed this task. The

genres used to develop students' conceptual vocabulary include academic publications

and books. The genres used to develop students' terminology include guides, standards,

and recommendations. The criterion the most frequently associated with this task was

public acceptance/endorsed usage. This was because the guides, standards, and

recommendations used for this task were widely used by working professionals. As he

described, "*What I want to get out of the standards is terminology. If the standard uses*

this term to identify this thing, we should use it throughout the class. Because if you go

talk to professionals, they'll probably be following the terminology used in standards."

4.4.2.14 Information use task: Walk students through the process

Participants used documents that contained how-to information to walk students

through specific processes. The genres used for this task include tutorials, guides,

handbooks, and video lessons. All of them contained step-by-step, procedural

information. <u>*Suitability*</u> played a leading role in this task. Participants were concerned

about how useful and applicable the above genres to students' tasks at hand. As a

participant described, "*I think when they are struggling on how to get started on a*

problem, looking at examples is helpful. Although there are work examples in the

textbook, I think it helps some students to go through in a video step by step so that they

hear the words and see the text that you are writing all at the same time." They were also

concerned about how long the genres they used were.

4.4.2.15 Information use task: Facilitate lab practices

Participants used documents that helped students to perform tasks in the lab. The

genres used for this task include textbooks, tutorials, handbooks, and documentations.

Most of these contained how-to, procedure information that helped students to perform

specific tasks step-by-step. As a participant described, "*In order to do the same task on*

different databases, the steps would be different. If you wanted to create a database in

MySQL versus in Microsoft SQL Server, it's different. The interfaces are different, the

steps you need to go through are slightly different, so it's always easier for the students to

watch the video about how I do this in Microsoft SQL Server before they go do the lab

exercises." The genres used to perform this task overlapped with the genres used to *walk*

students through the process. Students usually had to perform specific activities

step-by-step to accomplish their tasks in the lab. However, not all of the genres that

walked students through the process could be used to *facilitate lab practices* because

some were not related to the lab. *Suitability* and *information quality* were the only criteria

associated with this task. Participants were concerned about the match between the

genres and what they wanted students to perform in the lab.

4.4.2.16 Information use task: Balance research and practices

This task was only performed by a participant who used journal articles to

balance research and practices in her course. This task was only performed

once. *Suitability* played a role in this task because some of the journal articles she used

were research-based, while some were practice-based.

4.4.3   Teaching task: Enhance students' understanding

This teaching task consists of several information use tasks. These information

use tasks were performed to help students understand the learning content

better. *Suitability*, *credibility*, and *information quality* played a major role in this task.

Overall, *credibility* and *affect* played a more important role in this task than in the

task *teach about the field*. However, the importance of *cost effectiveness* and *public*

acceptance/endorsed usage decreased in this teaching task. *Credibility* was participants'

major concern when *providing an example(s), explaining/illustrating/demonstrating*, and

presenting different authorities. *Suitability* was their major concern when *providing*

theoretical/contextual information. *Information quality* was their major concern when

improving students' understanding.

4.4.3.1 Information use task: Provide an example(s)

Participants used documents to give students an example(s) of what they were

learning or their assignments. *Providing an example(s)* was the most frequently

performed task, and several participants emphasized the importance of examples in their

teaching. These indicate it was an important task for the courses included in this study.

As a participant described, "*These are examples of how people have come up with really*

clever advertising in an online context… I think the tremendous advantage is this is the

most important thing. The most important thing is for them to see and appreciate

successful strategies… If I get to throw out everything, I'll throw it all out, but keep that."

A wide variety of genres were used for this task, including: demonstrations/comedies,

rubrics, book reviews, news, textbooks, book chapters, magazine articles, project

websites, example deliverables, etc. Some of the genres used for this task were used in

professional practices in specific fields. These genres were related to the subjects

participants were teaching. For example, copyright license and license agreement were

used as examples in a course on copyrights. Collection development policy was used as

an example of students' assignment in a course on managing school libraries. In some

cases, the content in the genres provided examples for participants to use. As a

participant described, "*These kinds of issues are usually debated in the US and maybe*

Europe. But obviously these issues are the most important in developing countries, and

India is a very good example of a developing country. So I wanted to have an article

about India." Textbook genres and academic, research genres were not frequently used

for this task because examples were often used to explain the concepts, principles, or

theories participants were teaching. Hence, documents that provided the major learning

content, such as textbooks, journal articles, conference papers, standards, and

recommendations, were excluded.

Credibility was way more often associated with this task than *information quality*

and *suitability*. Among all of the credibility criteria, the criterion *tangibility*, which was

classified under *trustworthiness of information*, was the most often associated criteria.

Participants used documents to provide students with real-world examples. The criterion

recency was often associated with this task as well because some participants tried to

keep examples fresh. In several cases, the examples participants provided were real and

recent. As a participant described, "*This talks about exact examples happening today*."

One of the dimensions of credibility, that is, *expertise* was also often associated

with this task because the criteria *source* and *breadth of perspectives* were considered. In

the former cases, participants used documents created by subject experts or professional

organizations that had reputation and subject expertise in specific fields to provide an

example(s). In the latter cases, participants thought the examples they provided were

only examples. There were other examples. Thus, students had to understand the

examples were only a snapshot of the learning content.

4.4.3.2 Information use task: Explain/illustrate/demonstrate

Participants used documents to explain a concept, illustrate an idea or problem, or

show something. This was one of the most frequently performed task. It seemed it played

an important role in the courses included in this study. The genres used for this task were

very diverse, including: news, demonstrations/comedies, book chapters, journal articles,

pictures/images, blog post, instructional material, and so on. Textbook genres and most of

the academic, research genres were not used to perform this task. This probably was

because participants tried to explain concepts, illustrate or demonstrate the major learning

content. Thus, documents used as foundational text or used to provide the major learning

content were excluded.

<u>*Credibility*</u> associated with this task the most frequently, especially the criterion

source. Participants used documents created by subject experts or reputable organizations

to illustrate the points they wanted to make. Additionally, one of the dimensions

of *information quality*, that is, form, associated with this task more frequently than other

criteria. Participants used genres that had forms different from the genres used as

foundational text or used to provide the major learning content because this helped to

explain a concept(s) or illustrate the points participants wanted to make. As a participant

described his purpose in using political speech, "*It's one thing to talk about in the*

abstract. It's another thing to show them. Here's how it worked in this important case and

then I say, Can you see how this shaped the political process that came out of this?"

4.4.3.3 Information use task: Improve students' understanding

Participants used documents to help students better understand what they were

learning. The genres used for this task include: pictures/images, essays, journal articles,

magazine articles, blog post, instructional material, online training courses, tutorial, and

talk. Most of these belong to instructional, multimodal genres and Internet

genres. *Information quality*, *credibility*, and *suitability* were the major criteria associated

with this task. Among all, one of the dimensions of *information quality* – form – was

more often associated with this task than other criteria. Participants used genres that

expressed and presented information in different forms to enhance students'

understanding. The forms of these genres were different from textbooks and journal

articles. These genres brought students different learning experiences and hence

improved their understanding. As a participant described the advantage of using a blog

post, "*I think using different types of materials helps to reinforce things in students' minds*

in a way that if I try to make all the points from a single source like the textbooks it will

be harder to do." Several individual pieces were also used to perform this task. These

include journal articles, magazine articles, and essays. They were used with textbooks to

help students understand specific topics because the information in these genres was

written in different way. In these cases, the criterion *writing style* was associated with this

task. In other words, genres that wrote or presented information in different forms helped

to *improve students' understanding*. As a participant described,

"*If we're reading about a particular topic, they'll read something in one*

of the textbooks and then I usually have one or two journal articles that

go with that, that might even be on the same exact topic, but it's written

slightly differently and will cover some different points. Sometimes

students say we keep reading the same material, but sometimes what a

student will say to me is when I read it this way I didn't understand it,

but then when I read it in a different way I got it."

4.4.3.4 Information use task: Provide theoretical/contextual information

Participants used documents to provide students with theoretical or contextual

information. This information was used as background information for students to better

understand the major learning content. The genres used for this task include: biographies,

memoirs, documentaries, statistical data, book reviews, editorial, academic publications,

book chapters, and so on. *Suitability* and *information quality* were more often associated

with this task. Participants considered the match between the documents and their courses

when preforming this task, such as the match between the length/amount of information

in the documents and the time they had in the class. As a participant described, "*They had*

to watch those two brief online documentaries on the Spanish Civil War because that

would serve as a context - a historical context... It also allowed them to see those poems

in a more wide perspective, and to be able to think about the presence of war, of exile,

and those texts based on all the information that those documentaries gave." Participants

also concerned about how deep the contextual information was when they used the above

genres. They preferred to use short documents that contained the most important details.

4.4.3.4 Information use task: Present different authorities

This task refers to situations in which participants used documents created or

spoken by sources to whom they perceived as authoritative or historically important to

illustrate the points they wanted to make. Students were able to learn from different

authorities and understand the points participants tried to illustrate. The genres used for

this task include: webpages, executive order, news, and editorials. *Credibility* played a

leading role in this task because the genres participants used were created by reputable

organizations or spoken by authoritative figures. As a participant described, "*This is*

President Obama's executive order about computer security and driving home the point

that when the system is implemented incorrectly the chances are that it's secure will be

zero. So this is to the point is to say that when the ultimate authorities, the president of

the United States says computer security which means building systems correctly to

specifications among other things is important."

4.4.4   Teaching task: Make the learning content concrete and real

This teaching task consists of four information use tasks. Participants performed

these tasks to make the learning more concrete and realistic because this helped to

improve students' understanding and justify the relevance of the learning content.

Overall, <u>*credibility*</u> played a leading role in the information use tasks classified under this

teaching task, except for the task *provide multimodal information*. The importance

of <u>*suitability*</u> substantially decreased in this teaching task. <u>*Cost effectiveness*</u> did not play

a role in this task. It probably was because most of the genres used for this task were

freely available online.

4.4.4.1 Information use task: To present reality

Participants used documents that depicted real people, objects, events, problems,

or other occurrences to demonstrate what they were teaching existed in the real world.

The genres used for this task include: tutorials, demonstrations/comedies, interviews,

photos, example charts, statistical data, search results, blog post, instructional material,

and so on. Most of these belong to instructional, multimodal genres and Internet

genres. *Credibility* played a leading role in this task partly because the criterion

tangibility was often associated with this task. *Tangibility* refers to participants' concerns

about the extent to which the content of the documents they used was real and concrete.

Using documents that depicted real things allowed participants to *present reality*. As a

participant described the interviews (videos on YouTube) he used, "*It's someone talking*

about what they do. It puts a personal face to these people. They're not just names in

journal articles. You see a real-life person who is a researcher talking about how they do

things. And I think that brings the process to life a little bit in ways that articles and

things do not." In contrast, documents used as foundational text or used to provide the

major learning content were not used to perform this task. Textbook genres, and academic,

research genres were excluded from this task. Several participants perceived the

information in the textbooks as unrealistic, fixed, and ideal, which were in contrast with

the criterion *tangibility*. As a participant described, "*I do not want to just feed them a*

textbook as if there is only one way to deal with school library program and there's no

issues and no problems. No, that's not even true." She also described, "*It's quite possible*

to have a textbook that speaks in an almost a detached way that the way to manage a

school library program is you have five main things that you pay attention to and then

you'll have a chapter on each and then we finished, but it's never like that."

4.4.4.2 Information use task: Provide multimodal information

Participants used documents that presented the learning content in audio, visual,

or audio-visual modes. The genres used for this task include: training videos, tutorials,

demonstrations/comedies, interviews, instructive videos, podcast, video lesson, talks, and

videos. All of these belong to instructional, multimodal genres. *Information quality*

played a leading role in this task because one of its dimensions – *form* – was often

associated with this task. The form of instructional, multimodal genres was different from

that of textbooks. Several participants deliberately looked for videos to support or

reinforce the content of textbooks because presenting the content in multimodal modes

made it concrete. Students were able to learn better. As a participant described, "*I try to*

find other supporting readings or supporting stuff like videos or whatever that support

what those authors have said. For example, the Fairy Use Tale supports what's in those

books but does it in a fun way. It uses the Disney images to talk about what's in copyright

law." Different students learned in different ways. By presenting the learning content in

multimodal modes, participants were able to accommodate different learning styles. As a

participant described, "*There are certain people who learn things well from reading a*

book. There are certain people who learn things by doing hands-on. There are certain

people who learn things by watching videos. So my philosophy is I want to reach all of

those different students. And I think that a variety of different genres helps me to

accomplish that goal." Several participants also looked for videos in which authors of

textbooks or journal articles talked about what they did.

4.4.4.3 Information use task: Connect with the real world/make a connection

Participants used documents to help students relate what they were learning to

what happened in the real world. The most frequently used genre for this task was news.

Other genres used for this task include: journal articles, contemporary songs, traditional

songs, blog post, tutorials, comedy, articles from RSS feed, and so on. These genres

shared a common characteristic in that they were created for public consumption. Their

target audience was relatively broad. The broad normative scope of these genres enabled

students to connect the learning content to real-world occurrences. *Credibility* played a

leading role in this task partly because the criterion *recency* was often associated with this

task. Participants used documents that contained recent information to perform this task.

As a participant described, "*I think we use news articles in the school very much that way*

to provide a little bit of a relationship between what's going on right now and what they

are learning." Participants also used documents to help students make other types of

connections, such as the connections between different eras and between different genres.

4.4.4.4 Information use task: Help students visualize the goals

Participants used documents to help students visualize because this helped to

understand how to achieve the goals. The genres used for this task include: rubrics,

technical marketing videos, guidelines, and interviews. The technical marketing videos

and interviews helped students to visualize what they will be doing when they become

professionals in the future. The rubrics and guidelines helped students to visualize what

the best looked like and develop a concrete picture. As a participant described,

"*There are no standards that I know of for classroom management. So*

this [title of the document], I wrote that self-assessment rubric because

there maybe one little piece of the standards that say a library should be

conducive to learning but that didn't really tell what it looks like. And so

we developed a rubric to really flash that out so that people

understood… Both of these were ones that I found that I thought would

be good examples that would help my students visualize what they were

working towards."

The criterion associated with this task was *credibility*. Participants used

documents created by reputable organizations to help students visualize the goals they

were achieving.

4.4.5   Teaching task: Obtain reference information

This teaching task consists of five information use tasks that were classified

according to the types of information participants or students looked for. Participants

used different documents to look for different types of information, such as: statistical

data, examples, problems, or chemical property information. They also provided access to

different documents for students to look for information, such as job advertisements,

writing guidelines, and citation information. Different types of information helped

participants and students to accomplish different tasks, such as developing a problem for

students to work on or writing an assignment. Tasks including *help students find jobs*,

enable students to get citation information, and *provide guidelines for writing* were only

performed once or twice in the courses included in this study. Only a few criteria or no

criteria were identified as being associated with these tasks.

Overall, _credibility_ played a leading role in this teaching task. It was participants'

major concern when they performed the following tasks: *look up/provide references*, *look

for examples/problems*, and *help students find jobs*. _Information quality_ played a

secondary role, and the importance of _suitability_ substantially decreased.

4.4.5.1 Information use task: Look up/provide references

Participants used documents to look for data or other types of reference

information. As a participant described, "*[The subject guide is] full of these very common*

resources that chemical engineers use to find information. It is just like explanations like

how does a distillation column work. Some of it is what is the density of ethanol at 60

degrees Celsius and one atmosphere pressure. You need to know information about

different chemical compounds we call this property information and it's very important."

The genres used for this task include: handbooks, online property databases, specialized

search engines, resource websites, and documentation. All of these belong to reference

genres. <u>Credibility</u> played a leading role in this task partly because the above participant

used reference genres that had been reviewed and edited by subject experts in her

discipline. The information in these genres was perceived as trustworthy.

4.4.5.2 Information use task: Look for examples/problems

Participants used documents to look for examples or problems for students to

work on. Some of them adapted the examples or problems. As a participant described,

"*[The concept test database is] literally just a series of PowerPoint questions. I picked*

some of them and others I didn't use them exactly how they were written but I changed them

a little. I just picked 15 questions out of lots of questions and I'm using it as a pre-impose

test for my class." Although participants in social sciences also used problems in

textbooks for students' assignments, this task was performed only in sciences. The genres

used for this task include textbooks and a concept test database. Textbooks were the

major genre used for this task. Students could also use textbooks to look for examples or

problems as references. As a participant described, "*The textbook also has some work*

example problems. It gives them a reference for looking at work example problems. When

they come across the new problem in their homework, they can look back and see if they

see similarities in one of the work example problems." <u>Credibility</u> played a leading role in

this task partly because the criterion *source* was often associated with this task. The

examples and problems in the textbooks and concept test database were credible because

these were created by subject experts in specific disciplines.

4.4.5.3 Information use task: Help students find jobs

　　　This task was only performed by a participant who provided students with

documents that allowed them to search job advertisements. The genres used for this task

include listservs, professional organizations' websites, and a small website for job search.

As she described, "*The reason I listed all of these is because these are places that*

students can find jobs." The only criterion associated with this task was <u>*credibility*</u>. This

was because she was concerned about the *stability* of the small job search website.

4.4.5.4 Information use task: Enable students to get citation information

This task was only performed by a participant who provided students with the

bibliographic information of the documents she used. Students were able to cite these

documents. The genre used for this task was book/product information pages.

4.4.5.5 Information use task: Provide guidelines for writing

Participants provided students with documents that contained information about

how to write to help them to complete assignments. The genres used for this task include

guides and reference guidelines. As a participant described, "*Those were the literature*

review guides and argument writings. These were really meant to help students if they

were curious, who wanted a bit more guidance on how to do writing." No criteria were

identified as being associated with this task.

4.4.6   Teaching task: Develop students' advanced learning skills

This teaching task consists of two information use tasks. These information use

tasks involved higher-level learning skills because participants required students to use

what they have learned to analyze and interpret events, perspectives, or examples.

Overall, *credibility* played a leading role in this task. The importance of *information*

quality and *suitability* decreased. *Cost effectiveness* did not play a role. This might due to

the emphasis of this task on students' intellectual processing. Thus, the intellectual

content of documents were assessed.

4.4.6.1 Information use task: Help students apply the learning content

Participants instructed students to apply what they have learned to analyze the

content of documents. The genres used for this task include: academic publications,

memoirs, demonstrations/comedies, journal articles, and clicker assessments. The

memoirs and demonstrations/comedies participants used contained real events that could

be analyzed by theories. As a participant described, "*They use the theories to analyze the*

stories in the memoirs. It's not only to expose them to other life experiences of different

people, but it's also to help them understand the theories that we're talking about in class

and to do the application of the theory." <u>*Credibility*</u> played a leading role in this task

partly because the memoirs and demonstrations/comedies contained real-world events.

However, it was important for students to understand that the perspectives in the memoirs

were narrow, limited. Although the participant deliberately used memoirs written by

multiple authors and hence contained diverse perspectives, these perspectives did not

represent the whole. As she described, "*The advantages is that they represent different*

voices or different experiences, but even though they do that, they still don't represent the

whole, so you can't say after reading the book about Asian-Americans well this is true of

all Asian-Americans. It's only true of the stories that you read in that book."

4.4.6.2 Information use task: Develop students' critical thinking skills

Participants encouraged students to critique or think beyond what they have

learned. The genres used in this task were diverse, including: book reviews, editorial,

demonstrations/comedies, videos, law, FAQ, clicker assessments, and so on. <u>*Credibility*</u>

played a leading role in this task. Different dimension of _credibility_ were associated with

this task, especially _trustworthiness of information_. The genres participants used

contained valid and invalid perspectives, real events (e.g., actual law cases), or questions

real events that stimulated students' thinking. As a participant described,

> "*It's also part of my desire for them to develop critical thinking skills to*
>
> *see how the justices or judges on the court wrestled with the case. Most*
>
> *of these cases weren't decided unanimously, so the students will read*
>
> *five of the justices, thought this and here's why four of the justices*
>
> *thought this, sometimes only one vote difference. Because I want them*
>
> *to be able to make arguments on both side and learn skills and being*
>
> *able to make argument even for positions they don't agree with. To me,*
>
> *that's part of the higher ordered learning and critical thinking skills that*
>
> *they need.*"

4.4.7   Teaching task: Enhance students' participation

This teaching task consists of three information use tasks. These tasks were

performed to enhance students' participation in the class. The role of different criteria

varied. Overall, *credibility* did not play a leading role in this teaching task.

4.4.7.1 Information use task: Trigger discussion

Participants used documents to start discussions in the class. The genres used for

this task include clicker assessments, a podcast, and a video. *Suitability* was the only

criterion associated with this task. Participants considered the match of the above genres

to the class in terms of their *relevance*, *length/amount*, and *originality*. As a participant

described, "*The only shortcoming is because it's the podcast, it's short. So it's 2 minutes. I*

know when I listen to them I always want to know more, but there's no more. I usually like

those kinds of things. I play like at the beginning of class to get the discussion going, so

it's just enough to get discussion going, but it's not too long for them to listen to the whole

thing."

4.4.7.2 Information use task: To engage students

Participants used documents to enhance students' participation and involvement.

The genres used for this task include: pictures/images, instructional videos,

documentaries, speech video, advertisements, poems, news, clicker assessments,

magazine articles, and so on. <u>*Information quality*</u> played a leading role in this task

because one of its dimensions – *form* – was often associated with this task. Participants

used genres in different, unique forms to engage students. Several participants used

image genres and instructional, multimodal genres for this task. As a participant

described, "*Usually in a video, they're trying to illustrate something a little bit more,*

instead of just writing about it. It has visuals. It can have sound. I think it just engages

students in a different way than just reading. It may say the same thing, but hearing it in

words, and maybe seeing pictures, it gives you a different perspective on whatever the

topic is." Genres that presented textual information in unique forms could also be used to

perform this task. As a participant described, "*I saw some examples of this poem format*

called Where I am From, and thought that would be a different way to engage them and

thinking about how would they write about themselves, what would they say."

4.4.7.3 Information use task: Have fun

Participants used documents to entertain students. They were also entertained by

these documents. All of the genres used for this task were multimodal. These include:

demonstrations, comedies, pictures/images, and videos. Some demonstrates were also

identified as comedies. The criterion *affect* played a leading role in this task because

participants perceived the above genres as interesting, fun, engaging, or challenging. As a

participant described, "*I like to present something funny too because sometimes it makes*

the class more lively. We want to also make the students to have fun." Participants did not

just entertain students. *Having fun* was always an addition to their instruction. As a

participant described, "*I think teaching, you have to be entertaining at some points... I*

don't do them just for that, I thought they had a point that I could bring out." <u>*Credibility*</u>

played a secondary role in this task because sometimes participants were concerned about

the *trustworthiness of information* in the genres they used. When entertaining students,

participants had to be careful because funny documents were not always trustworthy. As a

participant described, "*Sometimes I wonder if it's worth the time to do something funny.*

They're obviously biased if there's satire or comedy. They're biased, but I think the

students will get that."

4.4.8   Teaching task: Point students to resources

This teaching task consists of several information use tasks. These tasks share

common task goals in that they were performed to help students access to different types

of documents. The importance of *credibility* and *suitability* varied. *Information quality*

and *personal preferences* did not play a role in this teaching task.

4.4.8.1 Information use task: Provide authoritative references

This task was only performed by a participant who provided students with access

to two professional organizations' websites. He called these websites authoritative

references because both were created and maintained by the authoritative bodies in his

field. These websites served as the ultimate guide for students who wanted to be certified

as professionals. As he described,

> "*The authoritative reference is the singular place that the student can*
>
> *go for the ultimate description of what the project management process*
>
> *is supposed to be and it is basically going to be the thing that if they*
>
> *wish to become certified or experienced professionals, they have to*

know this in detail and so the authoritative reference is the ultimate

guide for what that professional approach should be."

Credibility played a leading role in this task because these organizations were

perceived as having subject expertise and the knowledge they provided was official.

However, he was concerned about the match between the intellectual levels of the

descriptions on these websites and his students because these websites were created for

experienced professionals.

4.4.8.2 Information use task: Provide original sources

Participants provided students with original documents from which the learning

content was created or from which a specific concept was originated. The genres used for

this task include: conference papers, law, websites, a practitioner journal article, and a

book chapter. *Suitability* played a leading role in this task because the documents used to

perform this task were perceived as original. Sometimes participants preferred to use

documents that provided original, first-hand information, especially when the information

in the documents that contained secondary information was insufficient. As a participant

described the conference papers she used, "*A lot of this is about sentiment analysis and things that's not in the textbook and so where I'm giving them information from first sources instead in the text*." Providing original documents had pedagogical advantages. As the above participant described, "*Instead of giving all lecture slides, it's nice that there's a website about the topic where you can go and show first-hand – I mean it makes the lecture more interesting than to have everything on a slide. You can go and look at a website that talks about that topic.*"

4.4.8.3 Information use task: Provide access

Participants provided students with access to documents. The genres used for this task include subject guides and annotated bibliographies. The subject guides enabled students to access to reference genres. The annotated bibliographies were full-text documents that students could use if they did not purchase the textbooks. These annotated bibliographies helped to reduce students' *cost*. Thus, *cost effectiveness* was associated with this task.

4.4.9   Teaching task: Improve teaching immediately

This teaching task consists of two information use tasks. Participants performed these tasks to improve their teaching every week. The genres used for these tasks were clicker assessments. The importance of different criteria varied in different information use tasks.

4.4.9.1 Information use task: Get timely feedback

The genre used for this task was clicker assessments. Participants designed questions that asked students about their teaching. They received feedback from students immediately when the latter answered their questions. In this way, they were able to respond to students' feedback and improve their teaching immediately. They did not want to wait for students' feedback until the end of the semester. As a participant described, "*I also asked a question at the end of it about my teaching, asking them what they liked and disliked about what I was doing. And that was very helpful to me for making adjustments of the class on the fly.*" However, "*because it's anonymous, [students were] just pretty rude.*" <u>*Credibility*</u> played a role in this task because the feedback participants received from students was timely but rude.

4.4.9.2 Information use task: Understand students' learning situation

The genre used for this task was clicker assessments. Participants used clicker

assessments to design questions in order to understand whether students understood the

learning content in the class. Once students responded to these questions, they understood

students' understanding because clicker assessments presented students' answers

immediately. They were able to adjust their teaching according to students' understanding.

No criteria were identified as being associated with this task.

4.4.10   Teaching task: Encourage students to read

This teaching task consists of two information use tasks. These tasks were

performed to encourage students to read. These tasks were performed only once or twice

in the courses included in this study. The only criteria associated with this teaching task

were *information quality* and *credibility*. Other criteria did not play a role.

4.4.10.1 Information use task: Motivate reading

Participants used documents to ensure students to read the required readings

before the class. The genres they used include clicker assessments and an essay that gave

students advice on study habits. *Information quality* played a role because the participant

perceived the advice was good.

4.4.10.2 Information use task: Reflect on self-learning

The genre used for this task was clicker assessments. A participant used clicker

assessments to design questions that helped students to reflect on their study habits. Once

students responded to these questions, they were able to see their own responses as well

as their classmates', and made comparisons. Such comparisons helped students to reflect

on their own study habits and hopefully to improve. Students did not honestly respond to

the participant's questions. She perceived their responses as not trustworthy.

Hence, *credibility* played a role in this task.

4.4.11 Teaching task: Continue to learn

This teaching task consists of two information use tasks. These tasks were

performed to encourage students to continue their learning. *Credibility* played a leading

role in this teaching task. *Suitability* and *information quality* played a secondary

role. *Cost effectiveness* also played a role. However, *affect* did not play a role in this task.

It probably resulted from this task's emphasis on intellectual pursuit.

4.4.11.1 Information use task: Providing suggested readings/more information

Participants used documents as optional readings or resources for more

information. Students could use these documents if they were interested in specific topics.

The genres used for this task were very diverse, including: news, textbooks, book

chapters, journal articles, bibliographic information, professional organizations' websites,

webinars, and so on. These genres share common characteristics in that they contained

information on topics that have not been covered in the courses included in this study.

Multimodal genres, report genres, audio genres, image genres, professional work genres,

and example genres were excluded from this task. *Credibility* played a leading role in this

task partly because the sources of the genres used for this task had subject expertise, and

these genres contained recent and accurate information.

4.4.11.2 Information use task: Keep up

Participants keep updated with specific fields by subscribing or visiting specific

documents on a regular basis. They also provided students with these documents that

helped them to keep updated. The genres used for this task include: professional

organizations' websites, research reports, journal article, conference papers, articles from

RSS feed, and so on. *Credibility* played a leading role in this task because the sources of

and information in these genres were trustworthy, and the sources of these genres had

subject expertise in specific fields.

In summary, *suitability*, *credibility*, and *information quality* were the major

criteria participants employed to assess their use of the selected genres. *Suitability* played

a leading role in the teaching tasks *prepare the course* and *teach about the*

field. *Credibility* and *information quality* also played a role in these tasks. Most of the

genres used for these tasks were specifically designed for the teaching context, the

research context, and the professions participants were teaching. The associations

between these tasks and these criteria were established based on a fusion of purposes,

forms, and content of the genres used to perform these tasks.

Credibility played a leading role in the teaching tasks *develop students' advanced*

learning skills and *continue to learn*. These tasks involved intellectual development and

pursuit. *Credibility*, especially the dimension *expertise*, played an important role in

information use tasks that involved subject experts, professional organizations, or

authoritative figures. The associations between credibility and these information use tasks

tended to be established based on the sources of the selected genres. The sources,

including subject experts and professional organizations, were perceived as having

subject expertise, reputation, or authority. *Credibility*, especially the dimension

trustworthiness of information, played an important role in information use tasks that

involved a wide variety of genres. The associations between credibility and these

information use tasks tended to be established based on the content aspect of genres

because the information in the genres used to perform these tasks was often perceived as

trustworthy. The information in these genres was perceived as trustworthy because it

depicted concrete, real things or because it was recent, updated.

Information quality played a leading role in several information use tasks. The

associations between *information quality* and these tasks were established based on either

the form or content aspect of genres. For example, the association between the task

complement/supplement other resources and <u>*information quality*</u> was primarily

established based on the content aspect of genres because the genres used for this tasks

contained in-depth information. The associations between tasks including *improve*

students' understanding, *provide multimodal information*, and *to engage students* were

primarily established based on the form aspect of genres. A lot of multimodal genres and

image genres were used to perform these tasks. Genres had different forms enabled

participants to perform these tasks.

Chapter 5 Discussion

5.1   Overview

This chapter discusses the results of this study. It starts with the answers to the

research questions. This chapter goes on to examine the tasks participants performed, the

genres they used, and the credibility assessments and document assessments they made

based on the literature reviewed in Chapter 2.

5.2   Answering the Research Questions

This study investigated the associations between faculty's credibility assessments

and information use tasks with respect to document genres in the context of university

teaching. Specifically, it sought to answer the following three research questions:

Q 1   How do faculty assess the credibility of the documents they use to support their

teaching? What are the criteria they employ to assess the credibility of these

documents? Are the credibility criteria they employ associated with the genres of

these documents?

Q 2   How do faculty use the information in the documents they assess to support their

teaching? What are the information use tasks they perform to use these

documents? Are the criteria they employ to assess the credibility of these

documents associated with the information use tasks they perform?

Q 3   Are the information use tasks faculty perform to use the documents they use to

support their teaching associated with the genres of these documents? If so, what

are these associations?

5.2.1   Answer to Q1: Credibility-genre associations

Overall, the criteria associated with a task bridged this task and the genres used to

perform this task. The results of the co-occurrence analysis demonstrate the criteria

associated with a task served as function enablers. Because participants made evaluative

assessments based on their purposes in using the selected genres, the criteria associated

with a task represent salient information characteristics of the genres that enabled them to

perform this task. The associated criteria represent the information characteristics of the

genres that mattered in a task. _Credibility_ was one of the characteristics of the selected

genres that enabled task performance. *Credibility* played different roles in different

teaching tasks and information use tasks. According to Table 4.4.1 and Appendix 6,

different genres were associated with different dimensions of *credibility* and different

credibility criteria when they were used for task performance. For example, reference

genres used to perform the task *look up/provide references* were associated with

trustworthiness of information and *expertise*. Some of these genres, such as handbooks

and online property databases, were perceived as credible because the information in

these genres has been reviewed and edited by experts who had subject expertise.

Participants and students in the science disciplines were able to look up in the reference

genres to design or solve problems because the information in these genres was

guaranteed. Genres used to perform the task *provide an example(s)* were often associated

with *trustworthiness of information* and *expertise*. Genres used to provide examples were

often associated with *trustworthiness of information* because participants used specific

genres to provide real-world examples and/or recent examples. The information in the

genres was perceived as tangible and/or recent so that it was used to *provide an*

example(s). Genres used to provide examples were often associated with *expertise* partly

because participants deliberately chose genres created by subject experts or professional

organizations or genres that contained well-researched information when they *provided*

an example(s). Genres used to provide examples were often associated with *expertise*

also because several participants perceived the genres used to provide examples as

limited.

Credibility played a leading role in the tasks in which diverse genres were used. It

was a major concern when the genres not specifically created for the teaching context

were used, as exemplified by the genres used to *provide an example(s)*,

explain/illustrate/demonstrate, *develop students' critical thinking skills*, and *connect with*

the real world/make a connection(s) (e.g., memoirs, political speech, news, songs, and

demonstrations). Credibility was not a major concern when the genres specifically

created for this context and closely related contexts (e.g., the research context) were used,

as exemplified by the genres used to *provide foundational text* and *enable students to*

understand an area/a topic. This might partly result from the fact that these genres

tended to be created by subject experts, reputable publishers, or professional

organizations. The quality control, gatekeeper mechanism implemented in the publishing

process of these genres ensured the credibility of these genres. Thus, *suitability*

and *information quality* became participants' major concerns. The information in the

genres created for contexts other than the teaching context was recent, tangible, or

relevant to the real world. These characteristics enabled participants to perform the tasks

they desired. However, there was a lack of quality control mechanism in publishing these

genres. Thus, in order to ensure the credibility of these genres, some participants used the

genres created by professional organizations or reputable companies, such as Cisco and

New York Times. Participants relied on these companies and their own credibility

assessments to use these genres. Hence, *credibility* became a major concern when genres

not specifically created for the teaching context were used.

      Credibility, *suitability*, and *information quality* were the major criteria

participants employed to assess the selected genres in their task performance. These

criteria seemed to form a balance. The importance of *credibility* of genres varied in

different tasks. Genres that were primarily assessed by the criterion _credibility_ were used

together with genres that were primarily assessed by the criteria _suitability_

and/or _information quality_. Specifically, participants' positive perceived credibility of the

genres used to perform the tasks "_provide an example(s)_", "_to present reality_", and

"_connect with the real world/make a connection(s)_" mitigated their negative perceived

credibility of genres used to perform the task "_provide foundational text._" Most of the

genres used to "_provide foundational text_" were textbooks. Textbooks were often

perceived as outdated. In a few cases, the information in the textbooks was perceived as

untruthful and ideal. Participants used genres perceived as recent and tangible to

complement the textbooks they used when _providing an example(s)_, _presenting reality_,

and _connecting with the real world/make a connection(s)_. Additionally, most of the

genres used to _explain/illustrate/demonstrate_, _improve students' understanding_, and

provide multimodal information had forms different from textbooks and academic,

research genres. These genres were used with the genres used to _provide foundational_

text, _enable students to understand an area/a topic_, and _complement/supplement other_

resources. The genres primarily assessed by the *form* dimension of <u>*information quality*</u>

complemented the genres primarily assessed by <u>*suitability*</u> and the *content* dimension

of <u>*information quality*</u>. In this way, <u>*suitability*</u>, <u>*credibility*</u>, and <u>*information quality*</u> played

equivalent roles in participants' assessments the selected genres in their task

performance.

5.2.2 Answer to Q2: Credibility-task associations

Table 5.2.2.1 presents the roles of <u>*credibility*</u> in different tasks. This table was

developed based on Table 4.4.1, which summarizes the results of the co-occurrence

analysis. In Table 5.2.2.1, <u>*credibility*</u> played a leading role in some tasks because it was

the most frequently associated criterion. In some tasks, criteria such as <u>*suitability*</u>

and <u>*information quality*</u> played a leading role, but <u>*credibility*</u> played a secondary role. In

this way, <u>*suitability*</u>, <u>*credibility*</u>, <u>*information quality*</u>, and other criteria complemented

with each other and formed a complete picture.

Different tasks had different information requirements. Credibility was one of the

information requirements for task performance. Some tasks required trustworthy

Table 5.2.2.1 Credibility-task associations

Role of criterion	Teaching task	Information use task
Leading criterion: Credibility	Teach about the field	Provide learning content
		Expose students to influential thinkers
		Expose students to important perspectives
		Introduce a professional organization
	Enhance students' understanding	Provide an example(s)
		Explain/Illustrate/Demonstrate
		Present different authorities
	Make the learning content real and concrete	To present reality
		Connect with the real world/make a connection(s)
		Help students visualize the goals
	Obtain reference information	Look up/Provide references
		Look for examples/problems
		Help students find jobs
	Develop students' advanced learning skills	Help students apply the learning content
		Develop students' critical thinking skills
	Point students to resources	Provide authoritative references
	Improve teaching immediately	Get timely feedback

	Encourage students to read	Enable students to reflect on self-learning
	Continue to learn	Provide suggested readings/more information
		Keep up
Leading criterion: Suitability Secondary criterion: Credibility	Prepare the course	Prepare lectures
	Teach about the field	Enable students to understand an area/a topic
Leading criteria: Suitability & Credibility	Teach about the field	Prepare students for the job Draw on scholarship
Leading criterion: Information quality Secondary criterion: Credibility	Teach about the field	Complement/Supplement other resources
	Enhance students' understanding	Improve students' understanding
	Make the learning content real and concrete	Provide multimodal information
	Enhance students' participation	To engage students
Leading criterion: Affect Secondary criterion: Credibility	Enhance students' participation	Have fun

information, while some required expertise. For example, the information in the genres

used to *provide an example(s)* and *to present reality* had to be perceived as tangible, real,

and concrete to enable participants to perform these tasks. The information in the genres

used to *connect with the real world/make a connection* and *provide suggested*

readings/more information had to be perceived as recent and updated to enable

participants to perform these tasks. The genres used to *look up/provide references* had to

be reviewed and edited to enable participants to perform this task. Genres that fulfilled

different information requirements and contained the information participants desired

enabled task performance.

Expertise played an important role in tasks that involved subject experts or

professional organizations and in tasks that used genres created by them. For example,

expertise was associated with the tasks *expose students to influential thinkers* and

introduce a professional organization because these tasks required subject experts or

professional organizations. *Expertise* was associated with the task *provide authoritative*

references because this task required genres created by professional organizations.

Expertise also played an important role in the tasks *provide learning content* and *help students visualize the goals* because the genres created by subject experts or professional organizations enabled participants to perform these tasks. Students learned what happened in specific fields and how to achieve the goals from subject experts or professional organizations through the genres the latter created. The dimension *expertise* also played an important role in tasks that required information or perspectives that were endorsed by subject experts. *Expertise* was associated with the tasks *expose students to important perspectives* and *look for examples/problems* because subject experts' perspectives and the information they endorsed were perceived as credible.

According to Table 4.4.1, credibility was not identified as being associated with several tasks. These tasks include: *enable students to explore interests*, *facilitate lab practices*, *enable students to get citation information*, *trigger discussion*, *provide access*, and *balance research and practices*. *Credibility* was not the major information requirement that the genres used to perform these tasks had to fulfill.

5.2.3   Answer to Q3: Task-genre associations

The information use tasks participants performed served as the criteria that

determined what genres should be included and excluded. For example, when performing

the task *provide foundational text*, most participants used *textbooks* and the genres used

in the professions they were teaching (e.g., law, news). *Scholarly books* were used when

scholarship was an integral part of courses. Because this task was performed to teach

students foundational knowledge of the subjects, the genres that contained such

knowledge were included and used. The genres used to perform the task *enable students*

to understand an area/a topic include journal articles, book chapters, and magazine

articles. These genres share common characteristics in that their topic foci were narrower.

Because this task was performed to teach students specific areas or topics, genres that

contained overviews of specific areas or in-depth information on specific topics were

used. In this way, tasks served as inclusion criteria for genres. Tasks also served as an

exclusion criterion for genres because they determined what genres were not appropriate

to use. For example, when performing the task *provide multimodal information*, genres

that were not multimodal, including academic, research genres, were excluded. When

performing the task *provide original sources*, genres that contained secondary

information, such as news, were excluded. When preforming the task *introduce a*

professional organization, genres that were not created or maintained by professional

organizations were excluded. Thus, the information use tasks participants performed

served as the inclusion and exclusion criteria for genres.

5.3   Discussion of the Results

This study uncovered three types of associations, including the associations

between tasks and criteria, between tasks and genres, and between genres and criteria.

The task-criterion associations this study uncovered illustrate the information

requirements of different tasks were reflected in the criteria participants employed to

assess the genres. These associations also demonstrate the roles and relative importance

of different criteria in different tasks. The task-genre associations this study uncovered

illustrate the functions of the selected genres in the courses included in this study. These

associations also demonstrate the genres that fulfilled the information requirements of

different tasks. The genre-criterion associations this study uncovered illustrate the criteria

participants employed to assess different genres in their task performance. These

associations also demonstrate salient information characteristics of genres that enabled

task performance.

5.3.1   Teaching tasks and information use tasks

Previous research suggested the complexity of tasks affects credibility

assessments (Kirkyla, 2010), but our knowledge about the effect of other facets of tasks,

such as task performers' goals, on credibility assessments was limited. Freund (2008b)

argued because the goal-based approach focuses on the use of information, taking this

approach to investigate information-seeking and selecting behaviors provides untapped

potential, especially in the environment in which various types of documents are used.

This study took the goal-based, bottom-up approach to identify the tasks participants

performed to use information in the selected genres in the context of university teaching.

This approach was suitable for this study because the genres in use were diverse. The

genres used in this context include those specifically created for this context as well as

for other contexts, such as professional practices in different fields and the public's

consumption. The information use tasks this study identified connected participants'

teaching goals with the genres they used. Because these tasks were identified from

bottom-up, they were context-specific. They were not generic tasks that could be

transferred to other domains without a careful consideration of contextual differences.

A number of previous studies on tasks adopted the facetted approach to

investigate the associations between specific facets of tasks and other constituents of

human-information interactions in contexts (e.g., Li and Belkin, 2008; Li, 2009; Xie,

2009). The problem with the facetted approach is that it often involves too many facets.

Additionally, the importance of a facet changes as the context in which

human-information interactions take place changes. It is unclear which facets could

predict the lower levels of tasks better. These problems might reduce the facetted

approach's predictability on the lower levels of tasks and hinder its practical application.

Conversely, the goal-based approach is simpler, but it might be more powerful in

predicting the documents that might be useful to information users' tasks.

Previous research tended to view tasks as contextual factors that motivate

information-seeking and use activities. Work or leisure tasks give rise to

information-seeking tasks, which further give rise to search tasks. Viewing tasks just as

the stimulus for information-seeking and use is problematic because it focuses on

information-seeking and selecting activities. It does not account for information use. It

neglects the effect of information objects – especially document genres – on different

types of information activities. Additionally, the hierarchical associations between work

tasks, information-seeking tasks, and search tasks imply task performance takes place in

sequential order. However, different types of information activities tend to take place

iteratively without specific order. Furthermore, information-seeking and selecting is not a

one-time event. It is challenging to capture all of the information-seeking and selecting

activities pertaining to a work or leisure task, especially at the time when these activities

occur. As this study's participants demonstrate, the documents faculty use are obtained

from a wide range of sources. They accumulate documents over time. They look for

information in their everyday practices. They visit professional organizations' websites

on a regular basis and subscribe listservs to keep up. They also receive documents shared

by their colleagues. They use documents they used when they were students. Although

they might intensively look for information before they teach a course, it is difficult to

capture all of the information-seeking and selecting activities they perform in their course

preparation. Thus, taking the goal-based approach to identify the tasks participants

performed to use different genres helped to mitigate the problems of the hierarchical

approach.

This study approached tasks by task performers' goals in using documents that

belong to the selected genres. This approach focused on applying information to achieve

professional goals, not on the seeking and selecting aspect of human-information

interactions in contexts. Documents belong to the selected genres were used to perform

different tasks. The tasks participants performed reflect different aspects of genre

assessments and use in the context of university teaching. Specifically, these tasks reflect

participants' rationale behind their use and assessments of the selected genres, the

functions of genres in the courses included in this study, and the associations between

different documents and/or genres (e.g., the task *complement/supplement other*

resources). These tasks also represent the teaching activities that different genres

organized and accomplished (Andersen, 2008).

Wang and Soergel's (1998) document selection model indicates scholars'

perceived utility of documents generates the values of these documents. These values

lead to decisions regarding whether or not to accept a document. There were five values,

including: epistemic, functional, conditional, social, and emotional. Wang and Soergel's

(1998) argued epistemic value, that is, the utility of a document in fulfilling information

needs, is the prerequisite for all other types of values. However, in this study, documents

belong to the selected genres were used to perform information use tasks. These genres

had functional values because they contributed to task performance. Thus, in this study,

functional value serves as the prerequisite for other values. Because the tasks participants

performed illustrate the contributions of the selected genres to their teaching, these tasks

were mapped to the values in Wang and Soergel's (1998) model, as illustrated by Table

5.3.1.1. These tasks are classified based on all of the values in Wang and Soergel's

Table 5.3.1.1 The values of the selected genres used for different tasks

Value		Teaching task	Information use task
Functional		Obtain reference information	Look up/Provide references
			Look for examples/problems
			Help students find jobs
			Enable students to get citation information
			Provide guidelines for writing
Epistemic	Foundational	Teach about the field	Provide foundational text
			Enable students to understand an area/a topic
			Complement/Supplement other resources
			Enable students to explore interests
			Provide learning content
			Expose students to important perspectives
			Teach the highest expectations
			Highlight a topic(s)
			Prepare students for the job
			Draw on scholarship
			Walk students through the process

			Facilitate lab practices
		Enhance students' understanding	Prove an example(s)
			Explain/Illustrate/Demonstrate
			Improve students' understanding
			Provide theoretical/contextual information
		Make the learning content concrete and real	To present reality
			Provide multimodal information
			Connect with the real world/make a connection(s)
			Help students visualize the goals
		Point students to resources	Provide authoritative references
			Provide original sources
			Provide access
		Continue to learn	Provide suggested readings/more information
		Others	Present different authorities
			Balance research and practices
	Advanced	Develop advanced learning skills	Help students apply the learning content
			Develop students' critical thinking skills
Social	Professional	Teach about the field	Expose students to influential thinkers
			Introduce a professional organization

			Develop students' conceptual vocabulary/terminology
		Continue to learn	Keep up
	In-class	Enhance students' participation	Trigger discussion
			To engage students
Emotional		Enhance students' participation	Have fun
Logistic		Prepare the course	Structure the course
			Prepare lectures
Managerial		Improve teaching immediately	Get timely feedback
			Understand students' learning situation
		Encourage students to read	Motivate reading
			Enable students to reflect on self-learning

(1998) model, except for the condition value. Conditional value refers to undecided

utility of a document. This value could not be applied to classify the tasks participants

performed. This might partly result from the differences in the foci of Wang and

Soergel's (1998) study and this study. Wang and Soergel's (1998) study focused on

document assessments made in the information seeking process, while this study focused

on document assessments made in relation to information use in task performance. The

selected genres have been used, so there was no undecided utility.

Most of the tasks participants performed were classified under *epistemic value*

because these tasks were performed to fulfill the needs for new information. This reflects

the emphasis of the teaching context on knowledge transfer. Social value was divided

into two dimensions, including *professional* and *in-class*. Tasks including *expose students*

to influential thinkers, *introduce a professional organization*, and *keep up* were classified

under one of the dimensions of *social value – professional –* because they were

performed to help students connect to special figures or organizations. Tasks including

trigger discussion and *to engage students* were classified under one of the dimensions of

social value – in-class – because they were performed to enhance students' participation

in the learning process. The teaching task *obtain reference information* and its

information use tasks were classified under *functional value* because these tasks were

performed to accomplish specific tasks, although genres used to perform other tasks also

had functional values. Additional values, including logistic and managerial values, were

inductively developed. The teaching task *prepare the course* and its information use tasks

were classified under *logistic value*. The teaching tasks *improve teaching immediately*

and *encourage students to read* and their information use tasks were classified under

managerial value.

Since the genres participants used were identified based on their citations and use,

the granularity of the genres in use was reflected in their tasks. Different tasks relied on

genres at different levels of granularities. Some tasks required one or more documents;

some required sub-genres or information elements in different documents; still some

required packaged documents (e.g., textbooks with supplementary materials). For

example, performing the task *provide foundational text* usually required documents that

covered most of the topics or the most important concepts in specific fields.

Supplementary materials, such as tutorials, lecture slides, interactive quiz, or solution

keys, in the documents used as foundational text helped participants to *prepare the*

lectures and *improve students' understanding*. Performing the task *look for*

examples/problems required the questions and problems at the end of each chapter in

textbooks. Performing the task *understand an area/topic* required documents that

provided overviews of specific areas or contained in-depth information on specific topics.

Because different tasks required genres at different levels of granularity, building an

effective system to facilitate faculty's genre assessments and use needs to enable them to

flexibly navigate documents at different levels of granularity.

5.3.2   Document genres

This study took the bottom-up approach to identifying the genres participants

used to support their teaching. The genres in use were directly identified from their use

context. Participants went through the documents they used and identified the genres of

these documents in the interviews. Their perspectives were reflected in the genre labels

they came up with and their descriptions. The genres this study selected for in-depth

interviews included the most heavily used ones, the most frequently appearing ones, and

the least frequently appearing ones. These include the genres specifically created for the

context of university teaching as well as those created for other contexts. Genres such as

textbooks were created specifically for the context of university teaching. Documents

belong to academic, research genres in the genre classification in Table 4.3.1.2.1 were

created to report research, but they were used in the courses in which scholarship or

research was an integral part. Most of the example genres were used in professional

practices in specific areas. The example genres and professional work genres were used

in professionally oriented courses. Most of the instructional, multimodal genres, audio

genres, procedural genres, opinion-based genres, and news genres were found and

obtained through online searching. These genres were not specifically created for the

context of university teaching, but participants were able to repurpose different genres for

their own use.

Freund (2008b) argued that task-genre associations acted as an implicit link

between task performers and document creators who share similar intents in the same

organizational and domain contexts. Creators of genres used to perform the tasks *prepare*

the course and *teach about the field* probably share similar or closely related intents with

participants. Participants were familiar with the genres created for the teaching context,

the research context, and their professional domains. Participants may not share similar or

related intents with creators outside the teaching context. However, faculty and students

in this study could be viewed as users of genres that had broader normative scope (Rosso,

2010). For example, genres used to *explain/illustrate/demonstrate*, *provide multimodal*

information, and *connect with the real world/make a connection(s)* tended to have a

broader normative scope. Users share similar knowledge about these genres. Thus,

participants were able to repurpose these genres without causing understanding

difficulties.

Modeling the task-genre associations in search systems to facilitate

information-seeking and selecting activities would be the most effective when the

creation and use contexts of documents overlap because it helps to evoke knowledge

about genres (Freund, 2008b). To design information systems that facilitate genre

assessments and use for the context of university teaching, one needs to take into

consideration the differences in the creation and use contexts of documents. The genres in

use were created by a variety of sources, and the normative scope of these genres varied.

Building search systems that allow faculty to search for genres specifically created for

this context as well as those created for other contexts might help to facilitate faculty's

genre assessments and use. Adding task-criterion associations and genre-criterion

associations this study uncovered might help to build such systems as the former reveals

the salient information characteristics that enabled task performance, and the latter

reveals genres that had these characteristics. The task-genre associations this study

uncovered might also help to design search systems that filter genres based on the tasks

faculty wish to perform as task served as the inclusion and exclusion criteria for genres.

This study took the initiative to investigate genre assessments and use in the

context of university teaching. Genre use has been investigated in the context of scholarly

information practices. However, it has rarely been investigated in the context of faculty's teaching. Additionally, previous research on scholars' genre use tended to take the top-down approach. Researchers selected one or a few genres to investigate how scholars use the selected genres (e.g., Fry and Talja, 2007). The problems with the top-down approach included: (1) The genres in use were not directly identified from scholars' use practices. They were isolated from the context in which they were used. Genre use was investigated in a general research context, rather than in specific research projects where they were used. Thus, it was unclear the tasks that genres accomplished and the roles of different genres in different tasks; (2) Scholars' perspectives on the genres they used were not reflected. The genres researchers selected might not be meaningful to them; and (3) The contributions of different genres to scholarly research were not understood.

Previous research on scholarly information practices have employed citation analysis to identify the types of documents scholars use based on the citations in their publications, but scholars' perspectives on the documents they used were not amplified (e.g., Meho & Haas, 2001; Palmer & Neumann, 2002). A previous study on task-genre

associations has taken the bottom-up approach to identify genres, but it stopped before

the documents were actually put in use (e.g., Roussinov, et al., 2001). This study

mitigated the above problems.

5.3.3   Credibility assessments

5.3.3.1 Courses for which participant made credibility assessments

Participants were subject experts in specific fields. They were familiar with the

content they were teaching, although a few of them were not familiar with some of the

documents they used. Thus, they were able to make credible credibility assessments,

although credibility was not always important in the courses included in this study. As a

participant described, "*Because I'm an expert in the content, I was able to judge*

credibility myself... Because this is my topic area that I'm researching, I was able to do

that same sort of peer review, and looked for things that may not have been

peer-reviewed formally, but that I knew were credible or at least provided the tone." The

courses included in this study were pretty diverse. The diversity of the courses allowed

this study to capture variations of credibility-genre and credibility-task associations.

5.3.3.2 Participants' credibility assessments

Participants made two types of document assessments, including predictive and

evaluative assessments. The former derived from their approaches to course design and

expected use of documents in their task performance. The latter derived from their use of

documents belong to the selected genres in their task performance. The evaluative

assessments participants made took place at the interaction level (Hilligoss and Rieh,

2008). These assessments were made of their interpretations of the document attributes

they noticed (Fogg, et al., 2003). Thus, the evaluative criteria they employed to assess the

selected genres represent the document attribute they noticed and interpreted.

Participants employed more criteria when making evaluative assessments than

predictive assessments, but they employed more criteria related to topics when making

predictive assessments. When making evaluative assessments, their concerns about topics

of documents decreased. Additionally, the *suitability* of documents to their courses was

their major concern when making predictive assessments. Their concerns

regarding *credibility*, *information quality*, and *affect* increased when making evaluative

assessments. This indicates they focused on processing and interpreting the document

attributes they noticed. These results conforms the results of Rieh's (2002) study on the

judgments of information quality and cognitive authority scholars made on the Web.

These also conforms the results of Vakkari and Hakala's (2002) study in that faculty

became more discriminatory as they made progress in their task performance.

The evaluative credibility assessments participants made were encompassed in

their document assessments. They made credibility assessments based on their goals in

using documents belong to the selected genres. The documents this study identified were

already used. Thus, most of the documents were perceived as credible, including those

used as suggested readings. As a participant described, "*I am not going to recommend a

source that I think is poor.*" Even though some documents were used to demonstrate

problems or invalid criticism, these documents might have been perceived as good to

achieve their teaching goals. Thus, the evaluative criteria they employed highlighted why

the documents that belong to the selected genres were used and how these genres were

used to perform specific tasks.

Almost all of the participants used a variety of genres to support their teaching.

They had a deep understanding of the documents they used. They exploited the

advantages and used documents in combination to mitigate the shortcomings. These

suggest at the construct level (Hilligoss and Rieh, 2008), participants held a "*healthy*

skeptic" attitude toward credibility. As a participant described, "*Everything that you read,*

you have to critique and analyze. Anything, an article or book, whatever it is, you have to

read it critically. Hopefully, that's what we teach here [chuckles]. That you'll be in that

habit of reading everything critically." He went on to say, "*I teach healthy skepticism,*

critical thinking I hope [chuckles]."

At the heuristic level (Hilligoss and Rieh, 2008), several participants expressed

their strong preferences for specific genres. These genre-related heuristics were in

conflict with the construct "*healthy skepticism.*" There was a participant who preferred to

use textbooks to manage his course. There were two participants who preferred to use

journal articles, and they expressed their dislike for textbooks, books, and book chapters.

As one of them described, "*It's quite possible to have a textbook that speaks in an almost*

a detached way that the way to manage a school library program is you have five main

things that you pay attention to and then you'll have a chapter on each and then we

finished, but it's never like that." However, they shared the same construct of credibility.

Underlying their preferences and dislike, they defined credibility as *tangibility*, rather

than *truthfulness*. The participant who strongly believed in textbooks selected textbooks

and videos that contained information on the topics he thought were really important in

practices. The participant who disliked textbooks because she thought the information in

journal articles was real. Although the "*healthy skeptic*" attitude and genre-related

heuristics these participants applied were in conflict, they co-existed and worked together

to guide participants' genre use.

As well, at the heuristic level (Hilligoss and Rieh, 2008), there were several cases

in which specific genres were perceived as more credible or relatively not credible. For

example, a participant perceived textbooks and handbooks she used to find chemical

property information as credible because these have been reviewed and edited by a group

of subject experts in her fields. In this case, she applied source-related heuristics to

specific genres. Another participant had concerns regarding how accurate news was because the information in news was secondary. In general, journal articles, which have been peer-reviewed, were perceived as more credible. In contrast, genres found on the Web, such as guides and videos, were perceived as limited. Thus, genre-related heuristics probably could replace media-related heuristics in the unifying framework of credibility assessments (Hilligoss and Rieh, 2008).

However, this study did not find endorsement-related heuristics depicted in the unifying framework of credibility assessments (Hilligoss and Rieh, 2008). Participants did not accept documents recommended by other instructors or used by other prestigious institutions without making their own credibility assessments. Instead, they viewed other instructors' recommendations and use as a means to understand what documents were available. Sometimes it seemed they relied on prestigious institutions' use to endorse their own use. Thus, the criterion *public acceptance/endorsed usage* was not classified as a credibility criterion.

Participants employed a set of criteria to make evaluative credibility assessments

for the selected genres. Some were employed to assess a wide range of genres, while

some were not. Criteria such as *recency* and *source* were widely and frequently

employed. This indicates the importance of these two criteria in making credibility

assessments. Criteria such as *association with authoritative knowledge* were rarely

employed. Participants tended to employ multiple criteria to assess a document. This

demonstrates the inherent complexity of credibility assessments participants made. Their

credibility assessments encompassed strengths and weaknesses. The weaknesses of a

document were often mitigated by other documents perceived as having the opposite

values. Additionally, participants did not always view the weaknesses as weaknesses per

se. Sometimes the strengths and weaknesses were viewed as two sides of the same coin.

The credibility criteria participants employed reflect the creation context of these

documents. The creation context of the documents encompassed multiple dimensions,

including: the author or organizations that created the documents, their purposes in

creating these documents, when the documents were created, and how the documents

were published. The following criteria respectively reflect the above dimensions: *source*,

intent, *recency*, and *being reviewed and edited*.

5.3.3.3 The associations between genres and credibility

Although this study did not specifically focus on participatory, user-generated

genres (e.g., Wikipedia and blogs), the results of this study conform the results of

previous research that focused on these genres (Francke and Sundin, 2012). Participants

who used Wikipedia entries in their courses held positive attitudes toward Wikipedia.

They perceived the information in the entries they used as credible. Sometimes the

information in Wikipedia entries was the best for topics related to technologies. Entries

that had been heavily contributed were perceived as credible, but participants had

credibility concerns for entries that were rarely contributed. They also treated Wikipedia

entries as a starting point, rather than an ending point.

Previous research illustrates genres were associated with credibility in two ways,

including the associations between the print/digital dichotomy and the stability of a

medium and between the type of information a source contained and the genre of this

source (Sundin and Francke, 2009; Francke and Sundin, 2012; Francke, Sundin, and

Limberg, 2011). Participants also associated the genres they used with credibility in these

ways, but there were variations in the first type of association. In some cases, they

perceived some of the genres they obtained online as limited. However, they preferred to

use textbooks that were freely available online. They also preferred to use textbooks that

had both printed and e-book versions. It seemed if the printed version was credible, they

wanted to have the e-book version. Thus, it seems the print/digital dichotomy has

gradually disappeared. Additionally, participants had concerns about the stability of the

genres they obtained online because they may disappear in the future. However, several

participants kept their own blogs, and one of them thought his blog was relatively stable.

Thus, the stability of a medium depends on the source.

5.3.3.4 Interpreting credibility in the context of university teaching

When interpreting the results of this study, it is important to bear in mind the

credibility criteria this study identified tended to be neutral. Credibility was not a

dichotomy decision that determined whether a specific piece of information was correct

or wrong, updated or outdated, credible or not credible. As participants' document

assessments encompassed advantages and shortcomings, the results of their credibility

assessments were complicated. Additionally, the credibility assessments they made

tended to be relative, rather than absolute. For example, employing the criterion *recency*

resulted in either positive or negative (updated or outdated). The documents perceived as

updated might be published in three or four years, but the documents perceived as

outdated might be published in 1950s. Because the results of employing a criterion to

make credibility assessments differed, the documents assessed by the same criterion

might have the opposite information characteristics. Sometimes participants employed

the same criteria to assess different genres, but their perceptions of different genres were

quite different. Although the results of employing the same criterion varied, the results of

employing some criteria tended to be positive. For example, all of the documents

assessed by the criterion *source* were created by subject experts or professional

organizations. This probably resulted from this study's focus and methodology. The

documents this study identified have been assessed and used, so most of them were

credible.

It is important to take perspectives and agreements into consideration to

understand faculty's perception of credibility in the context of university teaching.

Participants exposed their students to perspectives that were radical, interesting,

challenging, and sometimes completely negated what they have learned from the

foundational text. Even though several participants used the books they wrote as

textbooks, they used documents created or spoken by other people to *present different*

authorities. They did not portray themselves as the ultimate authority. One of them even

worried that students might feel uncomfortable to disagree with his viewpoints.

Participants and their students did not have to agree on specific perspectives, but it was

important to know different perspectives and understand the rationale behind these

perspectives. Credible information reflected or depicted the real world. Participants

wanted their students to connect what they were learning with what was happening in the

real world. Knowledge did not exist in an ivory tower. They used different genres to

encourage students to think critically and participate in the ongoing dialog in which

knowledge is constructed (e.g., Wikipedia).

5.3.4 Participants' document selection and assessments

5.3.4.1 Contexts of participants' document assessments

Data regarding participants and their courses were collected to aid in the

interpretation of the results, although this study did not analyze similarities and

differences in the associations among tasks, genres, and criteria based on these data.

However, the interview transcripts indicate participants and their courses played a role in

their genre selection and assessments. For example, several participants described how

the disciplines to which their courses belong and the colleges and programs in which they

taught their courses framed their thinking about their course, disciplinary identities, and

the role of theories and/or practices in their courses and the documents they used. As a

participant described,

> "*I feel that Applied Linguistics in different universities is housed in*
>
> *different places. In some universities, it's housed in the School of*

Education. But in this university, Applied Linguistics is housed in the

College of Arts and Sciences; within a program in linguistics... It's a

master program in linguistic studies; it's not a master program in [the

subject of the course]... I feel that I really need to have a heavy

theoretical component to my course because we are in the College of

Arts and Sciences. I'm in a program in linguistics."

One of the textbooks she used was theoretically oriented, and it combined

linguistic theory with second language teaching.

Additionally, those who used the books they wrote as the textbooks were

professors and associate professor. Participants who relied on their student experiences to

assess and use documents were assistant professors. Three assistant professors used the

documents they used when they were students. Several participants' who were appointed

as (assistant/associate) professors of practices mentioned their practitioner experiences

played a role in their document selection and assessment. As a participant later described,

"*...in this particular class it is not so important that whether it much as recent as it does*

give the appropriate practitioner view of things." An associate professor of practice was

able to detect the differences between the textbooks written by academic professors and

practitioners. As he described, "*It's not at all uncommon to have textbooks out there that*

are written by academics who have never actually done any work in the field that they're

writing about. That's usually pretty obvious to me as a practitioner when I read that

material. It has to do with how they present the material that is a clue to that, but more

often it's what material they choose to present that is relevant." Most of the technical

marketing videos he used were created by prestigious companies, such as Cisco.

There was a case in which the participant considered the term when her course

was taught to select documents. As she described, "*The job search websites – at the end*

of the semester. Even though this is an introductory course and most of the students go on

to the advanced course, not all of the students do, especially the undergraduates because

of the way the class is scheduled. This is in the spring. Oftentimes the undergraduates

leave, so I will let them know. I'll show them what kind of things they can do."

There was a case in which the course requirement indirectly played a role in the participant's document selection and use. This participant's course was classified as highly recommended. He determined the topics of his course partly according to the qualifying exam his students had to pass, and he wanted to select a textbook that covered the topics he had to cover.

It seemed course development played a critical role in participants' credibility assessments, especially when it comes to *endorsed credibility* and *endorsement-related heuristics*. In the interview, the participant who completely inherited other instructors' teaching materials and documents first expressed his perceived credibility of the inherited documents was generally high. As he described, "*Most of the materials were inherited from [a faculty's name], so I trust him as an experienced instructor in this class, that the quality of the materials he selected should be very good.*" However, later he expressed contradictory perception of some of the inherited documents. There were some documents that he would not have been used if he had developed the course from scratch.

Thus, course development could be used as a sampling criterion for studies that

investigate *endorsed credibility*.

Furthermore, participants who taught large courses heavily relied on textbooks.

Their perception and use of textbooks shared many similarities. Using textbook packages

helped participants to manage these courses. As a participant described, "*I believe that*

textbooks provide structure for students and they come with databases of questions. I feel

for a course like this, where I have large class sizes, I like to take a modular approach.

Every week is one chapter in the textbook... The only way I can get a large number of

them to read the chapter is to include a quiz, an online quiz and that motivates."

However, another participant who used a textbook and took the same modular approach

had a small class. It would be interesting to further investigate the associations between

class size and faculty's use of textbooks.

Participants referenced their teaching experiences when answering the interview

questions. In the interviews, participants who had more teaching experiences sometimes

described their document assessments and use generally. They changed some of the

documents each time when they taught the courses, but the core documents they used

remained the same. As an experienced participant described, "*Every semester I change.*

I'm always looking for more up-to-date materials; materials that are more relevant to

students." It would be interesting to further investigate faculty's rationale in retaining and

removing different genres from their genre repertoires over time.

Students in different programs, departments, and disciplines had different

education backgrounds. Participants considered their students' interests and backgrounds

when they selected documents for their courses. For example, a participant who taught a

course required for students in the three master programs in his school described,

"*Different master students have different interests, and you have to give the library*

students stuff that they like. And with this article, I'm giving the [telecommunication]

students stuff that they like because it's a very technical discussion." In contrast, several

participants who taught in the same school mentioned the textbooks they used were too

technical for their students. As a participant described, "*Actually it can be used in*

information management program, the iSchool. But it is also used in more technical

programs, engineering-focused programs… There is even programming exercises in the

book, but obviously I won't use the material because we don't do programming in most of

our courses."

The interview transcripts indicate participants, their courses, and the context in

which their courses were taught were associated with their document assessments and

use. The ways participants and their courses varied, including: participants' rank,

academic versus professional backgrounds, teaching experiences, document familiarity,

course development, course requirements, student levels and majors, intellectual levels of

courses (e.g., introductory versus advanced), class size, and semesters, could be used as a

sampling framework as well as conceptual framework to guide data collection and

analysis in the future. Future research on faculty's information practices may take these

contextual variations into consideration.

5.3.4.2 Rules for selecting documents

Wang and Soergel (1998)'s document selection model depicted six decision rules

that scholars applied to select documents. Participants in this study applied these rules to

select documents for their courses, except for the *satisfice rule*. First, participants applied

the *elimination rule* to reject a document. Sometimes they focused on a document

attribute to reject a document, regardless of the positive document values they perceived.

As a participant described a textbook that a publisher encouraged him to use, "*It's 120*

bucks. I don't like this company. These people are in it for the money." This participant

expressed strong dislike toward the publisher's intent, despite of the good match in the

emphases and intellectual levels between this textbook and his course. Next, scholars

applied the *multiple-criteria rule* to decide whether to accept or reject a document.

Participants employed multiple criteria to assess a document as well.

Third, scholars applied the *dominance rule* to select documents. Scholars selected

documents that outperformed other available options in at least one aspect (Wang and

Soergel, 1998). Francke and Sundin (2012)'s study on teachers and librarians' perceived

credibility indicates that credibility was established by comparing the claims in different

sources. Several participants assessed documents by comparing multiple aspects of

different documents. They compared the documents they used in the courses they

selected for this study with the ones they used in other courses, and those they did not

choose to use. The documents they selected, especially textbooks, tended to outperform

other options in multiple aspects. As a participant described,

"*The other option was this [title of the textbook she didn't use]. The*

first reason is because other people in the department had chosen

[author of the textbook she used]. I agreed with that choice because

[author of the textbook she used], I think the presentation is more

modern. [Title of the textbook she didn't use] is an older textbook that

doesn't take in to account some of the newer physics education

research in best practices. The [author of the textbook she used] book is

a little bit at a lower level, which we found that it's helpful for the

introductory students... There is education research showing that

certain things are good to have in physics textbooks. And [author of the

textbook she used] incorporates those."

This snippet illustrates the textbook this participant used outperformed the other

textbook in at least three aspects, including: *presentation*, *student/course level match*, and

whether it contained important sub-genres or information elements. Participants did use

the documents they perceived as the best among available options.

Fourth, participants applied the *scarcity rule*. They compromised when there were

only a few options available. As a participant described, "*I really don't like it. Every year*

when I prepared for the course, I struggled with whether or not I'm going to keep the

book because it doesn't have the same depth as those others... The reason why I keep the

book is I want students to think though about what the identify development and

challenges are of students who are gay and lesbian. If I take that book out, I had nothing

else to use."

Fifth, participants applied the *chain rule*. In this study, different types of chains

were identified. First, different genres were interrelated because the shortcomings of a

genre were complemented by the advantages of other genres. For example, while the

information in the textbooks was perceived as ideal and outdated, the information in the

genres used to *provide an example(s)* was often perceived as tangible and recent. The

genres used to *provide an example(s)* complemented those used to *provide foundational*

text. Second, genres in different modes were interrelated based on document

creators/speakers. For example, several participants searched and used documents created

or spoken by the same authors. They used videos in which textbook authors spoke. These

gave students a clear sense of what the textbook authors looked and sounded like.

Participants also used magazine articles written by these authors. Third, genres in

different modes and forms were interrelated based on shared content. For example, some

participants used multimodal genres, such as tutorials and instructional videos, to

reinforce the concepts students learned from the textbooks. Participants also used genres

written in different styles (e.g., journal articles or magazine articles) but contained the

same content as textbooks to enhance students' understanding. Fourth, participants used

opinion-based genres that contained critiques to the textbooks they used (e.g., book

reviews of the scholarly book written by the participant). These opinion-based genres

allow students to know different perspectives. Fifth, participants used documents

referenced by the documents they used. For example, they used genres that contained

in-depth information (e.g., journal articles) to complement the genres that did not contain

the desired information in detail (e.g., textbooks). Sometimes the documents that

contained in-depth information were the original documents cited in the documents that

did not contain such information. Sixth, participants used documents that were associated

with the authoritative knowledge in the fields. Seventh, participants used individual

documents in a collective volume (e.g., monographs in a series).

The above interrelationships between different genres were often established

based on the associations this study uncovered. These chains might be exploited to design

search systems that connect genres specifically created for the context of university

teaching and those created for other contexts.

Finally, the only rule participants did not apply was the *satisfice rule*. This rule

refers to situations in which scholars stopped accepting or using relevant documents

because they felt what they had selected or used was sufficient (Wang and Soergel,

1998). Participants continued to look for and accumulate documents relevant to their

courses in their everyday practices. As a participant described, "*I get a daily morning email from [a source] because I teach [subject]. Those are the best sources for these sorts of articles. So every morning when I go to work, I review all these articles.*" When they teach next time, the documents they accumulate in their personal collection are readily available.

5.3.4.3 Document assessments at different levels of granularity

Participants made comparisons when they made predictive and evaluative assessments. They made comparisons at different levels of granularity. Francke, Sundin, and Limberg's (2011) study on how students in upper secondary schools decided whether or not a source was credible found credibility was established by comparing claims in different documents. Additionally, task-genre associations existed at two different levels, including within-documents and between-documents (Freund, 2008b; Roussinov, et al., 2001; Zhang, et al., 2011).

Participants assessed documents at different levels of granularity. They made comparisons: (1) between different genres; (2) between different documents that belong

to the same genres; (3) between sub-genres or information elements in different

documents; and (4) between claims in different documents. For example, a participant

compared the qualities of the problems in the textbooks he used in the course he selected

for this study and another course he taught. As he described,

> "*Someone who's fairly new to the topic can understand what's being*
>
> *asked and has the information available in the main text of the chapter*
>
> *to answer the question. The problems help reinforce concepts. They're*
>
> *covered by the text and help someone learn beyond what's just possible*
>
> *by reading… So I felt like there was good alignment between the*
>
> *problems and the text because that's not always the case, there is a*
>
> *textbook I use for another class where I like the text but the problems at*
>
> *the end of each chapter just seem unrelated to what's in the text and*
>
> *students find that extremely frustrating.*"

Participants compared the claims in different documents, especially when they

assessed the credibility of different opinion-based genres. As a participant described the

book reviews he used, "*I don't think all three are equally valid. So the one by [author] is a really thoughtful review and I went back and forth. He is a smart guy. What he really pointed out was there is this whole world of epistemology in philosophy that I didn't address. And he's right... The one by [another author] at the top, I don't think it's a very valid criticism and he is not a very nice person.*"

The associations among tasks, genres, and credibility this study uncovered existed at different levels of granularity. For example, the associations between the task *look for examples/problems* and the criterion *quality of sub-genres/information elements* took place at within-document level. The associations between the task *improve students' understanding* and the genre *pictures/images* took place at the genre level. Although participants used different image genres (e.g., photos, animation, logos), identifying the genres of different images was not very meaningful because all of the images were used for the same purpose.

In conclusion, credibility was the main information requirements for tasks that required diverse genres originated from heterogeneous sources and tasks that involved

subject experts or professional organizations. It was also a salient information

characteristic that enabled participants to develop students' advanced learning skills and

continue their learning.

Chapter 6 Conclusion

6.1 Overview

This chapter starts with a conclusion of this study. Next, it discusses the quality of this study. It goes on to discuss the advantages and limitations of the recruiting strategies this study adopted. What follows is a discussion of the advantages and limitations of this study's methodology. It then details the contributions this study made to theories, methodology, and practices. It goes on to discuss the limitations of this study. This chapter ends with future research directions.

6.2 Conclusions

This study uncovered three different types of associations, including the associations between criteria and genres, between criteria and tasks, and between tasks and genres, with a focus on the perception of credibility in the context of university teaching. The results indicate the tasks faculty performed served as an inclusion and exclusion criteria for genres. The evaluative criteria they employed served as function enablers that enabled faculty to use genres to perform different tasks because these

criteria represent salient information characteristics of the selected genres that mattered in

specific tasks. Credibility was one of the salient information characteristics that enabled

genres to function in faculty's task performance. Credibility played different roles in

different tasks. It played a leading role in teaching tasks that developed students'

advanced learning skills and helped students to continue their learning. The dimension

expertise played an important role in information use tasks that involved subject experts,

professional organizations, and authoritative figures. The dimension *trustworthiness of*

information played an important role in information use tasks that relied on diverse

genres originated from heterogeneous sources (e.g., genres used in professional practices

and instructional, multimodal genres found on the Web).

6.3   Quality of This Study

This dissertation describes this study's context and methodology in detail,

including how data were collected and analyzed. The detailed description of how the

coding categories were identified, developed, divided, and classified and how the coding

of some transcript snippets was revised enhances the descriptive validity and

trustworthiness of this study. The detailed description of how the data were collected and

analyzed at different stages will allow other researchers to replicate this study in similar

or different contexts. Specifically, the genre selection rule this study developed helped to

ensure the reliability of this study. A number of previous studies have employed citation

analysis to investigate scholars' document use and evaluate library collections in one or

two subject areas (e.g., Meho and Haas, 2001; Palmer and Neumann, 2002). Due to the

vast amount of documents that could be potentially identified from the citations in

scholars' publications, researchers tended to select a few publications for each participant

and analyze the citations in his/her publications. Researchers have to develop rules to

select their participants' publications consistently to conduct their citation analysis

according to their research goals. The selection rules play an important role in reliability

because they determine whether a study can be replicated in similar or different contexts.

When conducting cross-disciplinary investigations, consistent selection of documents or

genres in use becomes critical for theory construction and system design. This study

selected genres based on how heavily they have been used and how frequently they have

appeared in a course. This has allowed this study to include the genres core to the context

of university teaching as well as those peripheral but nevertheless playing a role in this

context. Researchers could apply and adapt this rule to systematically investigate the

associations among tasks, genres, and criteria in different disciplines.

In the interviews, participants identified the genres of documents based on the

definition of document genre this study adopted and their use. Genre identification

brought in their perspectives and helped to ensure the internal validity

(credibility/authenticity) of this study. Thus, the results were credible and authentic to

participants. The external validity (transferability) of this study was ensured by

preserving the contexts of genre use in customized genre repertoires and bounding the

interviews in the same contexts. The results could be reasonably transferred to contexts

that share similar contextual characteristics. Recruiting participants from different

disciplines and selecting genres based on how heavily they have been used and how

frequently they have appeared in a course helped to capture variations of credibility

assessments and information use. These two kinds of theoretical sampling also enhanced

the external validity of the study (Miles & Huberman, 1994).

This study collected data about the genres participants have used, the document

assessments they have made, and the information use tasks they have performed to

support the courses they taught and selected for this study. Because it collected

retrospective data, the impact of the presence of the researcher on their genre use and

assessments was avoided. Additionally, participants were not left to rely on their memory

to recall their genre use and assessments. Customized genre repertoires created based on

the citations in their teaching materials helped to enhance their recall. In this way, the

accuracy of the interview data was ensured. Furthermore, participants were instructed to

review customized genre repertoires and identify the genres of the documents they have

used in the interviews. They actively informed the researcher of what documents should

be added to and removed from customized genre repertoires. Some of the documents

should be removed because they were saved in the folders or on Blackboard but not

actually used. Some documents should be added because they were used but not uploaded

on Blackboard. Participants' instruction on what documents should be removed and added helped to ensure the completeness and accuracy of customized genre repertoires.

The transcripts have been analyzed multiple times for different purposes, including: developing and revising coding categories, differentiating the information use tasks performed to use and the criteria employed to assess the documents belong to the selected genres at different levels of granularity, and conducting the co-occurrence analysis. Such iterative analyses ensured the accuracy of the results. Additionally, participants' descriptions in different transcripts were examined and compared to develop and revise categories multiple times. When developing and revising the coding categories, the transcripts were analyzed in different order each time. This allowed the researcher to refresh and make decisions regarding whether to differentiate closely related categories or merge categories. This also helped to scrutinize previous coding. Errors made in the previous analyses were corrected. Thus, the accuracy and consistency of data analyses were enhanced.

6.4   Advantages and Limitations of Different Recruiting Strategies

This study adopted three strategies to recruit participants, including: referral, snowballing, and e-mail recruiting. The researcher's academic advisor's referral helped to recruit four participants in the sciences and humanities and implement the subsequent snowballing strategy. These participants suggested multiple faculty members who might be interested in participating in this study at the end of the interviews. The snowballing strategy required more time to recruit participants. It tended to take place at the end of the interviews. The snowballing strategy was very effective because twelve participants agreed to make suggestions. The advantage of the snowballing strategy was that it helped to recruit more participants, sometimes with diverse disciplinary backgrounds. For example, a participant provided a list of faculty members in her school. She selected faculty members from each academic program. Several other participants were able to suggest faculty members outside their programs and schools.

There were four limitations in adopting the snowballing strategy. First, sometimes the faculty different participants referred overlapped, especially when recruiting participants in sciences. Participants tended to refer faculty members who were dedicated

to teaching, and these faculty members were well known in their disciplines. Second, the

backgrounds and experiences of participants seemed to play a role in the faculty members

they were able to refer. Several participants had difficulties in coming up with names of

faculty in other disciplines. They were only familiar with the faculty in their own schools

and disciplines. As a result, there were fewer participants in the humanities. Third, those

referred by assistant professors tended to be assistant professors (of practice), while those

referred by associate professors or professors included different ranks. Fourth, several

participants hesitated to make a referral, although most of the participants were delighted

to participate in this study. Specifically, in the feasibility study, a participant was afraid

that making a referral would negatively impact her relationships with faculty members

outside the school. Thus, she rejected to make a referral. Two participants suggested that

the researcher contact the deans of their schools and send the recruiting e-mail to recruit

voluntary participants on their listservs.

Finally, the recruiting e-mails were sent and revised to recruit participants in different disciplines. Participants who agreed to participate were really interested in the study, but the rejection rate was high in other schools.

6.5   Advantages and Limitations of the Methodology

6.5.1   Advantages

The data collection methods this study employed had three advantages. First, employing qualitative citation analysis and semi-structured interviews in sequence provided methodological and data triangulation (Tashakkori & Teddlie, 1998). The explicit and implicit aspects of document assessments and information use were respectively captured by qualitative citation analysis and semi-structured interviews. The citations in teaching materials entailed participants' document assessments and information use because the documents they cited have been assessed and used. The descriptions accompanied by the citations revealed participants' assessments and information use because they often commented on the documents and guided students to use these documents. Thus, identifying the genres participants have used from the

citations in their teaching materials captured the explicit aspect of their document

assessments and information use.

Semi-structured interviews, which collected data about participants' rationale and

cognitive decisions, captured the implicit aspect of their document assessments and

information use. Participants verified the data collected by qualitative citation analysis in

the interviews. Presenting customized genre repertoires and giving them a chance to

review the genres they used at the beginning of the interviews enhanced the accuracy and

completeness of customized genre repertoires. Because customized genre repertoires

contained most but not all of the documents participants have used, four participants

indicated there were documents they used but were not included. These documents were

not uploaded to the Blackboard, so they were not identified. The missing documents were

added and the genres of these documents were included in the frequency reports. Several

participants indicated certain documents were not actually used and hence should be

deleted. This occurred in instances where participants used lectures with citations made

by other instructors and where they forgot to remove the documents they used in the past.

Additionally, there were the occasional documents participants had cited in error. Going

through customized genre repertoires with participants helped to correct these errors.

Second, since the methodology took a naturalistic, bottom-up approach, it

preserved the socially constructed nature of genre assessments and use. The genres were

defined based on how participants used these genres to support their teaching.

Participants' awareness, perception, and understanding of the genres were captured in

their own words. This study also captured document assessments and information use *in

vivo*. The naturalistic approach elicited other assessments participants made

(e.g., *suitability*, *information quality*, and *cost effectiveness*) with credibility assessments.

This helped to uncover the roles of different criteria and the relative importance of

credibility in different tasks. Overall, the naturalistic approach helped to effectively

capture naturally made credibility assessments.

Third, identifying the genres in use based on the citations in participants' teaching

materials allowed the researcher to become familiar with the documents they used. Such

familiarity facilitated the interviews. The researcher was able to ask questions about the

genres of different documents when participants identified the genres they used. The

researcher was also able to ask questions to probe their credibility assessments and

information use. For example, a participant stated, "*The textbook is authoritative and also*

challenging" in his syllabus. The researcher instructed him to elaborate this statement in

the interview.

Using customized genre repertoires to facilitate the interviews had the following

advantages: (1) Engaging participants: Customized genre repertoires documented the

genres participants used and their use contexts. They were able to discuss and elaborate

the genres they used in the interviews. Additionally, several participants were very

interested in reflecting their document use from the genre perspective; (2) Facilitating

participants' understanding and identification of genres: Shading the facet *genre* in

yellow has helped them to understand what document genre was immediately. The genres

the researcher identified also provided examples that enhanced their understanding. They

were able to identify the genres they used or came up with their own labels (e.g., survey

articles); (3) Collecting context-specific data: Customized genre repertoires helped

participants to concentrate on their genre assessments and use in the courses they selected

but not in other courses they were teaching; (4) Enhancing the accuracy of the interview

data: Because customized genre repertoires documented the bibliographic information

and use contexts of different documents, it helped participants to recall their purposes in

using different genres and the associated advantages and shortcomings; (5) Providing a

self-verification mechanism: The information provided by customized genre repertoires

allowed participants to verify their responses, which helped to collect accurate data. For

example, when asking a participant her purposes in using conference papers, she

responded intuitively, "*Conference papers tend to be the most cutting-edge research*,"

but she stopped to examine the conference papers she used in her genre repertoire. She

went on to say, "*I'm looking at the dates, these are not like 2012, 2013 things*." The

conference papers she used were actually older than she intuitively thought; (6)

Accessing to the documents on site: The facets *when* and *where* allowed the researcher to

locate the teaching material from which a specific document was identified quickly,

which assisted participants in recalling. The facet *hyperlink* allowed the researcher to

present the documents to participants quickly when they needed to see the documents to

recall; and (7) The differences in the use and use contexts of the selected genres became

more obvious as the researcher displayed them one by one: Whether instances of a

selected genre were used in the same way and whether different genres were used in the

same way were detected and probed because customized genre repertoires displayed

patterns of genre use.

Differentiating the information use tasks participants performed to use and the

criteria they employed to assess the documents belong to the selected genres at different

levels of granularity helped to clearly identify variations in genre use and assessments.

The co-occurrence analysis helped to decide salient criteria that mattered in a task and

further uncover the associations among tasks, genres, and criteria. Additionally,

conducting the aforementioned differentiation and co-occurrence analysis helped to

identify errors made in the previous analyses and correct these errors. The results were

confirmed and corroborated.

6.5.2   Limitations

There were several limitations in implementing the methodology and employing

citation analysis to identify the genres in use based on faculty's teaching materials.

First, in a few cases, participants indicated the genres of certain documents should

be revised when the interviews were nearly over. Changing the genres changed the

frequency distribution, so the researcher had to re-select genres to conduct in-depth

interviews. This tended to affect the selection of the lowest frequently appearing genres.

The most heavily used and the highest frequently appearing genres remained the same.

Second, the genre selection rules resulted in displaying documents that were used in

different degrees of heaviness and for different purposes in the interviews. For example,

textbooks were the most heavily used genre in most of the courses, but only one or two

textbooks were heavily used in a course. Textbooks that were lightly used or used as

optional readings were also displayed with heavily used ones. This did not affect data

collection though because participants were able to specify their purposes for using

different documents.

The limitations of relying on the citations in faculty's teaching materials to identify and characterize the genres in use include: (1) Not all of the documents used were referenced because some were omitted by participants or because some were internalized. Either way, the genres of these documents could not be identified; (2) Citation analysis cannot detect implicit purposes. The facet *purpose* was coded as required, review, skim, example, links (to the documents), and (use) images, according to what was manifested in faculty's teaching materials. Although there were common purposes across syllabi (e.g., required and optional readings), it was difficult to determine the purposes of using the documents according to teaching materials; (3) It was difficult to create entries for image genres (e.g., photos, logos, and signs) as several participants used a large amount of images in their lecture slides. To create entries for all of these images would generate a massive dataset, which would affect the interviews as it would take too long for participants to review these genres. In these cases, only a few lectures were analyzed along with other important teaching materials (e.g., syllabi). The researcher ensured image genres had the highest frequency count so that these genres

would be selected for in-depth interviews. Additionally, where the title of the image was

difficult to determine, textual information in the lectures was used to assign a title.

Customized genre repertoires re-arranged the documents participants used in

different classes and places in a course based on genres. Documents in use were

classified and displayed according to their genres when they were selected for in-depth

interviews. In this way, this study assumed documents belong to the same genre shared

common purposes, and perceived advantages and disadvantages, although sometimes

participants indicated they used different documents belong to the same genre for

different purposes. Selecting documents and asking interview questions based on genres

helped to investigate how different genres were used and perceived. However, genre was

not always the best way to classify and display documents and investigate how different

documents were used and perceived. Sometimes documents belong to different genres

but used in a specific place (e.g., a list of resources used for professional growth in a slide

offered at the end of a course) were used to perform the same tasks. It might be relatively

effective to display these documents together to investigate how these were used and

perceived. Nevertheless, genre was still an effective means to systematically investigate

how documents that scattered in different classes and places in a course were used and

perceived.

6.6   Contributions

6.6.1   Theoretical contributions

This study made contributions to theories, methodology, and practices. The

theoretical contributions fall into three areas: task-genre associations and credibility

assessments in the context of information-seeking and use, and faculty members'

information practices. This study enhanced our knowledge of task-genre associations in

three ways:

1. Exploring these associations in a new context, that is, the context of university

    teaching. This context shed new light on task-genre associations because both

    domain experts and novice users were involved. Faculty transformed their

    students from novice users to domain experts through their own genre

    assessments and use. Additionally, the genres used in this context were pretty

diverse. The genres faculty used included those specifically created for this

context (e.g., textbooks), those created for professionals in specific areas (e.g.,

license agreements), and those had broader normative scopes (e.g., news and

articles from RSS feed). The diversity of the genres used in this context brings

challenges to system design because designers must allow faculty to

effectively find genres originated from heterogeneous sources. The

task-criterion associations and criterion-genre associations this study

uncovered might aid in existing task-genre associations and help system

designers to connect genres originated from heterogeneous sources.

Furthermore, the context of university teaching provides insight into

task-genre associations because faculty's genre assessments and use were not

affected by the peer-review mechanism. They had more freedom in this

context. For example, they were able to use genres to entertain their students.

The involvement of both domain expert and novice users, the diversity of the

genres in use, and faculty's freedom in this context allowed this study to

uncover variations of task-genre associations;

2. Exploring these associations through the perception of credibility and

   explicating these associations by identifying the criteria faculty employed to

   make credibility assessments: Previous studies investigated these associations

   through the perception of usefulness without identifying the criteria that

   constituted usefulness (e.g., Freund, 2008; Freund, 2012; Zhang, et al., 2011).

   This study not only identified the credibility criteria faculty employed, but

   also uncovered the associations between the dimensions of credibility and the

   genres they used, and between specific credibility criteria and the genres; and

3. Explicating these associations by identifying a set of context-specific

   information use tasks. This study took the bottom-up approach to identify the

   tasks faculty performed to use information to achieve their teaching goals. It

   uncovered the associations between these tasks and the genres faculty used,

   and between these tasks and their credibility criteria. Thus, this study

explicated task-genre associations through the perception of credibility in the

context of university teaching.

This study contributed to our knowledge of credibility assessments in two ways:

1. Uncovering the associations between credibility assessments and genres:

    Previous research suggested contextual factors affect credibility assessments

    (Hilligoss and Rieh, 2008). Document genre is one of the most important

    contextual factors that affect information-seeking and document selection

    (Freund, 2008). Genres of websites affected users' perceived credibility

    (Flanagin and Metzger, 2007). However, the effect of genre on credibility

    assessments has not been examined thoroughly. This study bridged this gap by

    uncovering the associations between credibility and genres in professional

    task performance.

2. Uncovering the associations between tasks and credibility assessments. This

    study found credibility played different roles in different tasks and credibility

    was one of the salient criteria that enabled task performance.

This study contributed to faculty's information practices in two ways:

1. Investigating faculty's information activities – including credibility

    assessments and information use – in the context of teaching. This bridged

    the gap resulting from previous research's predominant focus on scholarly

    information practices; and

2. Bringing in task-genre associations: First, this study took the goal-based

    approach to information use tasks. It identified the set of tasks faculty

    performed to use genres to support their teaching. Previous research on

    scholarly information practices tended to put its focus on the information

    activities scholars perform in coping with information (e.g., chaining and

    verifying), neglecting the goals that motivate their information activities.

    The goal-based approach this study took to identify the information use

    tasks faculty performed bridged this gap. Second, this study took the

    bottom-up approach to identify the set of genres faculty used to support

    their teaching. Previous research on scholarly information practices tended

to take the top-down approach to investigate genre use. As a result, only a few genres were investigated (e.g., journal articles and mailing lists) and scholars' perspectives on the genres they used were not captured. The bottom-up approach this study took to identify the genres faculty used to support their course-teaching mitigated these problems. Third, this study uncovered the associations between the information use tasks faculty performed and the genres they used to support their teaching. Thus, the associations this study uncovered shed new light on faculty's information practices.

6.6.2   Methodological contributions

This study made several methodological contributions. Coupled with semi-structured interviews, this study's methodology transformed citation analysis from an unobtrusive data collection method to an active research tool that engaged participants and ensured the accuracy of the data collected by different methods. This study's methodology expanded the context of citation analysis from research to teaching. It also

extended the target of citation analysis from research publications to faculty's teaching

materials.

Librarians in academic libraries have employed citation analysis to investigate

scholars' document use and to evaluate collections. By analyzing the citation in scholars'

publications (e.g., journal articles or dissertations), citation analysis helps to uncover

patterns of citations and investigate the associations between different works. Mapping

out the documents that scholars cite with existing collections inform collection decisions

such as which journals to retain or exclude. Citation analysis has been employed with

other methods to investigate how scholars cope with information in the research context.

Comparing the documents identified from the citations in scholars' publications with the

data collected by other methods helps to uncover the documents that were used but not

mentioned. It allows researchers to gain a relatively complete picture of the range of

documents scholars use in their research.

However, previous research that employed citation analysis to investigate

scholars' document use suffered from four methodological problems. First, the citations

were analyzed solely by the researchers, so scholars' perspectives on the documents they

used were not reflected. Second, the documents identified from the citations were

analyzed according to bibliographic information rather than how they were used in

specific contexts. The contributions these documents made to scholars' research were not

captured. Third, the results of citation analysis were usually not verified, so their

accuracy was not guaranteed. Fourth, in the studies by Meho & Haas (2001) and Palmer

& Neumann (2002), citation analysis was conducted only after the primary research

methods were employed as its main objective was to compare and verify the data

collected by the primary methods. The documents identified from the citations were

bound to the specific research projects on which the selected papers were published.

However, the primary methods investigated the documents scholars in the two studies

used in their research, which may have involved multiple related or distinct research

projects. In other words, while the contexts that the different methods investigated were

not aligned, the data collected with these different methods were compared.

Citation analysis provides a relatively accurate documentation of what documents

were actually used. This study preserved the advantages of citation analysis and solved

the above methodological problems. It employed qualitative citation analysis to identify

the genres in use directly from their use contexts. It then employed semi-structured

interviews to investigate how faculty assessed the credibility of the genres they used and

the tasks they performed to use these genres. The customized genre repertoires this study

created preserved the contextual richness of genre use. The genres faculty used were

characterized by structural dimensions of communicative actions that genre invoked.

Participants verified the accuracy of customized genre repertoires and identified the genre

they used in the interviews. The genres they identified and the genre labels they came up

with reflected their genre use. Finally, the contexts the two data collection methods this

study investigated were identical.

6.6.3 Practical contributions

The results of this study have practical implications. This study's results could be

applied to design information services and systems that help faculty make credibility

assessments and use information more effectively. Search systems that exploit the

credibility-genre associations, credibility-task associations, and task-genre associations

could be developed and tested according to this study's results. Academic librarians,

search engine companies, database providers, publishers, and the education community

could benefit from this study's results. For example, they could adjust ranking algorithms

based on the criteria important for assessing the credibility of the genres used to perform

a task. Documents that carry information characteristics important for the task faculty

wish to perform could be placed on top of the search results. System designers could

design interfaces that highlight the document attributes salient to the genres faculty wish

to use. This will save faculty's time and efforts to identify the attributes they were

concerned about and made effective credibility judgments.

6.7   Limitations

This study had several limitations. First, the number of courses included in this

study was small. Due to the recruiting difficulties, this study was not able to recruit more

participants and include more courses. Including more courses in this study might help to

identify more criteria, tasks, and genres. It might also help to corroborate the associations

this study uncovered.

Second, the courses included in this study were not diverse when it comes to

disciplinary coverage. There were more courses in social sciences than in sciences and

humanities. This study might be able to identify more criteria, tasks, and genres if more

courses in sciences and humanities were included. Including more courses in sciences

and humanities might also help to uncover more patterns of associations or strengthen the

associations this study has uncovered.

Third, recruiting faculty members who were more interested in research or

services than in teaching might have enriched this study. Several participants suggested

faculty members who were well-known for their dedication to teaching in their

disciplines to participate in this study. This has helped to recruit participants who were

willing to share their perspectives more thoroughly. Faculty members who were not

dedicated to teaching might provide different perspectives that help to uncover variations

of associations.

Fourth, this study did not investigate credibility assessments at the construct and heuristics levels, although the interview transcripts reveal participants' construct and heuristics. The credibility assessments participants made were specific to the documents belonging to the selected genres. Thus, the credibility assessments this study investigated took place at the interaction level. Users' construct and heuristics affect their credibility assessments at the interaction level, and vice versa (Hilligoss and Rieh, 2008). In this study, several participants described the general principles they applied to assess the credibility of different genres. Although participants' heuristics were included in the coding and differentiating process, these were excluded from the co-occurrence analysis if they were not related to actual task performance. Collecting data about faculty's credibility assessments at the construct and heuristics levels might have enriched this study as these might help to explain their credibility assessments at the interaction level.

Fifth, the results of credibility assessments – regardless of whether they were positive, negative, or both (two sides of the same coin) – were not classified and

analyzed. Documents assessed by the same criteria but were perceived as having different

results were not analyzed separately to identify patterns of associations.

Sixth, this study did not analyze the effect of courses on faculty's credibility

assessments and genre use. The courses faculty taught were important contextual factors

that affected credibility assessments and genre use. Although data about the courses

included in this study were collected and reported, their effect on the associations this

study investigated was not analyzed. For example, this study did not analyze the

differences in the genres different types of faculty members (e.g., academic professors

versus professor of practices) used. However, it seemed professors of practices used more

professional genres than academic professors. Several credibility criteria seemed

particularly important to them. Investigating the effect of courses on faculty's credibility

assessments and genre use might shed new light on different types of associations.

Finally, this study did not investigate non-use of genres since this was beyond the

scope of this study. In the interviews, several participants described the textbooks they

have dropped and other available options. Identifying more documents faculty decided

not to use and the genres of these documents and investigating the criteria they employed

to assess these genres might shed new light on genre assessments and use.

6.8   Future Research Directions

This study left some unresolved problems that could be investigated in the future.

First, disciplinary comparison is necessary to enhance our understanding of different

types of associations in the context of university teaching. The results of this study

demonstrate there might be disciplinary differences in the associations among tasks,

genres, and criteria. For example, faculty in sciences heavily relied on textbooks for

problems and work examples. They employed the criterion *quality of*

sub-genres/information elements to assess the textbooks they used, and they performed

the task *look for examples/problems*. It is important to understand whether there were

criteria that were particularly important for a discipline, what tasks were specific to a

discipline, and what genres were particularly important for a discipline. Including more

courses from different disciplines could help to uncover disciplinary differences in

different types of associations.

Second, it is important to understand how courses affect the genres faculty use, their document/credibility assessments, and their task performance. Researchers may approach this by investigating the genres a faculty used, the document/credibility assessments he made, and the tasks he performed in different courses. In this study, at least three participants mentioned they used a different set of genres in different courses. They used textbooks with a few journal articles in introductory courses, but they used more journal articles in advanced courses. It was important to use original sources in advanced courses, but it was acceptable to use secondary information in introductory courses. In this way, the levels of courses seemed to play a role in faculty's document assessments and use. Comparing the genres a faculty use, his credibility assessments, and his tasks in different courses might reveal different task-genre associations. Researchers could also recruit more faculty from different disciplines to uncover the effect of courses across disciplinary boundaries.

Third, researchers could investigate the effect of faculty on their genre use and

assessments, including their rank, academic versus professional work experiences,

teaching experiences, and document familiarity.

Fourth, researchers could investigate the associations between the granularity of

genres and tasks. It is important to understand what tasks require sub-genres, what tasks

require multiple sub-genres from different documents, and what tasks require one or

more documents that contain a lot of sub-genres. Enhancing our understanding of the

associations between the granularity of genres and tasks could help to design systems or

devices that aggregate and present documents at different levels of granularity according

to the tasks faculty wish to perform.

Fifth, researchers could investigate situations in which the match/mismatch of

intellectual levels between documents and courses/students is preferred. While most

participants used documents that were at the level that matched their students, several

participants used higher-level documents because challenging documents benefited

students. Additionally, sometimes participants used ill-formatted information for students

to learn how to navigate through it. Thus, it is important to investigate: the factors that

affect faculty's preference for the match/mismatch between documents and

courses/students, criteria employed to assess these documents, and tasks performed to use

these documents. Investigating these could increase our understanding of information use

and help to design information services and systems that accommodate different

matching and mismatching situations.

Sixth, researchers could investigate the associations among different criteria. The

interview transcripts indicate in some cases, criteria classified under *suitability* were

associated with *credibility*. For example, a participant expressed her concerns regarding

the accuracy of the news and websites she used because the information in these genres

was secondary. In this case, the criterion *originality* was associated with the criterion

accuracy. Additionally, although the quality of information perceived as good might not

be credible, sometimes information quality leads to credibility. Information that is

perceived as credible tends to have good quality. This study did not investigate the

associations among different criteria. It is important to investigate these associations in

the future to have a holistic understanding of document assessments.

This study took the initiative to investigate the associations among task, genres, and

document assessments, especially credibility assessments, in the context of university

teaching. It is important to continue this line of research. Researchers may recruit more

faculty from different disciplines to continue this research. Recruiting more faculty from

different disciplines might help to identify more tasks, genres, criteria, and hence patterns

of associations. This could enhance our knowledge of the intricate interactions of

faculty's task performance, information use, and document assessments through the

perspective of document genres as well as facilitate the design of information services

and systems and assessment instruments based on this knowledge.

Appendix 1: Informed Consent

INFORMED CONSENT

School of Information Studies

221 Hinds Hall, Syracuse, NY 13244-4100

Phone: (315) 443-2911

Investigating Faculty's Credibility Assessments and Information Use Practices with Respect to Document Genres in Support of Teaching Tasks

My name is Min-Chun Ku. I am conducting an investigation as part of my dissertation at the School of Information Studies. My study investigates how faculty assess and use document genres in their teaching. Involvement in this study is voluntary, so you may choose to participate or not. This sheet will explain this study to you and please feel free to ask questions about it if you have any. I will be happy to explain anything in detail if you wish.

I am interested in learning more about the relationships between credibility assessments and information use practices with respect to document genres in faculty scholars' teaching tasks. In this study, *document genre* is defined as the type of a document. We can identify the genre of a document based on its socially recognized purposes, forms, and contents. For example, a journal article might report a research, and its components include introduction, method, and discussion. *Credibility assessment* is a subjective process in which people judge whether information is trustworthy. Faculty's definitions and conceptualizations of what credibility is influence their assessments and use of documents.

You will be asked to: (1) select a course that you are currently teaching or have

taught within the last year; (2) share your teaching materials with me, including syllabus, lectures, and reading guides. I will use these to compile a customized genre repertoire for you. The genre repertoire consists of entries detailing the genres of the documents used in your course and the ways these were used; (3) participate in an interview that will take approximately 1 hour of your time during summer 2013. The interview will take place at your office or a meeting room at your school/college. All information will be kept confidential; and (4) confirm the accuracy of my analysis.

I will use my recorder to audio record our interviews. The purpose for recording is to help me transcribe accurately. I will use snippets of the transcription in the articles I write and the presentations that I make. I will retain the audio recordings in my laptop indefinitely. My laptop is password-protected, and I will lock it either at my home or my office. Only I will have the access to the recordings.

I will assign a numeric code to represent you in my interview transcript according to the order of your participation, and only I will have access to the code. In any articles I write or any presentations that I make, I will use a made-up name for you, and I will not reveal details or I will change details about your institutional affiliation and the number and title of your course.

The benefit of this research is that you will be helping me to understand how faculty scholars assess and use different document genres in their teaching. This information should help design information services and systems that facilitate faculty's credibility assessments and information use practices in support of their teaching endeavor. By taking part in this research you will receive a customized genre repertoire that I compile for you. You can use the genre repertoire to manage and update your teaching materials. The risks to you of participating in this study are your credibility assessments and information use practices with respect to document genres might be identified based on your personal identifiable information and course information. These risks will be minimized by saving the audio recording in my password-protected laptop, assigning a numeric code to represent you in my interview transcript, and locking my laptop either at my home or office. I will use made-up names when I use transcript

snippets in my dissertation, presentations, and publications. I will only report your professional rank, discipline, and course information related to my sampling framework, such as levels (e.g. undergraduate and graduate), delivery modes (e.g. online and face-to-face), and the theoretical or practical orientation of your courses.

If you do not want to take part, you have the right to refuse to take part, without penalty. If you decide to take part and later no longer wish to continue, you have the right to withdraw from the study at any time, without penalty. You can receive the customized genre repertoire that I compile based on your unique teaching materials if you decide to withdraw from the study after it begins.

<u>Contact Information:</u>

If you have any questions, concerns, complaints about the research, contact Dr. Barbara Kwaśnik at (315) 443-4547. If you have any questions about your rights as a research participant, you have questions, concerns, or complaints that you wish to address to someone other than the investigator, if you cannot reach the investigator, contact the Syracuse University Institutional Review Board at 315-443-3013.

All of my questions have been answered, I am 18 years of age or older, and I wish to participate in this research study. I have received a copy of this consent form.

___ I agree to be audio recorded.

___ I do not agree to be audio recorded.

_____   _____

Signature of participant   Date

_____

Printed name of participant

_____

Signature of researcher   Date

_____

Printed name of researcher

Appendix 2: Recruiting E-mail

Dear Dr. [last name],

My name is Min-Chun Ku. I am conducting an investigation as part of my dissertation at the School of Information Studies. My study investigates how faculty assess and use document genres in their teaching. I invite you to participate in this study. This solicitation is for research purposes.

Participation includes: (1) Selecting a course that you are currently teaching or have taught within the last year; (2) Sharing all of your teaching materials with me, including your syllabus, lectures, and reading guides. I will use these to compile a genre repertoire for you; (3) Participating in an interview during summer 2013. The interview will be recorded and will take approximately 1 hour. The interview will take place at your office or a meeting room at your school/college; (4) Confirming the accuracy of my analysis.

For taking part in my study you will receive a customized genre repertoire (inventory) that I compile based on your unique teaching materials. The genre repertoire will contain entries documenting the genres of the documents you use and the way you have used them. Such repertoire is useful for managing and organizing teaching materials. Additionally, it aids in self-reflection on teaching. An example of a genre repertoire is attached.

If you would like to participate, or if you have any questions, please contact me at mku@syr.edu or (443) 257-0922. I would be happy to answer any questions.

I am looking forward to hearing back from you. Thank you for considering participating in this important study.

Best,
Min-Chun

Appendix 3: Interview Guide

Hi [the participant's first name], I am Min-Chun. Thank you so much for participating in my research. I will ask you questions to understand how you assess and use document genres in your teaching. Here is the informed consent form. You can read it and ask me questions before we start. If you agree to participate in this study and being audio recorded, please sign it.

1. Please tell me more about this course:

    *   Have you taught this course before? Is this your first time teaching?
    *   How familiar are you with the documents you use in this course?
    *   Describe the students in this course.
    *   How many students do you have?
    *   What are the general criteria you use to select documents for this course?

    I have identified the genres you use from your teaching materials. You have received your genre repertoire. Here is the frequency report showing the genres you have used. Let me explain what a document genre is. A document genre is the type of documents. We can identify the genre of a document based on a socially recognized purpose, common aspects of forms and content. For example, the purpose of [a genre in the participant's genre repertoire, such as journal article] is to [e.g. disseminate research findings] to [the genre's user groups, such as researchers]. It has [components, such as the abstract and introduction].

2. I cannot determine the genres of some documents. I have marked them in red. Can you tell me the genres of these documents?

3. Do you have any questions about the genre repertoire? Do you agree with the genres that I code?

4. The genres you use the most heavily in this course are [the genres]. We will discuss them separately. What is your purpose in using [the genre]?

5. How do you use [the genre]?

6. Are there any advantages and shortcomings in using [the genre]?

7. According to the frequency report, the genres that receive the highest frequency counts include [the genres]. We will go through these one by one. What is your

purpose in using [the genre]?

8. How do you use [the genre]?

9. Are there any advantages and shortcomings in using [the genre]?

10. The genres that receive the lowest frequency counts include [the genres]. We will go through these as well. What is your purpose in using [the genre]?

11. How do you use [the genre]?

12. Are there any advantages and shortcomings in using [the genre]?

Appendix 4: Codebook of Predictive Criteria and General Criteria

Predictive criterion	Dimension	General criterion	Definition	Example
Topic-related Criteria		Foundation	Participants looked for documents that helped students to learn foundational, basic, important knowledge of specific subjects.	*"Are they useful in giving students the kind of basic knowledge in research methods?"*
				"The general criteria was, importance of the literary text that we were going to work on, so texts that are important in the history of Spanish literature and another world literature that have influenced other authors, other works."
				"For several of the topics that covered the course, they're not new topics. There's already a well established theory and methods for encryption and for data management."

		Recency	Participants looked for documents that contained information on recent issues or hot topics.	"*It has to be it's either the materials are either recent in terms of represent recent theory or recent research. If it's kind of a new piece of research particularly around new population. We spend a lot of time talking about lesbian and gay and bisexual identity development, so I might look for recent, like new research related to that because that topic area is growing and people are doing a lot of research on that or the same with like multi-racial students, so I try to find things that reflects the current student population on campus that my students might be working with.*"
		Breadth	Participants looked for documents on different aspects of a subject.	"*The third goal was to provide a survey of the set of issues or concerns that researchers in this area tend to be focused on. So along with that kind of canonical texts or the foundational texts was also kind of giving some breadth to the questions and the methods that people used to try to answer questions, when they are wondering how people use the internet or what effects it has.*"
				"*I divided the syllabus into different topics and within each topic there's one, or two, or three readings depending on how much I want to expand on a certain topic. So I tried to*

				be diverse to kind of include different topics, different empirical studies, different methodology of data collection and interpretation and results. I tried to show variation in different aspects of - it could be in language acquisition, second language acquisition. It could be in child and adolescent language. It could be variation in dialects. It could be adult variation or comparison among different groups in society so I try to make it as diverse as possible so students can have a feel of all kinds of variation and how to deal with it."
		Students' interests	Participants looked for documents that contained information on topics students might be interested in.	*"Topic areas they may be interested in/might be of their great interest, get a feel of what the area is like."*
Suitability		Student/Course level match	Participants looked for documents that were at the right intellectual level. The intellectual level of the documents had to match that of their courses (e.g., introductory) and/or students.	*"I pick materials that will fit with the progression that I have in mind that are accessible to students. I don't want them to be too academic or abstract."*
				"It has to be at the right level. Because in the past this class, long time ago this was aimed more at the doctoral level, and there were a couple of readings that didn't seem to me to be appropriate for the masters level. More conceptual than they

				would be interested in."
		Coverage	Participants looked for documents that contained most of the information they needed.	*"I wanted to pick a textbook that contained the materials that I needed to cover."*
		Usefulness	Participants looked for documents that were helpful to them or students.	*"Are they likely to be used? Are they something the students will actually be able to make use of?"*
				"I have a copy at home and a copy here in my office and I look up something about once a week. It's very useful."
		Length/Amount	Participants looked for documents that were in appropriate length. They also looked for documents that contained the amount of sub-genres or information elements they desired.	*"They have to be relatively concise resources. If it's videos, they have to be under five minutes for most part. There are some exceptions there, but for the most part I try to keep them very short."*
				"Plus fair amount of work examples and homework that I assign."
Credibility	Trustworthiness of information	Accuracy	Participants looked for documents that contained accurate information.	*"I would say simplicity of language but mathematical and logical accuracy."*
		Writing style	Participants looked for documents that were written in the way that students could understand.	*"The language is as simple as it can be you know so it's much more readable and tutorial."*
				"Magazine tends to be written towards people who are working in the field like practitioners. The language like

				how it's written is easier for them to understand."
		Being reviewed and edited	Participants looked for documents that were reviewed and edited.	*"This practically oriented book is an edited volume. It's written by a collection of authors."*
	Expertise	Source	Participants looked for documents that were created by subject experts or professional organizations.	*"This practically oriented book is an edited volume. It's written by a collection of authors. Many of whom are very senior and important in the field and I like that."*
Information quality	Form	Presentation	Participants looked for documents that had good layout and visual design.	*"Everything is written in 12 point fonts not 9 point fonts."*
	Content		Participants looked for documents that contained quality information. The content was perceived as good.	*"Well the primary resource is textbook and so basically content..."*
Relevance		Personal relevance	Participants looked for documents that informed them personally or shared the same perspectives.	*"They come from things that sort of personally inform me or that I was part of producing. For example, you enlist one here on the Salzburg Curriculum right there, which points to a web page. That was something that I was part of producing and but to me, I saw that really is extending my thoughts on the Atlas, sort of taking those and extending them with talking to other people, bringing the museums et cetera."*

				"*The author ascribes to a particular view of multilingualism; and that is the view I follow in my own research. So his theoretical standpoint is the same as mine. That's why I like it.*"
		Connection-building	Participants looked for documents that allowed students to associate the learning content with other things.	"*I also look for material that they might be able to relate to, like some of the videos or podcast or something that's kind of contemporary that might be an aspect of popular culture that can relate to the topics, and so I find that doing that helps them to understand more complex topics.*"
				"*I try to make it as diverse as possible so students can have a feel of all kinds of variation and how to deal with it you know, and how to associate it with the different theories and different ways of analysis and interpretation.*"
Cost effectiveness		Availability	Participants used the documents they already had. These documents were handy.	"*If I am to be perfectly honest, first and foremost easy availability.*"
		Cost	Participants looked for documents that were freely available. They wanted to save students' money.	"*Another reason I chose it is because the book is available for free online in PDF format. So students could save a little bit of money, but also the book, if you buy it from Amazon.com, it is maybe $35, so it's not very expensive.*"
Others		Affect	Participants looked for documents that	"*The entertainment factor has to be there.*"

			evoked affective, emotional responses.	"*I want them to be engaging and fun and stimulate students' curiosity.*"
		Attention maintenance	Participants looked for documents that could capture students' attention.	"*They have to be loud enough to maintain their attention.*"

Appendix 5: Codebook of Teaching Tasks and Information Use Tasks

Teaching task	Information use task	Definition	Example
Prepare the course: Participants used the documents to design and prepare their courses.	Structure the course	Participants consulted the organization of a document to structure their courses. They also used it to frame students' assignments and class activities.	*"The textbook is very organized about which subjects should come first and which should come second. I use the textbook to plan my lectures a little bit, but I sometimes would not go in sequential order, sometimes pick and choose topics."*
			"That one book in some ways frames a lot of what we do in the course."
	Prepare lectures	Participants used documents to create their lectures, including copying the formula, borrowing lecture slides, and synthesizing and integrating the information in the documents.	*"Books offer me a place where recent research is collected and reviewed. So I don't have to do a literature search for every topic that I teach."*
Teach about the field: Participants used documents to help students acquire important knowledge and/or develop skills and terminology in specific fields.	Provide foundational text	Participants used documents to provide students with foundational, basic, core learning content.	*"The first book was basically a text for the course."*
			"I try to use the textbook as a source of basic concepts that I feel like students should be able to acquire fairly well on their own outside the class. They always have reading before coming to class and I try to reserve class time for working examples and focusing on complex concepts that

These knowledge and skills prepared students to become professionals.			*may have been difficult to get from the reading. So I see the textbook as a place for them to get kind of, I don't want to say facts and figures because that's - it's not facts and figures kind of class but the basic information they need I want them to get from the textbook on their own outside the class so within class we can focus on synthesizing information and working with the material, achieving better understanding. So the textbooks to me are kind of a source of basic information that they should be able to get on their own without much involvement on that one."*
			"It's a reference for the students and in this course really you very seldom go beyond the textbook. There's enough material there for these students to occupy them. In fact there's more material than I could possibly cover. So it's a reference, it's a source of problems for them to work."
			"These textbooks give you those two models that I talked about earlier. So, the first one is from the corporate perspective of gamification. The second one is a game scholar who looks at using goods – more of games for good. The books provided those two different tones, so I used this

			book in the first half and then we switched to this book for the second half. They set the tone for the course."
	Enable students to understand an area/a topic	Participants used documents to help students to understand different aspects of an area, a sub-area, or a topic.	"*A lot of those articles are actually either methods articles or about methodology.*"
			"*It makes the lecture more interesting than to have everything on a slide that you can go and look at a website that talks about that topic.*"
			"*So again trying to find people who are talking about elements of copyright and of using materials. So a lot of these are really around the use of digital materials; licensing digital content.*"
			"*To really kind of reflect all the different aspects of higher education.*"
	Complement/Supplement other resources	Participants used documents to complement or supplement another document, usually the main textbooks. It often resulted from the insufficient depth of information of the latter.	"*They help illustrate those points which are not in the text.*"
			"*I try to find other supporting readings or supporting stuff like videos or whatever that support what those authors have said. So for example a couple of the videos one is a Fairy Use Tale supports what's in those books but does it in a fun way. It uses the Disney images to talk about what's in copyright law.*"

			"*It gives them visual elements that again compliment the texts that we're working on in classroom.*"
			"*I use those two textbooks to supplement the first textbook to give more in-depth reading and everything else in the course I got - the journal articles and all of the things - really because this first textbook is an overview and it gives just a little bit of information here and it synthesizes there. Then I use all the other materials in the course to maybe go in more detail in particular areas that they won't get in the textbook.*"
	Enable students to explore interests	Participants provided students with documents that contained information on the topics they might be interested in.	"*[The textbooks] give broad coverage of IR. They allow the students to explore their interests.*"
	Provide learning content	Participants used documents to provide students with the learning content. They wanted students to understand the information in the documents.	"*They're common practice. Students should know about them because they're very well used in the field.*"
			"*They substitute for textbook chapters in some cases.*"
			"*This explains how network works basically. I use it in several courses.*"
			"*Because my idea was for them to learn stuff from that*

			video."
	Expose students to influential thinkers	Participants used documents written by subject experts whose thinking was considered influential in specific fields in the historical context. Students were able to understand these influential thinkers and their thinking through their writing.	*"Just to show that [the author] is a well known person in computer security and well let's say risks of things going wrong and so my purpose is to introduce students to the notion that even the smallest thing that's wrong can have grave consequences. [The author] has been writing this column for I think 20 or 30 years and so there are a lot of interesting cases that I'm wanted to introduce the students to [the author]'s writings because he has important things to say."*
	Expose students to important perspectives	Participants used documents that contained ideas, viewpoints, perspectives, or opinions they wanted students to understand.	*"I think the purpose in using those is for students to see somebody's opinion about a particular topic. So those would be more opinion, to help them understand the viewpoint of one side or the other."*
			"The intellectual decision is people need to know there are other views."
			"The blog posts were able to give the students a more updated view on some of the content. Many of the things that were in here were things that I also said in the lecture, but the blog posts then elaborated on it. And it also allowed to

			see the perspectives that were out in the field by different people about gamification."
			"The news provided a perspective on how these large-scale, augmented reality games affected the society."
			"It also gives some different perspectives because each blog post is written by different individuals with different perspectives and so they can see things from different perspectives."
			"I wanted the students to see what the response was to her textbook in the field of game studies because it was fairly negative."
	Introduce a professional organization	Participants used documents created or published by professional organizations in their fields to let students understand these organizations and what these organizations do.	*"I want to introduce students to ETS as an organization because it's a potential employer for them.*"
			"They are all professional rubrics. If they go to work for a language - when they go to work as a teacher; often times the classes will be organized around these standards. For example, if you go to work in Europe or Asia - increasingly in Asia - the levels of the students might be organized around the common European framework of references. They need to know about these organizations. Again, they

			need to know about these organizations because that will help them in their ongoing professional life."
	Teach the highest expectations	Participants used documents to help students understand what the best was and encourage them to achieve it.	"*I think you need to understand the highest expectations and the standards in order to realize the best that it can be and then to develop around that.*"
			"*Well the reason I use them is to get my students thinking about the best it could be. Otherwise they can quickly get sucked in to the daily dilemmas that you face and many of them are doing their student teaching at the same time and they're entering the library where there's discipline problems or whatever. And so they see lots of examples of less than perfect and to me it's important to have a vision of what's the best that this can be and then try to figure out how to get there rather than not even being able to envision where you're trying to go. So the guidelines are a path to get to that bigger vision and if you don't use something like that then it becomes just instantaneous decision making and you're not really on a path to get anywhere better, you're just daily making decisions.*"
	Highlight a topic(s)	Participants used documents to	"*The Asian women in STEM careers I pick that because*

		emphasize the importance of a topic.	*there's not a lot of information that talks about Asian women in STEM and is one of the few pieces that I could find and so I wanted to, I picked that to highlight that particular topic.*"
	Prepare students for the job	Participants used the documents students will use in the work practice in the future. They also used documents to prepare students to interact with professionals or become familiar with professional practices.	"*This is one of the first classes they take in the department, so I want to introduce them early on to the concept that engineers need to live by ethical guidelines and that there are specific ethical guidelines out there for each engineering discipline that they should be aware of if they're going to practice in those fields.*"
			"*Because a lot of people will be following these guides. So, if you are familiar with the process described in that guide, well then you can interact with the real world with the real practice in a better way than if you didn't know about these guides.*"
	Draw on scholarship	Participants used scholarly work to teach students about a subject.	"*I want to draw on scholarship, and I want to expose students to scholarship as a way of putting all the other things into a context.*"
	Develop a conceptual vocabulary/terminology	Participants used documents to help students develop conceptual vocabulary or terminology.	"*So what I want to get out of the standards is one is terminology. If the standard uses this term to identify this thing, we should use it throughout the class. Because I*

			mean, if you go talk to professionals they'll probably be following the terminology used in standards. In order for them to understand, you need to know the terminology. Just stick to the terminology of the standard."
			"To develop a conceptual vocabulary that I was talking about."
	Walk students through the process	Participants provided students with documents that contained procedural information. These documents walked students through specific processes step by step.	*"In order to do the same task on different databases, the steps would be different. So if you wanted to create a database in MySQL versus in Microsoft SQL Server, it's different. The interfaces are different, the steps you need to go through are slightly different, so it's always easier for the students to watch the video about how I do this in Microsoft SQL Server before they go do the lab exercises.*"
			"It has these tutorials where the students work through problems more sequentially so instead of just doing it all at once, and getting seeing if its, and then handing it in and finding out a week later if it's right or wrong. They sort of get guided through the problem interactively. And so, that I think is a nice feature."
	Facilitate lab practices	Participants used documents to help	*"The purpose of the second one is for students to read about*

		students perform specific tasks in the lab.	*what they're doing in the labs.*"
			"*I think these tutorials are great because most of these are about labs. So I asked them to watch them before they do the lab exercises, hands-on exercises.*"
	Balance research and practices	Participants used documents to balance the emphases they placed on theories and practices.	"*You can balance research and practice more easily. So you can get some articles that are just having to do it on Monday morning, and so they talk about the theory behind it and the research behind it.*"
Enhance students' understanding: Participants used documents to help students understand the learning content better.	Provide an example(s)	Participants used documents to provide students with example(s) of what they were learning or their assignments.	"*I use those comedies as examples of some grammar or some semantic differences or something like that.*"
			"*So the demos are important to show some types of natural language processing that we're not going to do ourselves in the lab, but somebody where we can go and see what somebody else has done. So not everything is available for them and so it's nice to have these other ones.*"
			"*This talks about exact examples happening today. I believe I put equal weight from textbook to this. I'm using them side by side.*"
			"*It's an example of how to change what a school district does with their libraries and bring it up to the next level.*"

	Explain/Illustrate/Demonstrate	Participants used documents to explain the learning content, illustrate a point they wanted to make, or to show something.	*"So basically, what happened is I was talking about the Patriot Act, and the Patriot Act revised so many laws. I think I just gave a list of all the laws that were revised by the Patriot Act. So nobody actually goes in and reads all of those laws. I don't even explain in detail how every one of those laws has changed. It's just showing them, 'Look how comprehensive the changes was in the law.'"*
			"Well, some developing country, but in the case of India based on what I know, is very interesting. Because they created a universal service program some subsidies and funds that were completely unnecessary because the competitive market developed the mobile phone so quickly in India that nobody was even using these funds [chuckles]. So my point is to show them when they have highly competitive market, they sometimes don't even need these subsidies."
			"I want to show them that these are real historical events we're talking about and I want to give them a feel for how this kind of political discourse were used in the particular historical context."
			"Several of them are intended to sort of show that the kind of

			things that we're studying are of interest to people today...
			So I'm trying to bring in sort of the idea that what we're
			doing is of relevance to people today."
	Improve students' understanding	Participants used documents to reinforce or improve students' understanding of the content they learned from other documents, usually the major textbooks.	*"They're writing from their own point of view and so it might help students understand the material because it's easier to understand because they're writing from their own point of view as opposed to a more formal article like a journal article."*
			"Usually that's hard materials from the textbook that I've found the past students don't understand just after reading the chapter. A lot of times they don't understand when they read the chapter, but after they have read the chapter and they go through the computer based training then they understand them."
			"So if we're reading about a particular topic, they'll read something in one of the textbooks and then I usually have one or two journal articles that go with that might even be on the same exact topic, but it's written slightly differently and will cover some different points. And so sometimes students say well we keep reading the same material, but

			sometimes what a student will say to me is well, what I read it this way I didn't understand it, but then when I read this, when I read it in a different way I got it. So some people might read the textbook and they understand it. Other people might read the similar thing in the journal article and they might understand it more than when they understood it in the textbook."
	Provide theoretical/contextual information	Participants used documents that contained theoretical or contextual information. This information was used as background information to understand the learning content.	"*To develop a conceptual vocabulary that I was talking about and to provide historical background.*"
			"*A lot of those things I'll draw on to put together my lectures or to provide more context.*"
			"*Just to contextualize the authors a bit.*"
	Present different authorities	Participants used documents created or spoken by figures they perceived as authorities. The authoritative figures helped to emphasize the learning content.	"*That points to things outside of it. It's not just me referring to me all the time.*"
			"*I also think with copyright, it's important to have different people talking about the law. So that it's just not [an author]. This is what [an author] thinks about the law, but to recognize that other people talk about the law and that there's similarities. Everyone kind of has agreement about what's in the law, what's not in the law, how do you*"

			interpret it. And so presenting different authorities or different experts is I think useful.”
Make the learning content concrete and real: Participants used documents to make the learning content concrete and realistic.	To present reality	Participants used documents to present real problems, facts, persons, objects, or events.	*“It was good to present real thing, real comparison, just see the real variation that exist in real life.”*
			“The reason I chose to use these and purpose was to demonstrate that the kinds of default graphs that come out of excel are often considered to be of low quality by people in many different disciplines. You know that I’m not just telling him that the figures directly but you can look to these examples on the Internet and see that people often recognize that poor graphs - you know that don’t transmit the information they are intended to and they don’t look professional or it’s a problem that a lot of people recognize. So that’s part of it is to show them that this is a big problem in industry, in business and research and then to give them specific examples of things to avoid.”
			“Students sometimes have a question about for example if I were to show them the official chart about how projects are supposed to go. Their question might be well do people really do this. Well so I can show them the example chart

			from JPMC that are almost identical and I can say see they do that."
			"*I want to show them that these are real historical events we're talking about and I want to give them a feel for how this kind of political discourse were used in the particular historical context I'm showing them.*"
	Provide multimodal information	Participants used documents to present the learning content in visual, audio, or audio-visual modes. It made the learning content more concrete, not abstract.	"*I mean I'll play it and usually the way that works is the person who writes the essay reads their essay and so you're listening to the author read his or her essay and it's kind of cool.*"
			"*It was a chance for the students to hear from the voice of someone who wrote the theory that they were studying. I like to do that when I can because seeing a talk by someone who actually wrote something that your reading makes the reading more meaningful.*"
			"*I'm realistic enough to know that the information industry is so loaded with jargon that if you're just exposed to it one time, you can't retain it. So my teaching strategy is to come at them from multiple directions and to have redundant materials. And so if I could find an entertaining video that*"

			illustrates the same concepts I talked about in the book, I think that's going to help a student retain the material better."
	Connect with the real world/make a connection(s)	Participants used documents to help students relate what they were learning to what happened in the real world or make connections between different things.	"*I think we use news articles in the school very much that way to provide a little bit of a relationship between what's going on right now and what they are learning.*"
			"*If there was a link that was related to what we were learning in class, I would point it out to them and maybe even click on it just for a minute to talk about what it was that – how it was related to what we were learning to demonstrate that what we were learning was related to the real world and interested things that were still evolving and still uncertain.*"
	Help students visualize the goals	Participants used documents to help students visualize what the best looked like or what they will be doing in the future.	"*Well, there are no standards that I know of for classroom management. So this [title of the document], I wrote that self-assessment rubric because there maybe one little piece of the standards that say a library should be conducive to learning but that didn't really tell what it looks like. And so we developed a rubric to really flash that out so that people understood.*"

Obtain reference information: Participants used different documents to obtain information to accomplish a task, such as designing a problem for students to solve. They also helped students obtain information to accomplish a task, such as writing assignments and obtaining a job offer.	Look up/provide references	Participants used documents to look for data or other types of reference information. They also provided students with access to these documents so that they could find different types of reference information.	"*[The subject guide is] full of these very common resources that chemical engineers use to find information. It is just like explanations like how does a distillation column work. Some of it is what is the density of ethanol at 60 degrees Celsius and one atmosphere pressure. So you need to know information about different chemical compounds we call this property information and it's very important.*"
			"*These documentations are all directly relevant to give information for what they're doing in lab and it's important for them to be able to have a resource where they can go and look things up when they need information about what they're doing for their assignments.*"
	Look for examples/problems	Participants used documents to find examples or problems for students to work on. They may adapt the examples or problems. Sometimes students also looked for examples or problems in the documents.	"*If I needed examples of good graphs and things like that I tended to look in the textbook to see if there were good examples and if not then I would go to often to the internet and see what examples were available either from the general lab or from the scientific literature and just kind of try to find examples that made the point I wanted to make. And then a similar thing happened with MATLAB I tried to work entirely within MATLAB doing lectures and if I needed*"

			a particular example to give I'd look in the textbook."
	Help students find jobs	Participants provided students with documents to help them find job information.	"*The reason I listed all of these is because these are places that students can find jobs.*"
	Enable students to get citation information	Participants provided students with documents that contained bibliographic information. Students could cite in their assignments.	"*This was just artifacts of either not getting the book scans to include the product information, you know the ISP information and the publisher information. So if the students want to cite these for example in their papers or something, they would have all the citation information they would need, so that's what those were.*"
	Provide guidelines for writing	Participants provided students with documents to help them write.	"*Those were the literature review guides and argument writings, so these were really meant to help students if they were curious, who wanted a bit more guidance on how to do some other writing. You know, this class wasn't explicitly focused on research writing as a process, but it was part of the class. And so we did talk about it fairly frequently in class and then, I wanted to give students some links to resources to help them if they wanted that.*"
Develop students' advanced learning skills: Participants	Help students apply the learning content	Participants encouraged students to use what they have learned to analyze	"*I ask them what do you notice in this comedy? What is the variation that exist in this comedy and how can you explain,*"

used documents to help students develop higher-level learning skills. These skills involved applying what they have learned and critically analyzing and interpreting events, life experiences, and other occurrences.		and interpret the information in specific documents.	*how can you interpret it?*"
	Develop students' critical thinking skills	Participants used documents to encourage students to think critically or think beyond what they have learned.	"*The advantage of a FAQ is that they are questions, so it is hopefully the question that students are thinking of when they think about that topic. Or that they should be thinking of.*"
			"*So teaches students a little bit about the technology, but also sort of challenges them to think about the potential downsides to something like that. It's an interesting topic. Most students when they first see it: Yeah if the Iranians are trying to build a bomb and we can put a virus that messes up their centrifuges. Yeah let's go ahead and do that, right? Nobody wants the Iranians to get the bomb. Well yeah but once you do that, now what happens if people start re-using that code that we wrote to mess up their centrifuges, what happens if they take that code and modify it into a new virus that attacks the centrifuges in our own research facilities? Now how do you feel about doing that? So, but students don't think about it. They're still developing their global context about how politics and public policy works. I think*

			that's a big part of what college should be about, to get students to think about things they haven't thought about before."
Enhance students' participation: Participants used documents to motivate students to actively participate in the learning process or enjoy the learning.	Trigger discussion	Participants used documents to initiate discussions in the class.	*"Sometimes I use it as a discussion starter. If one of the techniques that people who use polling talk about is if you can write the questions so that it's hard, and the answers come out mixed not 90 to 10, then that starts to generate discussion. Why did you say this, why did you say that, and it's another teaching tool."*
			"In this particular case this was just something that I felt was a way to open up the topic otherwise that would be a very dry topic."
	To engage students	Participants used documents to keep students involved in the learning process.	*"One is to keep them involved."*
			"I think they can be engaging for students."
			"I wanted them to think about their own identity and who they are and how they think about themselves. And I wanted them to be able to write about it. And so I saw some examples of this poem format called Where I am From, and thought that would be a different way to engage them and thinking about how would they write about themselves, what

			would they say."
	Have fun	Participants used documents to entertain students.	"*The students don't learn anything from it. It's just interesting. I guess a piece of pop culture for them to see.*"
			"*I think teaching, you have to be entertaining at some points, and so they were for comic relief, for entertainment. I don't do them just for that, I thought they had a point that I could bring out, so it's a teaching tool to use video.*"
Point students to resources: Participants provided links to help students access to different types of information.	Provide authoritative references	Participants provided students with documents created or maintained by professional organizations in specific fields for authoritative information.	"*They are the ones that generate that either they are the ones that everyone goes to as the authority and how things work or they have the exam. Now in the case of the Project Management Institute they are the ones that have the exams. There are couple others in there. But the Agile Alliance is where that particular approach to project management was developed and is basically you know that is the source, that is the particular approach source organization that you go to for any information about it and the Project Management Institute has developed the exam in conjunction with them. So in that sense you know between the two they are the authoritative bodies in the field.*"

	Provide original sources	Participants provided students with documents from which a concept or the learning content was originated. It also includes situations in which participants provided students with access to the original documents.	*"Anyone who understands copyright law will tell you that you need to go back to the law. And so that's why I use a lot of the law in my class and my students have to read sections of the law. Because you need to know what's actually in it, and what's not in it and the best way to know what's not in it, is to actually read the law. So if someone said, "I can make as many copies as I want of anything." It's like okay, "Is that in the law?" Well no, it's not in the law, what is the law actually say? So for many weeks they have to read sections of the law so they actually know what's in it and I quiz them."*
	Provide access	Participants provided students with access to documents.	*"To make it for people who may not have the book, even though they were supposed to, there were people doing it for free and I found that they didn't buy the book, to let them know they could get access to some of the stuff full text."*
			"To give my students quick access because I knew about these resources already... My students don't even know that they exist, much less how to go find them. And especially because as I mentioned we have subscriptions to all of these things, they can't just Google it and then go to it, they won't

			be able to get into the resource, they have to go through – they either have to be on campus or they have to go through the library webpage to actually be able to access them and so this was a way for me to not only show them very quickly, a small and important number of these resources, but give them a way to literally be able to access them."
Improve teaching immediately: Participants used documents to understand their teaching as well as students' learning in order to improve their teaching.	Get timely feedback	Participants designed questions about their teaching in the documents to elicit students' responses every week. They then adjusted their teaching according to students' responses.	"*I also asked a question at the end of it about my teaching asking them what they liked and disliked about what I was doing and that was very helpful to me for making adjustments of the class on the fly.*"
	Understand students' learning situation	Participants used documents to design questions for students to answer. The answers they received helped to understand whether students understood the learning content.	"*I also use them to kind of check have they got the concept, can I move on, or do I need to spend more time for it.*"
Encourage students to read: Participants used documents to improve students' reading and studying habits.	Motivate reading	Participants used documents to ensure students read the required readings.	"*I designed clicker quizzes usually with two purposes. One is to motivate reading - pre-class reading - so those usually occur at the beginning of the class. And they are questions geared towards just making sure people did the reading.*"

	Enable students to reflect on self-learning	Participants designed questions to elicit students' responses regarding their study habits. Students were able to see and compare their responses with their classmates'. This helped them reflect on their study habits and hopefully to improve.	*"Every week they have to go and do this survey and this survey asks them to reflect upon their study habits. Because as I told you one of – I mean honestly I've maybe out of the 150 students I've taught so far two students who have not passed have not passed because they just weren't quite capable of mastering the material. Anyone else who hasn't passed hasn't passed because of doing things like not turning in their homework and not studying, staying up too late and for reasons that don't have to do with chemical engineering but have to do with learning how to learn. How to have good time management and study skills and stress management skills. And so I'm trying to get them to reflect upon how they are doing in preparing for this class and so it's a self-assessment, they actually see two graphs, they see the average class response and they see their own response so not only do they get to assess themselves but they get to compare themselves to how the rest of the classes assess themselves."*

Continue learning: Participants used documents to help students learn more about the topics the latter were interested in. They also used documents to keep students and themselves updated about specific fields.	Provide suggested readings/more information	Participants provided students who were interested in a topic with readings or more information to dig in. They also pointed students to documents that contained information for assignments or projects.	*"It's pointing at additional resources. It's not that I wouldn't use more bibliographies. I just haven't found the need to use more bibliographies. The Google Book Search Litigation attracted a lot of attention, and so was worthwhile. I think I spent time talking about it in class, and worthwhile having something to point to give students a lot more information."*
			"I have a ton of these. I have a ton of recordings of webinars that I have access to; as a result of a membership of professional organizations. Also Pearson - like major publishers like Pearson; they all produce free webinars and anybody can listen to them. I just record them and I make them available to students if they want to watch them. They can watch them as an extra credit activity. Again, this is part of the additional collection of resources that they can have access to if they like."
			"The websites are more reference sites that I use if they want more information or they're places that I think would give them more depth on the topic than the textbook does."
	Keep up	Participants subscribed or visited	*"I keep up-to-date with the listservs."*

		specific documents on a regular basis to keep updated with specific fields.	*"They're about trends. You can see something fashion waves and ISR, to talk about where the field is going and what's happening."*

Appendix 6: Codebook of Evaluative Criteria and Assessment Criteria

Dimension	Assessment Criterion	Value	Definition	Example
			Evaluative criterion: Suitability	
	Student/Course level match		Participants were concerned about the match between the target audience of the documents they used and students. They were also concerned about the match between the intellectual levels of the documents they used and their courses.	*"These are very standard, these are pretty standard because it's beginning hardware design. But what I do look for are, since we're dealing with number systems, transistor level designs, what we call logic gate designs, I want at least that level of introduction."*
	Applicability		Participants were concerned about whether the documents they used were applicable to students' tasks. They wanted to use documents that provided templates for students to adapt and use.	*"It has specific examples at each level of thinking and they're adaptable and you can use it whenever you're designing a unit."* *"They are hands-on demos."*
	Emphasis		Participants were concerned about whether the subjects or topic foci of the documents they used matched what they were teaching. They were also concerned about the match between the subjects or topic foci of the documents they used	*"Topics are not exactly the same. It's about sustainable energy in general, and my course is narrower in focus. I talk broadly about solar energy, he talks about all forms of energy."* *"Some of them are really they get to the point and"*

			and the orientation of their disciplines, schools, or programs in which their courses situated.	*they help explain it.*"
				"It gives discipline-specific examples of the understanding about things we are trying to promote. So this is specific to the fields that they intend to go into."
	Specificity		Participants were concerned about whether the information in the documents they used was specific.	*"The required one might be really explaining how some issue is going. It will be more concrete and more pragmatically focused.*"
				"It gives discipline-specific examples of the understanding about things we are trying to promote. So this is specific to the fields that they intend to go into."
	Coverage		Participants were concerned about whether the documents they used, usually the major text, contained most of the topics or important concepts they had or wanted to cover.	*"I think it's good to have a textbook that guides students, that covers all the basic topics.*"
				"It's a pretty good fit for what I teach in terms of topics but there are some topics that I do that are not covered very well in the book and so I have additional materials but for the most part it's a pretty good fit."

				"*It covers most of the things you need to talk about in this.*"
	Content orientation	Overview	Participants perceived the information in the documents they used as overview, introductory, or summary.	"*Textbooks are valuable in that they present a lot of information and it's an overview, so you get an overall picture...*"
		Technical	Participants perceived the information in the documents they used as technical.	"*Actually it can be used in information management programs, the iSchool. But it is also used in more technical programs, engineering-focused programs. Because there are even programming exercises, a computer science, computer engineering programs. There is even programming exercises in the book. But obviously I won't use the material because we don't do programming in most of our courses.*"
		Theoretical	Participants perceived the information in the documents they used as theoretical.	"*Currently I'm using two textbooks. One is more theoretical and one is more practically oriented.*"
		Scholarly	Participants perceived the information in the documents they used as scholarly or academic.	"*A scholarly book, which is much more about why.*"
		Conceptual	Participants perceived the information in the documents they used as conceptual.	"*There were a couple of readings that didn't seem to me to be appropriate for the masters level...*"

				more conceptual than they would be interested in."
		Practical	Participants perceived the information in the documents they used as practical.	"*Teacher Librarian is certainly more practical.*"
				"*They're very practical articles. One of them is about network management techniques and how they create policy conflicts. And the other's about the very specific Google publishers' settlement over how Google Books would work. But they both bring an academic concepts to analyze these very immediate policy programs.*"
		Business	Participants perceived the information in the documents they used as business-oriented. It was created based on corporate perspectives.	"*The first half of the class, we focused on reward-based gamification. For the first half of the class I focus more on writings out of marketing and of the corporate side of things because I wanted the students to see the corporate view of gamification... The one I'm using this year is written by a business school professor.*"
	Originality	Primary	Participants were concerned about whether the information in the documents they used was primary, original, or first-hand.	"*A lot of this is about like sentiment analysis and things that's not in the textbook and so where I'm giving them information from first sources instead in the text.*"

			Secondary	Participants were concerned about whether the information in the documents they used was second-hand.	*"They're probably are peer reviewed, but they're not original research reports."*
					"That book is kind of a baseline overview. It synthesizes a lot of material and I use it because the synthesis I think is useful for the students to understand the concepts."
	Length/Amount	Length/Amount of sub-genres or information		Participants were concerned about whether the documents they used contained sufficient sub-genres or information they were able to use.	*"They're relatively brief. So students can read them, and we can talk about them the next day."*
					"Textbooks are valuable in that they present a lot of information."
					"It had a question bank for quizzes and exams already made with the solutions, so I don't have to do that either."
		Intensity of information		Participants were concerned whether the documents they used contained the most important information in an appropriate length.	*"They're able to get a lot of information with a short amount of reading."*
	Usefulness			Participants were concerned about whether the documents they used were useful or helpful to students and/or themselves.	*"Although there are work examples in the textbook I think it helps some students to go through in a video step by step so that they hear the words and see the text that you are writing all at the same*

				time. They can also pause and rewind and go back and forth over a part that's unclear which I think is useful and so basically I try to pick example problems that I thought were going to use techniques that would be useful to them in their homework or on exams and I would work my way through the problem highlighting exactly what steps to do in what order in order to achieve the goal."
	Whether it contains important sub-genres/information elements		Participants were concerned about whether the documents they used contained sub-genres or information elements important for their teaching or students' learning, such as definitions, concepts, questions, problems, examples, and so on.	*"University Physics is an older textbook that doesn't take in to account some of the newer physics education research in sort of best practices."*
				"Those texts being adapted for undergraduate American students, so they had the footnotes, the vocabulary that they were going to use or that it was going to be helpful for them to understand the text."
				"I think the advantage of a FAQ is that they are questions, so it is hopefully the question that

				students are thinking of when they think about that topic, or that they should be thinking of."
				"It also comes with a lot of additional information on the authors and the historical context of the different texts. So it also gave them not only the texts that we were going to read and analyze in class, not only elements that would help them understand those texts that we were going to read, but also information that would give them details about the context that explains where and when those text were created. So it was a good way to have those three elements in one on textbook."
	Whether it provides supplementary materials		Participants were concerned about whether the documents they used provided materials that supplemented their teaching or students' learning, such as online assessments, tutorials, or lecture slides.	*"Sometimes he does include materials that aren't in the textbook. In those weekly, there's like a glossary in there; just some potential materials that students might find useful."*
				"In fact there's a CD that comes with this the book that has data sets on it."

				Contain important/unusual perspectives		Participants were concerned about whether the documents they used contained important or unique perspectives they wanted students to learn.	*"The first one gave the appropriate tone for how gamification and rewards are used to manipulate people. That was the tone it took and that's what I wanted students to encounter, that tone. Then the second one was about how the games benefit people. So again it gave students the right tone."*
							"It gives the students another perspective on how these things are."
							"It also gives some different perspective because each blog post is written by different individuals with different perspectives and so they can see things from different perspectives."
							"They have a particular perspective. But, I think it's an important perspective as students need to get."
							"I'm wanted to introduce the students to Peter Norman's writings because he has important things to say."
				Whether the instructor's and author's perspectives were aligned		Participants were concerned about whether their perspectives or approaches were the same as the	*"The textbook supports my view of hardware engineering."*

			authors of the documents they used. They were also concerned about whether they agreed with the authors' perspectives.	
	Relevance		Participants were concerned about the associations between the information in the documents and the content they were teaching.	*"The wedding entrance dance is an interesting video because you can think about how we all use music and how we all break copyright law. So here's something that just seems like we would all do this and nowadays some of the video we record and you put online and you do all these things and not realize that you're breaking copyright. It's a great conversation because you can see the common experience."*
				"What I was trying to do in that particular segment was to talk about risk analysis and of course, the question is what is the ultimate risk and the ultimate risk I have here is that there is an asteroid that is going to come and hit the Earth. Okay, so in other words the project manager always is puzzled by how to handle risks and so rather than start immediately with well let's talk about IT risks

				because they are all different in different contexts, but yet let's just talk about the ultimate risk you know and so we will talk about the risks to the planet and so I use these news articles to show that there are people who are handling that the same way that we are supposed to handle project risk, okay and they are handling it exactly the same way, they use the same dimensions of measurements and they take the same parchments. It is really just a matter of scale… I think we use news articles in the school very much that way to provide a little bit of a relationship between what's going on right now you know and what they are learning.”
				“*It has to be something that addresses a true information security concern, it can be NASA who just launched a new spacecraft. Great, how does that relate to information security? That's nice news but it has to be something in the world of information security. So relevance.”*
	Readability		Participants were concerned about the extent to	“*It's very easy to read.”*

			which the information in the documents they used can be easily read and understood by students.	*"They can just be harder to read although sometimes these are a little bit more interesting than others just because of the topic that students might be more interested in reading about critical race theory in that you know as a journal article and how people have used it, but I think it still suffers from sometimes it is difficult to get through some of the material."*
			Evaluative criterion: Credibility	
Trustworthiness of information	Tangibility		Participants were concerned about whether the documents they used depicted real things or whether the information was real, concrete, or tangible.	*"I want the material on new technologies to be grounded in reality; not just the hype the vendors give about why it's going to be important in the future."*
				"I make students read actual law cases."
				"The advantages is that we know you always want to present something that is more concrete to students, and that can be tangible to them so they can be able to really have a grasp of the idea we are talking about in class."

	Accuracy		Participants were concerned about whether the information or logics in the documents they used was accurate, correct, and free of errors.	*"I think I have 100% confidence that this page correctly explains how the pieces move."*
				"The ideas that are presented in it are supposed to be accurate, supposed to be very useful for students especially if it is like this is the handbook of language variation and change."
	Objectivity		Participants were concerned about whether the standpoints or perspectives in the documents they used were objective or biased.	*"The question of how the mainstream approach to language teaching emerged is covered in this practical textbook, but I felt like the coverage is a little light, a little biased."*
	Factuality		Participants were concerned about whether the information in the documents they used was factual.	*"It usually has the facts students will put out in the line begin to say that yes that would be the ultimate risk and so."*
				"The first virus actually came from Iran and this is how we know that it came from Iran. The guys that made it actually, in the code they put their address [chuckles]. So he shows that he went to Iran and visited these guys that created the first virus."

				Participants were concerned about whether the viewpoints of the authors of the documents they used were valid.	*"The shortcomings are that I don't necessarily, of those three that you have here, I don't think all three are equally valid, right. So the one by [an author], I think is a really thoughtful review and I going back and forth. He is a smart guy. And what he really pointed out was, what he really pointed out was, there is this whole world of epistemology in philosophy that I didn't address. And he's right, because I didn't even ever think about it and so I find that his review made me think a lot. For example, it made me sort of, you know challenge and such. The one by [another author], I don't think it's a very valid criticism and he is not a very nice person..."*
Validity					
Being reviewed and edited				Participants were concerned about whether the documents they used have been reviewed and edited. If a document was reviewed and edited before it was published, the quality and accuracy of the information in this document was ensured.	*"Handbooks and the online property databases; they are all very heavily edited."*

	Degree of formal		Participants were concerned about how formal, mature, or polished the documents they used were.	*"They're very formal, mechanisms to validate them if you wanted to. I mean the system's got developed saying, You have to follow recommendation such and such and other ways and we won't buy that thing. So, they're up to the level of standard."*
				"This is the official set of materials so if somebody were to say to me alright what is the way I should be following to do project management and information technology will answer well okay let me give you this, this is the ultimate authority, this is the way you do it. Well I heard that people use the Agile approach you know how do I find out more about that. Well here is the ultimate authority this is what you do."
				"Dissertations are not the most polished, you know, they are still rough around the edges."
	Recency		Participants were concerned about whether the information in the documents they used was updated, recent, old, or outdated.	*"The blog posts were able to give the students a more updated view on some of the content."*
				"You can get more current information from journal articles."

| | | | | Truthfulness | | Participants were concerned about whether the information in the documents they used was fixed, ideal, detached, or mechanic. | *"In the textbook everything is laid out and all the decisions have been made and they say, "Well, there are three things that you have to remember, bam, bam, bam." But a journal article, they're coming at the students from different directions and they'll just go, "Okay, so this article says there's six things I need to remember. What! Wait, this one has 12 things I need to remember and what? Wait, this one says those 12 things are stupid." And so they have to do more of their own thinking when you do – when you teach by using journal articles, which is my goal."* |
| | | | | | | | *"So the textbook, it focuses more on the mechanics of making a graph in excel, so if you want to plot this column of data versus this column of data here's how you do it. So it tells you how to make a graph but it doesn't really discuss how to make a graph that transmits the information you want to transmit or kind of the aesthetic, the appearance issues."* |

	Association with authoritative knowledge		Participants were concerned about whether a document incorporated the information created by professional organization(s). Such information was perceived as authoritative.	*"[The author] actually takes excerpts from that body of knowledge book and incorporates it into her textbook and then describes a lot of other she has one case study after another."*
Trustworthiness of a source	Honesty		Participants were concerned about whether the information in the documents they used was honestly reported and presented.	*"At the beginning of the semester they were all saying that they were up to date with the reading and then half the students said that they needed to catch up with the reading. So they are not being entirely honest with themselves which I thought was interesting but not much I can do about it."*
	Intent		Participants were concerned about why and how the documents they used were created. They explained the purposes or intentions of the authors or organizations that created the documents.	*"This climate conducive to learning, I wrote that self assessment rubric because there maybe one little piece of the standards that say a library should be conducive to learning but that didn't really tell what it looks like. And so we developed a rubric to really flash that out so that people understood."*
				"In the policy field, these kinds of reports are really important part of the dialogue. So we call them think-tanks or institutes in Washington, and they

				have researchers who are trying to shape the policy so they will come up with reports that they will release and try to influence the public dialogue about some issue."
				"*They're motivated to see people be more knowledgeable about networking technologies and so they've developed these tutorials, mostly for people who work for their partners to come up to speed on networking.*"
				"*This is propaganda (The red…). This is propaganda (Berlin Block). That's propaganda.*"
				"*They're busy pushing me to think about adopting it… It's 120 bucks. I don't like this company… These people are in it for the money.*"
	Interaction with authors		Participants were concerned about their interactions with the authors of the documents they used. They cared about the authors' responses to their suggestions or feedback.	"*He's been moderately responsive to me when I've had issues with them.*"
	Investment		Participants were concerned about the financial investment that has been made to create the	"*I think they're pretty high quality because, you know, so where do they get the money to do this?*

			documents they used. They thought the more money an organization invested in creating a document, the more credible it was.	*It's basically one of the big journals in physics... and so they've developed these RSS feed to sort of publicize articles that are exciting in their manuscripts... They are pretty high quality, somebody gets paid to do it.*"
				"*They're professionally produced online training courses that cost a lot of money to produce.*"
	Stability		Participants were concerned about whether the documents they used were going to disappear in the future or whether the hosting sites of the documents they used were stable.	"*On the internet the URLs may change, they may disappear.*"
	Functionality		Participants were concerned about the functions of an interactive document, or students and their interactions' with this document.	"*It has these tutorials where the students work through problems more sequentially so instead of just doing it all at once, and getting seeing if its, and then handing it in and finding out a week later if it's right or wrong. They sort of get guided through the problem interactively. And so, that I think is a nice feature.*"
	Writing style		Participants were concerned about whether the documents they used were written in the way	"*I don't particularly myself like journals that are too full of themselves. They just think they're the*"

			that were understandable by students. They were also concerned about the languages the authors used.	*best journal in the world and therefore they write very obtusely and using a lot of jargon and I don't like reading that kind of stuff.*"
				"*Sometimes they are not described very well… The biggest shortcoming is that they can be sometimes very dense in their material you know and it is meant to serve as a guideline for a competent professionals who are already doing that work.*"
Expertise	Source		Participants were concerned about the authors or organizations that created or maintained the documents they used. They were concerned about whether the authors or organizations had subject expertise. They were also concerned about whether the authors or organizations had a good reputation or were affiliated with prestigious schools.	"*In each case the author has a deep understanding of the law and understands what's in the law and what's not in the law and does a very good job of explaining to someone who hasn't yet read the law what's there.*"
				"*Those are very reputable taskforces, and I wanted them to understand what was happening in the field.*"
				"*These are produced by professional organizations.*"
				"*ETS is one of the global providers of English language assessments and other kinds of*

				assessments too."
Authorship	Collective	Participants were concerned about whether the documents they used were written by a group of experts. Documents written by more authors tended to contain multiple perspectives.	*"This practically oriented book is an edited volume. It's written by a collection of authors."*
	Single	Participants were concerned about whether the documents they used were written by one person. Documents written by one person tended to contain single perspective.	*"The theoretical oriented book is written by one person."*
Breadth of Perspectives	Multiple	Participants perceived the perspectives in the documents they used as containing multiple perspectives, although these perspectives did not represent the whole.	*"The edited volume presents multiple viewpoints because it's written by a number of different authors."*
	Narrow	Participants perceived the perspectives in the documents they used as narrow, limited. It also includes situations in which participants used a document as one of the many examples. There were other examples or other possibilities. The examples participants used did not represent the	*"The disadvantage is that journal articles will not necessarily be tied into a larger body of work as quickly as a book would. For journal articles, you need to follow citations or use the citation tool to see what side it is in order to find other things that are related."*

			whole.	*"One person's life experience is a limited. It's a constrained perspective, so that's a limit."*
				"It's the same thing as the methods papers. Here's a methods paper at a point in time and this is one person's perspective on it based on the literature, built on literature, but it's still a perspective. It's not the final word on that method."
	Research effort		Participants were concerned about the research or analysis that has been conducted or the thinking that has been invested in the documents they used. They cared about the quality of the research and thinking. They were also concerned about the approaches the authors took to conducting research.	*"Because the book chapters tend to be more authoritative than the blog posts should be. They'd be more researched."*
				"Compared to the little things that you find online, the guide or whatever, they are more complete and comprehensive and thought-out."
				"Her dissertation is meant as a critique and so she does some very nice analysis, content analysis."
				"I think he's the only one I know that really combines linguistic theory with second language teaching. Nobody else really does that. So, other people talk about linguistic theory or they talk about language teaching, but they don't combine

				them. And he does."
				"This particular person had written in 2010 a very good practitioner view of how Agile is to be done alright using the whole software concept and in this particular case here this one was because of the fact that you have."
	Position		Participants were concerned about the importance of the documents they used in specific fields. They were concerned about whether the documents they used were well-known, well-respected, seminal, canonical, or classical in specific areas.	*"It's a well respected textbook."*
Evaluative criterion: Information quality				
Form	Form		Participants were concerned about the modes, forms, and formats in which the information in a document was expressed or presented.	*"This one they have redone to be an online database and it's not in book format online. It's in like a searchable table format which is very nice."*
			Information expressed or presented in audio, visual, audio-visual modes, or unique forms and formats made the learning more meaningful, concrete, or engaging. Using documents in	*"It's someone talking about what they do. It puts a personal face to these people. They're not just names in journal articles. You see a real-life person who is a researcher talking about how they*

			specific forms brought students different learning experiences. These experiences were different from reading "traditional" textual genres, such as textbooks and journal articles.	*do things. And I think that brings the process to life a little bit in ways that articles and things do not.*"
				"*I think the advantage of a FAQ is that they are questions, so it is hopefully the question that students are thinking of when they think about that topic, or that they should be thinking of. So it's a nice format for a resource.*"
				"*I think the blog postings are nice because it's a different format, there's a sense of being up to date and relevant and modern.*"
				"*The [an author] textbook is available as an e-book so that's a nice advantage and I think the [another author] textbook might also be an e-book; there might be an e-book version.*"
	Organization		Participants were concerned about how the information in the documents they used was structured. They cared about the logical sequence of different pieces of information in a document.	"*I like to give my students articles that are laid out for easy consumption especially if it's a practical article. So it will have subheadings and it will be organized in a way that they can easily figure out what the main points are.*"
				"*They try to organize it in a progressive way.*"

	Presentation		Participants were concerned about how the information in the documents they used was expressed and presented. They cared about the visual design and layout of the documents. For example, they were concerned about whether the documents contained visual information (e.g., figures and pictures), or used humor and animations to present information.	*"Certainly the content, design, and readability is key for me. Because law as far as graphically what it looks like, are there pictures? Are there poll boxes? Because law is very dense. And so if graphically, the book looks a little bit interesting, they're more likely to read it."*
				"It does it with nice graphics."
				"Fairy Use Tale… supports what's in those books but does it in a fun way. It uses the Disney images to talk about what's in copyright law. What also makes that video fun is that changes in the copyright law in the late 1990s were partially driven by the entertainment industry and by Disney. So here is someone using Disney images to talk about copyright law. So there is a nice humor in that."

				"It was a pretty well done video, they talked about the early days, the invention of the packet switching technology that is now the foundation of the internet. And it does so in a fairly entertaining way that gives the students some sense for how it all started."
Content	Content		Participants were concerned about the quality of the content of the documents they used as a whole, as opposed to specific sub-genres or information elements.	*"I encourage them to buy it because it's a nice resource for topics beyond my class, but I don't require it."*
				"I think it's pretty good."
				"Both are good."
				"Here is a good source of technical and scientific information."
				"They do vary in quality but for the most part I think that ones I have a pretty good – but you have to be careful."
				"I know it's good content."
				"The second one for the labs is very good for sort of the introductory stuff but then again, it doesn't really go far enough so I produce other materials

				myself."
				"And in this book chapter I think it's a just good overview or synthesis."
Clarity			Participants were concerned about whether the information in the documents they used was clearly written or explained.	*"I picked it because it seemed to have a clear exposition of material."*
Coherence			Participants were concerned about whether different pieces of information in a document were related to each other or whether the information in the documents in a series was consistent.	*"Usually there is far more material in these readings than I actually need them to master, but it's coherent."*
				"I would also highlight the similarities between all of the different example problems I worked. For example I would say on every single problem you work out you should draw a set of axis and X axis and a Y axis and I did that for every sample problem that I developed. So that there was a continuity through the video lessons of here is a problem, how do I begin to attack it, what are the techniques that I used to work through it."
Completeness			Participants were concerned about whether the documents they used contained all of the	*"It was okay, but it didn't have everything that I wanted the students to learn about."*

			information they thought should have been there without missing important points.	"*But the theoretical book is kind of - it is very comprehensive.*"
Depth			Participants were concerned about whether the information in the documents they used was detailed enough.	"*The articles themselves are not engineering articles, so they're not going to disclose all the details.*"
				"*The second one for the labs is very good for sort of the introductory stuff but then again, it doesn't really go far enough so I produce other materials myself.*"
Whether it's informative			Participants were concerned about whether the documents they used were informative.	"*I think it's, you know, how informative they are about the topic.*"
				"*Some of them are extremely good and well informed and some of them are not.*"
Quality of sub-genres/information elements			Participants were concerned about the quality of sub-genres or information elements – such as definitions, concepts, work examples, problems, sections, or perspectives – in the documents they used.	"*It has good definitions. It has good theory at very practical level.*"
				"*It's also a good source of homework problems.*"
				"*A lot of times the person who's developing those questions is not really an expert on the topic. All they're doing is, they're reading the book and they're looking for questions, and as a result, a lot*"

				of questions are very specific."
				"*I just thought it explained the concept of viruses very well, explained the history of viruses.*"
				"*The Yaws' database has a lot of good information for organic molecules but it doesn't have very good information for non-organic molecules.*"
	Quality of supplementary materials		Participants were concerned about the quality of supplementary materials (e.g., tutorials and powerpoint slides).	"*They have good instructor support... So for this book, it offers PowerPoint slides for - each of the chapters are already made, so I don't have to spend time building the PowerPoint slides. It had a question bank for quizzes and exams already made with the solutions, so I don't have to do that either, so basically that.*"
		Criterion: Personal preference		
	Topic importance		Participants were concerned about whether the topics of the documents they used were important in the real world.	"*The topics that they're addressing are usually important topics that the vendors have thought were important enough to invest time in developing the video.*"

	Topic variety/diversity		Participants were concerned about the extent to which the topics of a genre varied.	*"I like journal articles because you can have variety of things you know. You can just you talk about this topic. You bring a journal article, but if you just assign a book it's not going to be diverse, and you are not going to talk about many different topics. So in this way you can really touch on so many things, and then the student will learn so much more you know so."*
				"These particular things just represent what I think are kind of important areas, but there's so much to choose from that I think the advantages is that I think it's a good cross section of different kinds of research that's going on that identify the critical areas for students, for faculty and in the curriculum."
	Topic interestingness		Participants were concerned about the extent to which the topics of the documents they used were interesting or exciting.	*"Sometimes these are a little bit more interesting than others just because of the topic that students might be more interested in reading about critical race theory in that you know as a journal article and how people have used it, but I think it still*

				suffers from sometimes it is difficult to get through some of the material. It's not always the most exciting."
		Evaluative criterion: Cost effectiveness		
	Cost		Participants were concerned about how much it cost students to obtain documents or how much it cost them to make a document available for students.	*"Both are good, free online.*"
				"A combination of complexity and cost is why I don't choose handbooks as textbooks."
				"In the end, they wanted to charge me $600 to make a recording of a DVD we already own. So finally, I got them down to – I negotiated down to $100 per year. But that's still too expensive. $100 per year? It's still not perfect."
				"There are one, full text online, so people who may not have access to the book or purchase the book can get to it."
	Availability		Participants were concerned about how handy a document was to them when they wanted to use it to perform a task. They were also concerned about the extent to which a document was	*"I have copies of several of them, so it's very easy for me to access that material and in particular because I have physical copy to these, it's so easy just to look through them.*"

			accessible and available for students.	*"It's also a resource for teachers because these resources are downloadable."*
	Copyright concerns		Participants were concerned about whether their use or sharing of a document was legal.	*"I wonder about is; do I actually have the right to record webinars and re-broadcast them?"*
				"The legality of - is it appropriate for me to provide the students with these PDFs? That's a question. Because if I give the students a PDF of the book chapter, they didn't buy the book. And I've actually short changed those authors of the royalty that they deserve for having written the book."
				"I try to be very careful that I have permission for every photo. So I either have used a licensed photo from the AP database which the library has."
Other criteria				
	Affect		Participants were concerned about whether the information in the documents they used was interesting, fun, challenging, or engaging. They cared about the emotional responses these documents were able to evoke.	*"I think it's more engaging and so if I can find something, I always will try to find things that are more interesting and engaging and that means that I can substitute for a journal article that's kind of dry but it still gets the same point across then I'll do that."*

	Public acceptance/Endorsed usage		Participants were concerned about whether the documents they used were used by many people or by subject experts who were affiliated with prestigious schools.	*"It's fantastic. I know this book is used by professors at Berkeley and Harvard. It's used everywhere."*
				"They're common practice, students should know about them because they're very well used in the field."
				"I'm not the only one using that. There's an institution using it."

Appendix 7: The Complete Results of Co-occurrence Analysis

Teaching task	Information use task	Genre	Criteria
Prepare the course	Structure the course	Textbooks*8 (including one scholarly book)	Suitability*7(Coverage*5, Emphasis*1, Contain important sub-genres/information elements*1), Information quality: Form*4(Organization*4), Credibility: Trustworthiness of information*1(Recency*1)
	Prepare lectures	Textbooks*2, Books*2, Book chapters*1, Conference papers*1, Lecture slides*1	Suitability*3(Content orientation: Overview*2, Whether it provides supplementary materials*1), Credibility: Trustworthiness of information*2(Recency*2), Information quality: Form*(Presentation*1), Information quality: Content*1(Depth*1)
Teach about the field	Provide foundational text	Textbooks*20, Scholarly book*1, Law*1, Charts and graphs*1, Poems*1	Suitability*47(Coverage*11, Student/Course level match*8, Contain important sub-genres/information elements*7, Content orientation*4, Whether it provides supplementary materials*3, Whether the instructor and author's perspectives are aligned*3, Emphasis*3, Length/Amount*2, Usefulness*2, Readability*1, Amount of sub-genres/information elements*1, Originality: Secondary*1, Applicability*1), Information quality:

			Content*18(Quality of sub-genres/information elements*5, Completeness*4, Depth*4, Clarity*2, Coherence*1, Quality of supplementary materials*1, Content*1), Credibility: Trustworthiness of information*14(Recency*7, Tangibility*2, Accuracy*2, Degree of formal*1, Association with authoritative knowledge*1, Being reviewed and edited*1), Information quality: Form*11(Organization*5, Presentation*4, Form*2), Credibility: Expertise*7(Position*5, Source*2, Breadth of Perspectives: Narrow*1), Cost effectiveness*5(Cost*5), Public acceptance/Endorsed usage*4, Credibility: Trustworthiness of a source*3(Writing style*1, Interaction with authors*1, Intent*1)
	Enable students to understand an area/a topic	Mainly articles, individual pieces, including: Journal articles*4, Book chapters*4, Magazine articles*2, Review article*1, Law review article*1, Blog post*1, Website*1, Monograph*1	Suitability*11(Content orientation: Overview*6, Readability*2, Length/Amount*1, Originality: Primary*1, Contain important/unusual ideas/perspectives*1), Credibility: Expertise*4(Source*2, Breadth of perspectives*2), Information quality: Content*4(Content*3, Depth*1), Credibility:

			Trustworthiness of information*3(Objectivity*1, Recency*1, Truthfulness), Personal preferences*2(Topic variety*1, Topic interestingness*1), Cost effectiveness*1(Cost*1)
	Complement/Supplement other resources	Textbooks*4, Book chapters*3, Journal articles*3, Book*1, Review article*1, Conference papers*1, Handbook*1, News*1, Blog post*1, Instructional material*1, Chapter overview tutorials*1, Demo*1, Video*1, Online encyclopedia entry*1, Image*1, Online image*1	Suitability*13(Content orientation*3, Originality: Primary*2, Specificity*2, Whether the instructor and author's perspectives are aligned*1, Emphasis*1, Contain important/unusual perspectives*1, Originality: Secondary*1, Usefulness*1, Contain important sub-genres/information elements*1), Information quality: Content*9(Depth*7, Quality of sub-genres/information elements*1, Completeness*1), Credibility: Trustworthiness of information*8(Recency*4, Being reviewed and edited*2, Objectivity*1, Truthfulness*1), Information quality: Form*7(Form*4, Organization*2, Presentation*1), Credibility: Expertise*5(Authorship*2, Research effort*2, Source*1), Public acceptance/Endorsed Usage*1, Affect*1
	Enable students to explore interests	Textbooks*3	Suitability*5(Coverage*2, Content orientation: Overview*2, Emphasis*1), Information quality:

			Content*3, Cost effectiveness*2(Cost*2)
	Provide learning content	Research reports*3, Rubrics*3, Textbook chapters*2, Journal articles*2, Survey article*1, Educational video*1, Guide*1, Standard*1, Recommendation*1, Law*1	Suitability*13(Content orientation*4, Student/Course level match*3, Coverage*2, Emphasis*1, Contain important sub-genres/information elements*1, Originality: Secondary*1, Length/Amount of information*1), Credibility: Expertise*9(Source*9), Credibility: Trustworthiness of information*8(Degree of formal*2, Recency*2, Truthfulness*1, Being reviewed and edited*1, Tangibility*1, Factuality*1), Information quality: Content*5(Depth*2, Coherence*1, Clarity*1, Quality of sub-genres/information elements*1), Public acceptance/Endorsed usage*4, Cost effectiveness*3(Copyright Concerns*2, Cost*1), Credibility: Trustworthiness of a source*3(Writing style*2, Intent*1), Information quality: Form*2(Organization*1, Presentation*1), Affect*1
	Expose students to influential thinkers	Journal articles*1, Conference papers*1, Technical report*1, Review article*1, Keynote speech*1, Biography*1	Credibility: Expertise*8(Source*4, Breadth of perspectives*3, Position*1), Suitability*6(Contain important/unusual perspectives*5, Content orientation: Overview*1), Credibility: Trustworthiness of

			information*1(Recency*1)
	Expose students to important perspectives	Textbooks*4, Book reviews*4, Book chapters*2, Journal articles*3, Conference papers*2, Magazine articles*2, Editorials*2, Blog posts*2, Documentaries*2, News*1, Instructional material*1, Master thesis*1, Ph.D. dissertation*1, Memoir*1, Keynote speech*1	Suitability*26(Contain important/unusual perspectives*22, Whether the instructor and author's perspectives are aligned*2, Originality: Primary*1, Content orientation: Business*1), Credibility: Expertise*14(Breadth of perspectives*4, Research effort*4, Position*3, Source*2, Authorship: Collective*1), Credibility: Trustworthiness of information*12(Recency*4, Validity*4, Factuality*2, Tangibility*1, Accuracy*1), Credibility: Trustworthiness of a source*1(Stability*1), Information quality: Content*1(Depth*1), Public acceptance/Endorsed usage*1
	Introduce a professional organization	Professional organizations' websites*2, Internal research report*1, Rating rubrics/Standards*1	Credibility: Expertise*4(Source*4), Suitability*2(Contain important sub-genres/information elements*2)
	Teach the highest expectations	Guidelines*1, Standards*1	None
	Highlight a topic(s)	Magazine Article*1	None
	Prepare students for the job	Guide*2, Standards*1, Recommendations*1, Video lectures*1,	Public acceptance/Endorsed Usage*4, Suitability*4(Length/Amount*1, Emphasis*1,

		Code of ethics*1, Executive order*1, Rating rubrics/Standards*1	Specificity*1, Applicability*1), Credibility: Expertise*3(Source*3), Information quality: Form*1(Presentation*1), Credibility: Trustworthiness of information*1(Tangibility*1), Information quality: Content*1
	Draw on scholarship	Academic Publications*1	Suitability*1(Content orientation: Scholarly*1), Credibility: Expertise*1(Source*1)
	Develop students' conceptual vocabulary/terminology	Academic publications*1, Books*1, Guides*1, Standards*1, Recommendations*1	Public acceptance/Endorsed usage*3, Credibility: Expertise*1(Source*1), Suitability*1(Content orientation: Scholarly*1)
	Walk students through the process	Tutorial*2, Guide*2, Handbook*1, Video lessons*1	Suitability*8(Usefulness*3, Applicability*2, Length/Amount*2, Specificity*1), Information quality: Content*3(Whether it's informative*2, Coherence*1), Credibility: Trustworthiness of information*2(Being reviewed and edited: Not*1, Tangibility*1), Information quality: Form*1(Form*1), Credibility: Trustworthiness of a source*1(Functionality*1), Credibility: Expertise*1(Breadth of Perspectives*1)
	Facilitate lab practices	Textbook*2, Tutorial*2, Handbook*1, Documentation*1	Suitability*5(Usefulness*1, Applicability*1, Length/Amount*1, Content orientation: Overview*1,

			Coverage*1), Information quality: Content*4(Content*2, Depth*1, Whether it's informative*1)
Enhance students' understanding	Prove an example(s)	Demonstrations/Comedies*3, Rubrics*3, Book reviews*3, News*3, Textbooks*2, Book chapters*2, Magazine articles*2, Videos*2, Professional organizations' websites*2, Project websites*2, Memoirs*2, Framework documents*2, Journal articles*2, Example deliverables*1, Book*1, Copyright license*1, License agreement*1, Research report*1, Lesson plan*1, Collection development policy*1, Blog post*1, Instructional material*1, Video lesson*1, tutorials*1, Advertisement*1, Search results*1, Speech video*1, Poems*1, Documentaries*1, Response to reviews*1	Credibility: Trustworthiness of information*20(Tangibility*10, Recency*6, Validity*3, Accuracy*1), Credibility: Expertise*16(Source*5, Breadth of Perspectives*5, Research effort*3, Position*2, Authorship: Collective*1), Suitability*15(Whether the instructor and author's perspectives are aligned*4, Specificity*3, Contain important/unusual perspectives*3, Originality: Secondary*1, Relevance*1, Emphasis*1, Usefulness*1, Length/Amount*1), Information quality: Content*9(Depth*4, Completeness*2, Coherence*1, Content*1, Whether it's informative*1), Credibility: Trustworthiness of a source*7(Interaction with authors*2, Stability*2, Intent*2, Functionality*1), Information quality: Form*7(Organization*2, Form*3, Presentation*2), Affect*4, Public acceptance/Endorsed usage*1

	Explain/Illustrate/Demonstrate	News*5, Demonstrations or comedies*4, Book chapters*2, Journal articles*2, Tutorials*2, Pictures/Images*2, Photos*1, Internal research reports*1, Report*1, Law*1, Professional organizations' website*1, Website*1, Statistical data*1, Bibliographic information*1, Webpages*1, Executive order*1, Rating rubrics/Standards*1, Response to reviews*1, Documentaries*1, Political speech*1, Magazine articles*1, Essay*1, Articles from RSS feed*1, Review article*1, Blog post*1, Instructional material*1, Instructive videos*1	Suitability*15(Length/Amount*4, Specificity*3, Originality*2, Contain important/unusual ideas/perspectives*2, Content orientation: Technical*1, Practical*1, Emphasis*1, Relevance*1), Information quality: Form*13(Form*9, Organization*2, Presentation*2), Credibility: Expertise*11(Source*8, Research effort*1, Breadth of Perspectives*1, Position*1), Credibility: Trustworthiness of information*8(Tangibility*3, Recency*2, Objectivity*2, Factuality*1), Affect*5, Information quality: Content*4(Depth*2, Content*1, Whether it's informative*1), Credibility: Trustworthiness of a source*1(Intent*1), Public acceptance/Endorsed usage*1
	Improve students' understanding	Pictures/Images*3, Essays*2, Journal articles*1, Magazine articles*1, Blog post*1, Instructional material*1, Online training courses*1, Tutorials*1, Talk*1	Suitability*10(Originality: Primary*3, Length/Amount*2, Specificity*1, Coverage*1, Emphasis*1, Content orientation: Overview*1, Contain important sub-genres/information elements*1), Information quality: Form*9(Form*6, Presentation*2, Organization*1),

			Credibility: Trustworthiness of information*5(Recency*4, Degree of formal*1), Credibility: Trustworthiness of a source*5(Writing style*3, Intent*1, Investment*1), Information quality: Content*3(Content*2, Depth*1), Public acceptance/Endorsed Usage*1
	Provide theoretical/contextual information	Biographies*2, Memoirs*1, Documentaries*2, Statistical data*1, Book review*1, Editorial*1, Magazine articles*1, Journal articles*1, Book chapters*1, Book*1, Academic publications*1	Suitability*7(Length/Amount*3, Content orientation: Theoretical*2, Specificity*1, Content orientation: Scholarly*1), Information quality: Content*4(Depth*3, Completeness*1), Credibility: Expertise*3(Breadth of Perspectives: Narrow*2, Source*1), Information quality: Form*2(Presentation*2), Affect*2, Credibility: Trustworthiness of information*1(Tangibility), Personal preference*1(Topic Variety*1)
Make the learning content concrete and real	To present reality	Authoritative references*2, Tutorials*1, Demonstrations/Comedies*1, Documentaries*1, Interviews*1, Photos*1, Example charts*1, Statistical data*1, Search results*1, Blog post*1, Instructional material*1, Webpages*1, Political speech*1	Credibility: Trustworthiness of information*10 (Tangibility*8, Degree of formal*2), Information quality: Form*6(Form*4, Organization*2), Credibility: Expertise*5(Source*3, Position*2), Suitability*3(Specificity*2, Originality: Primary*1), Information quality: Content*2(Depth*2), Public acceptance/Endorsed usage

	Provide multimodal information	Training videos*2, Tutorials*2, Demonstrations/Comedies*1, Interviews*1, Instructive videos*1, Podcast*1, Video lessons*1, Talks*1, Videos*1	Information quality: Form*7(Form*6, Presentation*1), Suitability*2, Credibility: Trustworthiness of information (Tangibility)*1, Credibility (Expertise)*1
	Connect with the real world/make a connection(s)	News*5, Journal articles*2, Contemporary songs*1, Traditional songs*1, Blog posts*1, Tutorials*1, Comedy*1, Code of ethics*1, Articles from RSS feed*1	Credibility: Trustworthiness of information*8(Recency*6, Factuality*1, Tangibility*1), Suitability*3(Relevance*2, Emphasis*1), Affect*2, Personal preference*1(Topic Variety*1), Information quality: Content*1(Completeness*1)
	Help students visualize the goals	Rubrics*3, Technical marketing videos*1, Guidelines*1, Interviews*1	Credibility: Expertise*3 (Source*3), Credibility: Trustworthiness of a source*1(Intent*1)
Obtain reference information	Look up/Provide references	Handbook*5, Online property databases*4, Specialized search engine*1, Database*1, Resource website*1, Documentations*1	Credibility: Trustworthiness of information*8(Being reviewed and edited*7, Recency*1), Credibility: Expertise*5(Source*3, Position*2), Information quality: Form*5(Form*4, Presentation*1), Information quality: Content*3(Quality of sub-genres/information elements*1, Content*1, Depth*1), Public acceptance/Endorsed usage*2, Suitability*1(Length/Amount*1)
	Look for examples/problems	Textbooks*8, Concept test database*1	Credibility: Trustworthiness of information*6(Being

			reviewed and edited*4, Truthfulness*1, Accuracy*1), Credibility: Expertise*5(Source*5), Information quality: Content*5(Quality of sub-genres/information elements*4, Coherence*1), Suitability*3(Student/Course level match*1, Usefulness*1, Contain important sub-genres/information elements*1), Cost effectiveness*2(Availability*2)
	Help students find jobs	Listserv*2, Professional organization's website*2, Website for job search*1	Credibility: Trustworthiness of a source*1 (Stability)
	Enable students to get citation information	Book/Product information page*1	Information quality: Content*1 (Completeness)
	Provide guidelines for writing	Reference guidelines*2, Guide*1	
Develop advanced learning skills	Help students apply the learning content	Academic publications*1, Memoirs*1, Demonstrations/Comedies*1, Journal articles*1, Clicker assessments*1	Credibility: Expertise*3(Authorship: Collective*1, Breadth of Perspectives*1, Source*1), Credibility: Trustworthiness of information*3(Tangibility*2, Recency*1), Information quality: Content*2(Depth*1, Completeness*1), Personal preference*1(Topic variety), Affect*1
	Develop students' critical thinking skills	Book reviews*3, Journal articles*2, Law*2, Videos*2, Documentary*1,	Credibility: Trustworthiness of information*12(Validity*4, Tangibility*4, Factuality*1,

		Book chapter*1, Clicker assessments*1, Editorial*1, Demonstrations/Comedies*1, Photos*1, FAQ*1	Truthfulness*1, Recency*1, Accuracy*1), Suitability*10(Contain important/unusual perspectives*3, Whether the instructor and author's perspectives are aligned*2, Relevance*2, Emphasis*1, Length/Amount*1, Contains important sub-genres/information elements*1), Credibility: Trustworthiness of a source*3(Interaction with authors*2, Position*1), Credibility: Expertise*4(Research effort*3, Source*1), Information quality: Form*1(Form*1), Affect*1
Enhance students' participation	Trigger discussion	Clicker assessments*1, Podcast*1, Video*1	Suitability*4(Relevance*2, Originality: Primary*1, Length/Amount*1)
	To engage students	Pictures/Images*2, Instructional videos*2, Clicker assessment*2, Advertisements*1, Speech video*1, Documentaries*1, Poems*1, Magazine articles, News*1	Information quality: Form*6(Form*4, Presentation*2), Credibility: Trustworthiness of information*3(Factuality*2, Recency*1), Credibility: Expertise*2(Position*1, Source*1), Affect*3, Suitability*2(Length/Amount*1, Relevance*1), Credibility: Trustworthiness of a source*1 (Writing style), Information quality: Content*1(Quality of sub-genres/information elements*1)
	Have fun	Demonstrations/Comedies*4, Videos*2,	Affect*5, Credibility: Trustworthiness of

		Pictures/Images*1	information*3(Factuality*2, Objectivity*1), Information quality: Form*2(Presentation *2), Information quality: Content*1(Quality of sub-genres/information elements), Credibility: Expertise*1(Source*1), Public acceptance/Endorsed usage*1
Point students to resources	Provide authoritative references	Authoritative references*2	Credibility: Expertise*4(Position*2, Source*2), Suitability*3(Student/Course level match*2, Originality: Primary*1), Credibility: Trustworthiness of a source*2(Writing style*2), Credibility: Trustworthiness of information*2(Degree of formal*2), Public acceptance/Endorsed usage*2
	Provide original sources	Conference Papers*2, Book chapter*1, Law*1, Websites*1, Practitioner journal article*1	Suitability*6(Original: Primary*6), Public acceptance/Endorsed usage*2, Credibility: Expertise*1(Position*1)
	Provide access	Subject guides*1, Annotated bibliographies*1	Cost effectiveness*1(Cost*1)
Improve teaching immediately	Get timely feedback	Clicker Assessments*3	Credibility: Trustworthiness of information*1(Recency*1), Information quality: Content*1(Whether it's informative*1), Suitability*1(Usefulness*1), Credibility: Trustworthiness

			of a source*1(Interaction with authors*1)
	Understand students' learning situation	Clicker Assessments*2	
Encourage students to read	Motivate reading	Clicker Assessment*1, Essay*1	
	Enable students to reflect on self-learning	Clicker Assessments*2	Credibility: Trustworthiness of a source*1(Honesty*1)
Continue to learn	Provide suggested readings/more information	News*3, Textbooks*2, Handbooks*1, Scholarly book*1, Book chapters*2, Journal articles*2, Websites*2, Professional organizations' websites*2, Bibliographic information*2, Online encyclopedia entry*1, Encyclopedia entry*1, Books*1, Handbook*1, Conference papers*1, Survey articles*1, Executive order*1, Blog posts*1, Online resources*1, Annotated bibliographies*1, Bibliography*1, Webinars*1, Biographies*1, Memoirs*1, Documentaries*1	Suitability*16(Emphasis*4, Length/Amount*3, Originality: Primary*2, Student/Course level match*2, Content orientation*2, Usefulness*1, Contain important sub-genres/information elements*1, Originality: Secondary*1), Information quality: Content*11(Depth*5, Content*5, Quality of sub-genres/information elements*1), Credibility: Trustworthiness of information*10(Recency*6, Accuracy*3, Objectivity*1), Credibility: Expertise*9(Source*6, Breadth of Perspectives: Narrow*2, Research Effort*1), Cost effectivness*4(Cost*3, Copyright Concerns*1), Credibility: Trustworthiness of a source*1(Stability*1), Information quality: Form*1(Presentation*1)
	Keep up	Professional organizations' websites*3,	Suitability*4(Length/Amount*3, Originality: Primary*1),

		Research reports*2, Journal articles*1, Conference Papers*1, Articles from RSS feed*1, Website for job search*1	Credibility: Trustworthiness of a source*3(Intent*1, Investment*1, Stability*1), Credibility: Expertise*3(Source*2, Position*1), Credibility: Trustworthiness of information*2(Recency*2), Public acceptance/Endorsed usage*1, Information quality: Content*1(Content*1), Information quality: Form*1(Presentation), Cost effectiveness*1(Cost*1)
Others	Present different authorities	News*3, Editorials*2, Executive order*1, Webpages*1	Credibility: Expertise*5(Source*5), Credibility: Trustworthiness of information*1(Validity), Suitability*1(Whether the instructor and author's perspectives are aligned*1)
	Balance research and practices	Journal articles*1	Suitability*2(Content orientation: Practical*1, Content orientation: Theoretical*1)

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Curriculum Vitae

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EDUCATION

- **Syracuse University, School of Information Studies, Syracuse, USA**
  2007 – 2015   Ph.D. in Information Science and Technology
  Accumulated GPA: 3.928
  Expected graduation date: June 30, 2015
  2010   Certificate in University Teaching, the Future Professoriate Program
  2005 – 2007   Master of Science in Library and Information Science (MSLIS)
  Accumulated GPA: 4.00

- **National Taiwan Normal University, Taipei, Taiwan**
  2000 – 2004   Bachelor of Education, Division of Library and Information Science
  Department of Adult and Continuing Education, School of Education
  Minors: Health Education and the Secondary Education Program
  Accumulated GPA: 3.96

HONOR & AWARD

2013   Top candidate of Thomson Reuters Doctoral Dissertation Proposal Scholarship; Being invited to participate in the 2013 ASIS&T Doctoral Seminar for Research and Career Development
2009   Jeffrey Katzer Doctoral Fellowship, Koll Family Foundation
2006   Joseph and Martha Dosa Scholarship, Pi Lambbda Sigma Chapter of Beta Phi Wu
2002   Mr. Cha-Bing Wong Scholarship, Library Association of Taiwan, R.O.C.

RESEARCH

- **Research Interests**
  Faculty's information practices, scholarly information practices, credibility assessments, information-seeking and use, and human-information interaction in contexts

- **Dissertation Research**
  Title: *Investigating the Associations Between Credibility Assessments and Information Use Tasks with Respect to Document Genres in the Context of University Teaching*

  Advisor: Dr. Barbara Kwaśnik
  Committee: Dr. Carsten Østerlund, Dr. Bei Yu, Dr. Luanne Freund
  Internal reader: Dr. Bryan Semaan
  External reader: Dr. Tiffany Koszalka
  Chair: Dr. Leanne Hirshfield

- **Research Toolkit**
  - Data collection methods: Interview, citation analysis, survey, experiment, focus group, think aloud, simulated work task situations, and participant observation

- Data analysis techniques: Content analysis, grounded theory, discourse analysis, log analysis, and descriptive statistics
- Research tools: Dedoose, Excel, and SelectSurvey

TEACHING

- **Co-instructor**
  Fall 2010   IST 600 International Librarianship, the MSLIS program
  - o Developed the syllabus, offered face-to-face instruction, managed the course online, and provided students with detailed feedback for their weekly assignments and the grant proposals of the international library collaboration projects they developed

- **Curriculum Design & Assessment**
  Spring 2009   Curriculum mapping of the MSLIS program for the American Library Association (ALA)'s accreditation
  - o Compared the learning objectives and teaching contents of the core MSLIS courses against the ALA standards to identify gaps

- **Teaching Assistant** (Primary duties: Course management and grading)
  Spring 2009   IST 972 School Media Practicum
  Fall 2008   IST 668 Literacy Through School Libraries
                         IST 972 School Media Practicum
  Spring 2008   IST 613 Library Planning, Marketing, and Assessment

- **Teaching Practica**
  Fall 2008   IST 668 Literacy Through School Libraries & IST 600 Information Analysis, Presentation, and Interpretation
  - o Developed the syllabi and selected the readings
  Spring 2008   IST 511 Introduction to Library and Information Profession
  - o Developed a learning module on international librarianship, offered face-to-face instruction, and graded students' assignments
  Fall 2007   IST 613 Library Planning, Marketing, and Assessment
  - o Developed three learning modules on library advocacy, marketing strategies, and tools, and graded students' assignments

SERVICE

- **Syracuse University**
  Fall 2012 – Spring 2013   Doctoral representative, the personnel committee
  - o Assessed junior faculty's performance in their annual evaluations
  Fall 2011, 2012   The planning committee of the fall retreat for the Ph.D./DPS program
  Fall 2011 – Spring 2012   Doctoral representative, the search committee
  - o Reviewed faculty candidates' applications
  - o Participated in the telephone interviews, on-campus visits, and final decisions
  Fall 2008 – Spring 2012   Graduate assistant, the doctoral committee
  - o Organized the Ph.D. applications and coordinated the admission process for four years

                    o   Participated in curriculum planning and program assessment

Fall 2009 – Spring 2010	Student liaison of the faculty meeting

           o   Participated in the faculty meetings on a regular basis
           o   Took notes and shared with my fellow students

Fall 2008 – Spring 2009	Doctoral representative, personnel committee

           o   Reviewed and presented the faculty's promotion and tenure cases

PROFESSIONAL AFFILIATION

Student Member	The Association for Information Science and Technology (ASIS&T), Special Interest Group: Information Needs, Seeking, and USE (SIG USE)
Student Member	The Association for Library and Information Science Education (ALISE)

WORK EXPERIENCE

Aug. 2011 – Aug. 2012	Graduate assistant for the director of instructional quality, supervised by Dr. Susan Bonzi

           o   Developed and implemented a survey to investigate students' teamwork experiences at the school;
           o   Analyzed the survey data;
           o   Searched and summarized literature on team management in higher education for the faculty.

Aug. 2011 – Aug. 2012 Aug. 2008 – May 2011	Graduate assistant, administration of the Ph.D. program & the IT artifacts and state of IS research project, supervised by Dr. Ping Zhang

           o   Host prospective Ph.D. students, arranged schedules for them, and introduced the Ph.D. program to them;
           o   Managed the Ph.D. applications and participated in the admission process;
           o   Organized activities for the Ph.D. program, including the orientation dinners, retreats, and outing activities;
           o   Identified and coded the IT artifacts in the ICIS proceedings, ISR, and MISQ in 1990, 2000, and 2010. This experience has allowed me to learn to use Excel for content analyses. I applied it to conduct my dissertation research;
           o   Reviewed literature on the historical evolution of IT artifacts in the information systems field.

May 2010 – Aug. 2010	Graduate assistant, supervised by Dr. Bei Yu

           o   Reviewed top communication journals to evaluate text-mining algorithms using legacy corpora that have been content analyzed. This experience has polished my capabilities in developing and shaping research problems.

May 2009 – Aug. 2009	Graduate assistant, the "Can genre metadata improve information access in large digital collections?" research project, supervised by Dr. Kevin Crowston & Dr. Barbara Kwaśnik

	o	Qualitatively analyzed the experiment data (log) to understand the subjects' cognitive process based on their navigation path. This experience has developed my interest in how document genres shape information behaviors in the context of human-information interaction.
Aug. 2008 – May 2009		Teaching assistant for two MSLIS courses, supervised by Dr. Renée F. Hill
	o	Managed courses online;
	o	Graded MSLIS students' library internship journals.
June 2008 – Aug. 2008		Investigated the ALA-accredited programs to help develop the Ph.D. program in NTNU, Taipei, Taiwan, supervised by Dr. Hsaio-Tieh Pu
Aug. 2007 – May 2008		Graduate assistant, supervised by Dr. Megan Oakleaf
	o	Managed online courses and reviewed literature;
	o	Analyzed research data using atLas.ti.
May 2005 – Aug. 2005		Research assistant, "The study of the collection and organization of Internet resources for reference services" research project, sponsored by the National Central Library, supervised by Dr. Hsaio-Tieh Pu, Taipei, Taiwan
	o	Reviewed literature on subject gateways.
Jan. 2005 – July 2005		Research assistant, "The broadcasting digitization project", sponsored by the Eastern Multimedia Company Ltd., supervised by Dr. Chao-Chen Chen, Taipei, Taiwan
	o	Research assistant for "The planning and implementation of e-Learning courses of the digital Chinese calligraphy archive" project;
	o	Organized the licensing exhibition for the National Digital Archive Program and related workshops.
June 2004 – Dec. 2004		Research assistant, "The state of digitizing audiovisual materials in Taiwan and in various countries and the study of creating a national video and audio database", Government Information Office, Executing Yuan of R.O.C, supervised by Dr. Chao-Chen Chen, Taipei, Taiwan
	o	Reviewed literature on media asset management;
	o	Investigated the state of digital asset management systems;
	o	Interviewed practitioners in the broadcasting and music industries;
	o	Helped revise the "Classification scheme of Taiwanese literature, dance, music and traditional art" for the interface of the National Repository of Cultural Heritage, Council for Cultural Affairs, Taiwan, R.O.C.

PUBLICATION

- ▪ **Refereed Conference Papers**

  Zhang, Ping, Scialdone, Michael, & Ku, Min-Chun (2011). IT artifacts and the state of IS research. In *Proceedings of the International Conference on Information Systems (ICIS)*, Shanghai, China, 4-7 December, 2011. Available at http://aisel.aisnet.org/icis2011/proceedings/generaltopics/14/

Ku, Min-Chun (2011). A conceptualization of interaction with genres in the context of information practices. *iConference 2011*, Seattle, WA, 8-11 February, 2011. Available at http://dl.acm.org/citation.cfm?id=1940781

- **Refereed Conference Posters & Workshop Papers**
  Ku, Min-Chun (2013). Investigating genre-credibility relations in faculty scholars' teaching tasks. The Jean Tague Sutcliffe Doctoral Poster Competition of the Association for Library and Information Science Education (ALISE).
  Ku, Min-Chun, Scialdone, Michael, & Zhang, Ping (2012). Absent information technology in legitimate information systems research. *iConference 2012*, Toronto, Canada, 7-10 February, 2012. Available at http://dl.acm.org/citation.cfm?id=2132249
  Yu, Bei, & Ku, Min-Chun. (2010). Collecting legacy corpora from social science research for text mining evaluation. *The ASIS&T 73rd Annual Meeting: Navigating streams in an information ecosystem*. Pittsburg, PA, 22-27 October, 2010. Available at http://onlinelibrary.wiley.com/doi/10.1002/meet.14504701368/full
  Ku, Min-Chun, & Zhang, Ping (2009). Conceptualizing aesthetic experiences of embodied interaction with ICTs. *The Eighth Annual Workshop on HCI Research in MIS*, 2009, Phoenix, AZ, 14 December, 2009. Extended abstract available at http://aisel.aisnet.org/sighci2009/18/
  Ku, Min-Chun (2009). How can academic libraries go beyond e-Science: the emergence of the new contribution-recognition system. In *Proceedings of the 72nd the American Society for Information Science and Technology Annual Meeting (ASIS&T 2009)*, Poster Session 1, Vancouver, Canada, 6-11 November, 2009. Extended abstract available at http://onlinelibrary.wiley.com/doi/10.1002/meet.2009.1450460339/full
  Mueller, M. & Ku, Min-Chun, & Schmidt, A. (February 17, 2009). Transactional regimes and the response to cybercrime: the case of phishing. *The 50th Annual Convention of International Studies Association*, Innovative panel: understanding multistakeholder participation in the global governance of information and communication policy, 15-18 February, 2009. New York, NY.
  Yoo, S. & Hagedorn, K. & Ku, Min-Chun & Dennis, D. & Nicholson, S. (June, 2006). Corporate sponsorship in libraries. *The ALA 2006 Annual Conference* at New Orleans, LA.

- **Doctoral Consortium & Doctoral Colloquium**
  Ku, Min-Chun (2011). Investigating genre-credibility relations in the context of scholars' information practices. *iConference 2011*, Seattle, WA, 8-11 February, 2011. Available at http://dl.acm.org/citation.cfm?id=1940929
  Ku, Min-Chun (2010). Investigating human-genre interaction in information practices: A comparative study of the roles of genres in American and international graduate students' information seeking, use, and sharing behaviors. *2010 Information Interaction in Context Symposium* (IIiX), Doctoral Workshop, New Brunswick, NJ, 18-21 August, 2010.

- **Publication in Chinese**
  Pu, Hsaio-Tieh & Chang, Chi-Lung & Kuo, Pei-Yi & Ying-Feng, Huang & Ku, Min-Chu, & Chen, Szi-Ying (2008). *Exploring subject gateways on the Internet*. The

National Central Library Series on Special Topics. Taipei, Taiwan: National Central Library.

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