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An Investigation of the Associations Among Professional Tasks, Document Genres and Document Assessments in the Context of University Teaching

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Abstract

This study investigated the following three associations in the university teaching context: (1) between genres of the documents faculty used to support their teaching and the tasks they performed to use these genres; (2) between these genres and the criteria they employed to assess these genres; and (3) between their tasks and criteria. The author first employed qualitative citation analysis to identify the genres faculty used based on citations in their teaching materials (e.g., syllabi and lecture slides). Semi-structured interviews were then implemented to explore how they assessed and used different genres. A total number of 27 faculty from different disciplines contributed 28 courses. Qualitative content analysis was employed to analyze interview transcripts. The results indicate the criteria faculty employed served as function enablers that bridged genres and tasks. The tasks they performed served as the inclusion and exclusion criteria that determined what genres were used or not. Tasks determined the information characteristics of genres that mattered in faculty's task performance.

Keywords: Document Genres; Genre Repertoires; Task Analysis; Information Use; Document Assessments

1. Introduction

Teaching involves intensive information practices. Faculty select and use different documents. As information and communication technologies (e.g., mobile devices and learning management systems) infiltrate higher education, their reliance on information documents to support their teaching increases. Faculty are free to use the abundant resources available to them. Academic libraries at their home institutions purchase and subscribe resources in different forms and formats. Publishers also provide them with textbooks and supplementary resources. However, the sheer amount of resources available has brought challenges because they often had to choose among many options. Previous research on users' document assessments emphasized those made in the information seeking process (e.g., Barry & Schamber, 1998; Rieh, 2002). How documents in use are perceived has rarely been explored. It is important to examine document assessments in relation to information use because documents are assessed for use. The lack of literature on how the selected documents are used, especially in the teaching context, necessitates the need for a study that explores how faculty use different documents to support their teaching.

Professional tasks are associated with genres of the documents used to accomplish them (Freund, 2008a). For example, genres including

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tutorial pages, project lists and product reviews are particularly useful to computing tasks (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. Moreover, 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 teaching context, modeling and incorporating these associations into search systems might help faculty assess documents and use information effectively. Thus, it is important to uncover the associations between the tasks faculty perform to use information and the genres they use to facilitate the design of search systems. Moreover, previous research on task-genre associations focused on how useful a document is to a task (Freund, 2008a, 2013; Zhang, Kopak, Freund, & Rasmussen, 2011). However, users tend to employ a variety of criteria to assess documents (Barry & Schamber, 1998). It is important to explore the criteria users employ to assess documents and how these might be associated with genres. Thus, this study aimed at identifying how tasks, genres and criteria might be associated with each other in the teaching context. As the first step toward a deeper understanding, the goal was to uncover possible variations of the associations. Below are the research questions that guided this study.

RQ1 What, if any, are the associations between the tasks faculty perform to use documents to support their teaching and genres of these documents?

RQ2 What, if any, are the associations between genres of the documents faculty use to support their teaching and the criteria they employ to assess these documents?

RQ3 What, if any, are the associations between their tasks and criteria?

2. Literature Review

2.1 Tasks in the context of information seeking and use

Tasks are goal-oriented activities people perform to make progress in their work or personal life. Tasks have practical goals, which can be achieved in a process (Byström & Hansen, 2005). Task performance involves physical and cognitive actions leading to a meaningful product(s) (Vakkari, 2003). Its beginning and end are observable. In information seeking and use, tasks were often divided into three levels, including: work tasks, information seeking tasks and information search tasks. Work tasks refer to the activities people perform to fulfill their work responsibilities. Work tasks motivate information needs and problems, which lead to information seeking and use because information is needed to solve their problems. Work tasks determine document selection criteria (Freund, 2013). Information seeking tasks refer to the activities people perform to identify and gather information (Byström & Hansen, 2005). Information seekers may find the information that helps solve the problems in their work tasks through a variety

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of means. Information search tasks refer to task situations in which information seekers rely on search systems, such as search engines and databases, to find the information that helps accomplish their information seeking tasks and work tasks (Li & Belkin, 2008).

Freund (2008b) argued task as an analytical framework offers a means to distinguish patterns of information behaviors at an intermediate level. Such 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, 2008b). Thus, task can serve as a simple, situational model for users (Freund, 2008b). The concept of task also helps understand human activities that genres help accomplish and the contributions genres make to these activities (Andersen, 2008; Vakkari, 2000, 2001). Freund (2008a) noticed task performers' goals of using information had not been seriously considered. The goal-based approach addresses the goals of using information directly. Differentiating tasks according to task performers' goals has a great potential for information seeking and retrieval. Vakkari (2000) also argued it is important to identify and classify expected use of information to design document representations that offer clues useful to inferring the potential contributions of documents to their tasks. The goal-based approach to tasks can be useful for modern information environments in which a wide variety of documents are sought and used.

Information use is an intricate decision involving the treatment and application of information in different contexts (Wang & Soergel, 1998; Wang & White, 1999). Information use has been conceptualized in several different ways, including: information practices, 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. For example, conceptualizing information use as knowledge construction focuses on the contribution of information to meaning-making. Conceptualizing information use as information application 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).

2.2 Document genres and genre repertoires

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 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 hence can be identified based on its socially recognized communicative purposes and forms (Crowston, 2010; Crowston & Kwasnik, 2003). Identifying the genre of a document reduces users' cognitive load in navigating within it and comprehending information (Crowston & Kwasnik, 2003; Dillon, 2008). Experts who is knowledgeable about the genres enacted in a domain can rely on such knowledge to identify the genres they interact with

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and assess the fit of these documents to their task situations according to the architectural traits they perceive (Crowston & Kwasnik, 2003; Rosso, 2008; Sundin & Francke, 2009). Genre repertoires are sets of genres commonly used in a domain. Members of a community can recognize the genres enacted in their domain because they share mutual understanding of these genres (Freund, 2013).

2.3 Task-genre associations

Previous studies on task-genre associations were conducted at both the between-document (e.g., Freund, 2008a, 2013; Roussinov et al., 2001) and within-document levels (e.g., Zhang et al., 2011). Regardless of the levels, both found professional tasks and information tasks are associated with the genres or sub-genres used to accomplish these tasks. Task and genres are associated with each other primarily based on functional matching. The creation purpose of a document matches users' task. Other types of task-genre associations also exist, such as those based forms and contents of genres (Freund, 2013). Roussinov et al. (2001) found certain genres address certain information needs frequently when users search on the Web. For example, genres including product information and advertisements were associated with shopping purposes frequently. Freund (2013) examined the extent to which task-genre associations were domain-specific or generalizable across different domains. She compared the effect of task type and document genre on how useful documents were perceived in two domains, including software services workplace and Internet users' use of e-government information. Her results demonstrated task, genre and task-genre associations influenced the perceived usefulness of documents. Such influence was stronger in software consultants' workplace setting than in the Internet domain. Zhang et al. (2011) identified the associations between functional units in the four major sections of journal articles (introduction, methods, results and discussion) and the information tasks scholars performed to use journal articles. Functional units refer to the smallest units of information. Each functional unit serves a distinct communicative purpose. Several functional units were significantly more useful to a specific task than others in the same section. For example, "support explanation of results" in the discussion section is more useful to the task "refer to arguments." Other functional units in the same section were also useful, but to a less degree. For example, "compare results with previous research" was also useful to "refer to arguments," but to a less degree.

2.4 Document assessments

The notion of relevance has been a central concern of information retrieval and different types of relevance have been discussed (Cooper, 1971; Wilson, 1973). Relevance has been associated with topicality, but it is not users' only concern when deciding whether a document is potentially useful to their tasks (Green, 1995). Schamber, Eisenberg, and Nilan (1990) and Borlund (2003) encouraged the use of situational relevance to evaluate users' interactions with retrieval systems because it defines the relationships between users and the retrieved documents at a specific point in time. Relevance is a subjective perception that users experience when processing the retrieved documents against their

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work task situations. Its multidimensional and dynamic nature is reflected in the criteria users employ to judge the relevance of the retrieved documents. Freund (2013) argued situational relevance or context-specific assessment has rarely been investigated. Park (1997) identified three dimensions of relevance, including: problem orientation, use orientation, and document value orientation. Barry and Schamber (1998) compared two studies that elicited the criteria users employed to judge relevance. The two studies varied in types of users, sources and formats of information, and information use environments, but the criteria overlapped. The core set of criteria users employed included: depth/scope/specificity, accuracy/validity, clarity, currency, tangibility, quality of sources, accessibility, availability of information/sources of information, verification, and affectiveness. Rieh (2002) found scholars made two types of judgments when assessing the information quality and cognitive authority of webpages, including predictive judgments and evaluative judgments. The former referred to the prediction scholars made before opening a webpage, while the latter referred to the values and preferences they expressed after opening a webpage. Scholars were concerned with information quality, cognitive authority, topical interest, aesthetic aspects, affective aspects, and general expectation when opening webpages for research, travel, medicine and computer tasks, although the importance of different criteria varied by tasks (Rieh, 2002). This study took a step forward by focusing on the document assessments scholars made after using a document.

El Mhouti, Nasseh, and Erradi (2013) developed an assessment instrument for assessing the quality of multimedia learning resources. This instrument first guided instructors to identify a resource and its relevant product information (e.g., the creator responsible for it and the target audience). This resource should be assessed by a set of criteria classified into four categories, including: academic quality, pedagogical quality, didactic quality and technical quality. Each category contains multiple criteria. Nesbit, Belfer, and Leacock (n.d.) developed the Learning Object Review Instrument (LORI). LORI contains nine items for instructors to rate or comment on a specific learning object, including: (1) Content quality; (2) Learning goal alignment; (3) Feedback and adaptation; (4) Motivation; (5) Presentation design; (6) Interaction usability; (7) Accessibility; (8) Reusability; and (9) Standards compliance. Not all of the items were applicable to a specific learning object. Vakkari and Hakala (2000) found the importance of different criteria changed as users made progress in the proposal-writing process. The criteria they employed to assess bibliographic information and documents for their research proposals included: (1) the information content of documents (e.g., topicality and recency); (2) sources of documents (e.g., person's relations to sources and source types); (3) documents as physical entities (e.g., availability and length); (4) users' situations (e.g., time constraints and the stage of a process); (5) users' experiences and background (e.g., language and novelty); and (6) information types (e.g., general and specific information).

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3. Research Methods

3.1 Sampling and recruitment

This study took place at Syracuse University (SU), Syracuse, New York. It received the top research class "R1" ranking in the 2015 Carnegie Classification of Institutions of Higher Education for its "higher research activity" (Boll, 2016). Such ranking was determined based on factors that evaluated research activities in different doctoral institutions, including expenditures on research and development, and number of doctoral conferrals. The Carnegie Classification, which was developed by the Carnegie Foundation for the Advancement of Teaching, is a widely adopted standard. It has been used by the U.S. Department of Education, U.S. News and World Report to allocate funding and classify institutions (Boll, 2016). This study assumed courses were crucial contextual factors that shaped the genres faculty used, their document assessments and tasks. University courses varied in sizes, student levels (e.g., undergraduate, masters or Ph.D.), course levels (e.g., introductory or advanced), course orientation (e.g., theoretical or practical) and course requirements (e.g., required or elective). Different courses required different sets of genres. Including a variety of courses helped diversify teaching contexts. Thus, this study recruited faculty from as broad a range of academic disciplines as possible to ensure a diversity of teaching contexts, which covered social sciences, humanities and sciences. This study adopted several strategies to recruit participants, primarily snowballing and e-mail recruitment. The author was introduced to several faculty members in other disciplines. These participants referred to several faculty members who might be interested in this study after completing their participation. Recruiting e-mails were also sent to faculty who have won the teaching recognition awards at the university and faculty in several schools and departments. This has helped recruit more participants.

3.2 Participants and their courses

Twenty-seven participants taught the twenty-eight courses included in this study. One of them contributed two courses. The ranks of participants were quite diverse. There were ten assistant professors, four associate professors, seven professors, an assistant professor of practice, three associate professors of practice and two research associate professors. Participants' teaching experiences varied. It was the first time that ten participants taught their courses. It was the second time that five participants taught. Eight participants taught from three to ten times. Three participants taught more than twenty times. There was a special case in which the participant re-taught his course since 1998. Thus, it was his first time to teach it since a long time ago. Most participants were very familiar with the documents they used. Four participants were partially familiar. In one case, 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, 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 they have used. Two participants were not very familiar with the

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documents they used. One was not very familiar with the documents he used when he taught the first time, but became more familiar when he prepared to teach it the second time. The other was not very familiar with the textbook he used, but the content was so basic to him.

The courses 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) belonged to social sciences. Eight belonged to sciences, and three belonged to humanities. Some courses targeted students in specific academic programs or departments; some were open for students in different programs in the same school; still some were cross-listed in different programs in different schools. The courses were in the following disciplines: library and information science, information management, information science and technology, political science, chemical engineering, Spanish, journalism, math, higher education, computer science, linguistics, advertising, and so on. The courses varied in requirements, including: ten required and ten elective courses, three highly recommended courses, two elective within specific requirements, and three were both required and elective (required for certain programs, but elective for others). The levels of students were very diverse, including: eleven undergraduate courses, seven master courses, two doctoral courses, four courses having both Ph.D. and master students, three courses having both undergraduate and master students, and a Massive Open Online Course (MOOC). The courses varied in student numbers: Three had 5 to 8 students; sixteen had 10 to 25 students; five had 30 to 60 students; three had 80 to 200 students; and there were about 2,000 students in the MOOC.

3.3 Data collection and analysis

This study took a multi-method approach to data collection. Qualitative citation analysis and semi-structured interviews were employed in sequence to collect data. Data collection encompassed a bottom-up approach to identifying the genres that participants used to support their teaching. This study first identified the genres they used based on citations in their teaching materials (e.g., syllabi, lecture slides and lab notes) in their courses. Customized genre repertoires that documented genres of the documents in use were created in Excel files to facilitate interviews. Participants first answered questions about their courses in interviews. They were then instructed to identify genres of the documents they used and verify the genre repertoires. This brought in participants' perspectives and helped ensure internal validity (credibility/authenticity). Ten genres, including the most heavily used two, four that appeared the most frequently and four that appeared the least frequently in a course, were selected and displayed for in-depth interviews designed to collect data about the tasks they performed and the criteria they employed to assess these genres. The external validity (transferability) was ensured by preserving the contexts of genre use in customized genre repertoires and bounding interviews in the same contexts.

Interviews were fully transcribed. Qualitative content analysis and co-occurrence analysis were employed in sequence to analyze interview transcripts. Open coding was first employed to analyze the data about the courses, the information

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use tasks (IUTs) participants performed and the criteria they employed. Several previous studies on users' relevance judgments and credibility assessments were consulted to identify participants' criteria, including: (1) The unifying framework of credibility assessments (Hilligoss & Rieh, 2008); (2) The criteria participants of an Internet Discussion Forum employed to assess the information quality of messages and the credibility of authors (Savolainen, 2011); (3) The criteria scholars employed to assess information quality and cognitive authority on the Web (Rieh, 2002); (4) The relevance criteria users employed in different contexts (Barry & Schamber, 1998); and (5) Topics of users' comments when they assessed the credibility of e-commerce websites (Fogg et al., 2003). Some criteria were developed inductively from interview transcripts. The criteria were then abstracted to higher-levels and classified into evaluative criteria (Rieh, 2002). The IUTs were then classified into teaching tasks (TTs) according to the common goals they shared, because this study took the goal-based approach (Freund, 2008a). Codebooks that detailed the definitions of different tasks and criteria with examples were developed. The real assessments participants made and the IUTs they performed varied in granularity. Sometimes they used different documents that were identified as the same genre in the same way, but sometimes not. Distinguishing the tasks participants performed to use a specific document or genre and the criteria they employed to assess a specific document or genre was necessary. Thus, the author reanalyzed the transcripts and organized these in tables in Word files. Furthermore, participants tended to use a specific document or genre to perform several tasks and employed multiple criteria to assess it. However, not all the criteria were associated with all the tasks. Certain criteria were associated with certain tasks. Thus, co-occurrence analysis was conducted to identify the tasks associated with specific criteria when participants used a specific document or genre. Finally, the documents identified as the same genres were aggregated to identify how often a task was associated with a specific criterion.

4. Results

4.1 Teaching tasks and information use tasks

One interview question asked participants their purposes in using the selected genres. Their responses were analyzed to identify the tasks they performed, which were presented in Table 1. Each TT consists of several IUTs. *Prepare the course* refers to situations in which participants used documents to plan their courses, such as deciding how to structure their courses. *Teach about the field* refers to situations in which participants used genres to help students acquire important knowledge in specific fields. *Enhance students' understanding* refers to situations in which participants used documents to help students understand the learning content. *Make the learning content real and concrete* refers to situations in which participants used documents to make the learning content tangible and realistic. *Obtain reference information* refers to situations in which participants used documents to find different types of information that helped accomplish specific tasks, such as solving a problem. *Develop students' advanced learning skills* refers to situations in which participants used documents

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Table 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	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

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Table 1. Teaching Tasks and Information Use Tasks (Continue)

Teaching tasks	Information use tasks
Develop students' advanced learning skills	Develop students' critical thinking skills
	Help students apply the learning content
Enhance students' participation	Trigger discussion
	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

to help students develop higher-level learning skills, including critical thinking. *Enhance students' participation* refers to situations in which participants used documents to encourage students to participate in the learning process actively. *Point students to resources* refers to situations in which participants provided students with different types of documents, such as documents from which specific approaches or concepts originated. *Improve teaching immediately* refers to situations in which participants used documents to obtain feedback from students and understand how they were learning to adjust their teaching immediately. *Encourage students to read* refers to situations in which participants used documents to help students reflect on their reading habits and to ensure students read the required readings. *Continue to learn* refers to situations in which participants provided students with documents for continuing development.

4.2 Document genres

Table 2 presents an overview of the selected genres. Several were classified in multiple major categories because sometimes the same genres had different identities in different courses. For example, handbook was classified as a review genre because a participant in linguistics said the handbooks she used were comparable to encyclopedias. Handbook was also classified as a reference genre because another participant used it to find chemical property information.

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Table 2. The Selected Genres

Major genre categories	Genres	Sub-types
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	
	Master's thesis	
Professional publications	Practitioner journal article	
	Magazine article	
	Journal/Magazine article	
	Essay	
Opinion-based genres	Editorial	
	Book review	
	Blog post	
Review genres	Encyclopedia entry	Online encyclopedia entry
	Annotated bibliography	
	Handbook	
	Handbook chapter	
	Review article	
Report genres	Report	Internal research report
		Research report
		Advocacy report
News genres	News article, news report, news video	
Research news genres	News article about study, study reports	
	Articles from RSS feed	
	Survey article	
Reference genres	Handbook	
	Database	Online property database
		Concept test database
	Specialized search engine	
	Resource website	
	Data website	
	Documentation	
	Job search website	

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Table 2. The Selected Genres (Continue)

Major genre categories	Genres	Sub-types
Resource genres	Website	
	Subject guide	
	Authoritative reference	
	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 tutorial
		Chapter overview tutorial
	Guide, online guide	
	Manual	
	Handbook	
Professional genres	Professional organizations' websites	
	Listservs	
Image genres	Photo	
	Chart and graph	
	Image, online image, picture/image	Logo
Law genres	Law	
	Docket report	
	Executive order	
Professional work genres	Code of ethics	
	Guidelines	
	Standard	
	Recommendation, recommendation report	
	Rating rubric/standards, rubric	

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Table 2. The Selected Genres (Continue)

Major genre categories	Genres	Sub-types
Example genres	Collection development policy	
	Framework document	
	Lesson plan	
	Copyright license	
	License agreement	
	Example deliverable	
	Example chart	
	Advertisement	Banner advertisement
	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	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 Evaluative criteria and assessment criteria

One interview question asked participants the advantages and disadvantages in using the selected genres. Their responses were analyzed to identify the criteria they have employed, which were presented in Table 3. Specifically, *suitability* refers to the match between a document and a course. *Credibility* refers to whether the information or source of a document was trustworthy or had expertise (Fogg & Tseng, 1999; Hilligoss & Rieh, 2008). *Information quality* refers to participants' perceived goodness of the forms and content of a document. *Personal preferences* refer to participants' preferences for specific genres because they thought the topics of these genres were diverse, interesting or really

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Table 3. Evaluative and Assessment Criteria

Evaluative criteria	Dimensions	Assessment criteria		Values
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		
		Has been reviewed and edited		
		Degree of formal		
		Recency		
		Truthfulness		
		Association with authoritative knowledge		

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Table 3. Evaluative and Assessment Criteria (Continue)

Evaluative criteria	Dimensions	Assessment criteria	Values
	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	

important. *Cost effectiveness* refers to the extent to which a document was easily available for both participants and students. Public acceptance/endorsed usage refers to whether a document has been used widely or used by experts who were affiliated with prestigious schools. Affect refers to the extent to which a document evoked emotional reactions, including: interesting, fun, engaging or challenging.

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4.4 Task-genre-criterion associations

This section was organized based on tasks because co-occurrence analysis was conducted based on tasks. Each sub-section reports the associations among a TT and its IUTs, the genres used to perform these and the criteria employed to assess these genres. Table 4 presents the results of co-occurrence analysis. *The selected genres* present the genres participants used to perform the corresponding tasks. *Evaluative criteria* present the criteria associated with the corresponding tasks. *Dimensions or criteria that stood out* (presented as bold in Table 4) presents the dimensions of evaluative criteria or specific assessment criteria associated with the corresponding tasks more frequently. *N* in *the selected genres* refers to how frequently a genre was associated with a task. *N* in the *evaluative criteria* refers to how frequently a criterion was associated with a task. *N* in *dimension(s) or criteria that stood out* refers to how frequently a dimension of a criterion or a criterion was associated with a task. Given that frequency is not equivalent to importance and genres such as clicker assessments were rarely used partly because it was a new instructional technology, the associations that occurred only once or a few times were also reported.

4.4.1 Prepare the course

Genres used to *prepare the course* were not diverse. Textbooks were commonly used to perform the two IUTs. Criteria including *suitability*, *information quality* and *credibility* were employed and *suitability* was more frequently associated. First, textbooks were the only genre used to *structure the course*. Coverage and organization were frequently associated with it. Genres used to structure participants' courses contained most of the information they needed. Second, more genres were used to *prepare lectures* and most were academic, research genres. Although textbooks were used, overall participants did not rely on textbooks heavily. This probably was because they treated textbooks as a self-study guide. They expected students to read textbooks before the class. They wanted to emphasize important learning content or worked on difficult problems in the class. No criterion was associated with this IUT more frequently.

4.4.2 Teach about the field

Some IUTs involved a narrow range of genres, while some involved a wider range of genres. For example, genres used to *provide foundational text*, *enable students to explore interests* and *facilitate lab practices* were not diverse, while genres used to *complement/supplement other resources* and *expose students to important perspectives* were relatively diverse. Participants employed many criteria to assess genres because *teach about the field* was a core task. *Suitability*, *credibility* and *information quality* were their major concerns.

First, genres used to *provide foundational text* contained the major learning content for participants' courses. These genres tended to be assigned as required readings. These were related to the subjects or professions in which participants were teaching. For example, different types of laws were used in a course about the laws in the news profession. The major genre used to perform this IUT was textbooks. Many criteria were associated because selecting foundational texts tended to be a major decision. Participants considered *suitability*, *information quality*, *credibility* and other criteria. *Suitability*

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Table 4. Task-genre-criterion Associations

Teaching tasks	Information use tasks	The selected genres (*N*)	Evaluative criteria (*N*)
Prepare the course	Structure the course	Textbooks*8 (including one scholarly book)	**Suitability*7 (Coverage*5)** **Information quality*4: Form*4 (Organization*4)** Credibility*1
	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 (Coverage*11)** Information quality*29 Credibility*24 Cost effectiveness*5 Public acceptance/Endorsed usage*4
	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)** Credibility*7 Information quality*4, Personal preferences*2 Cost effectiveness*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	**Information quality*16: Content*10 (Depth*7)** Suitability*13 Credibility*13 Public acceptance/Endorsed Usage*1 Affect*1
	Enable students to explore interests	Textbooks*3	Suitability*5 Information quality*3 Cost effectiveness*2

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Table 4. Task-genre-criterion Associations (Continue)

Teaching tasks	Information use tasks	The selected genres (*N*)	Evaluative criteria (*N*)
	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: Expertise*9 (Source*9)** Suitability*13 Information quality*7 Public acceptance/Endorsed usage*4 Cost effectiveness*3 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*9: Expertise*8** **Suitability*6 (Contain important/unusual perspectives*5)**
	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: Expertise*13** **Suitability*26 (Contain important/unusual perspectives*22)** Information quality*1 Public acceptance/Endorsed usage*1
	Introduce a professional organization	Professional organizations' websites*2, Internal research report*1, Rating rubrics/ Standards*1	**Credibility*4: Expertise*4 (Source*4)** Suitability*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 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

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Table 4. Task-genre-criterion Associations (Continue)

Teaching tasks	Information use tasks	The selected genres (*N*)	Evaluative criteria (*N*)
	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 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*43: Trustworthiness of information*19 (Tangibility*9); Expertise*16** Information quality*16 Suitability*15 Affect*4 Public acceptance/Endorsed usage*1

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Table 4. Task-genre-criterion Associations (Continue)

Teaching tasks	Information use tasks	The selected genres (*N*)	Evaluative criteria (*N*)
	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: Expertise*11 (Source*8)** **Information quality*17: Form*13 (Form*9)** Suitability*15 Affect*5 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	**Information quality*12: Form*9 (Form*6)** Credibility*11 Suitability*10 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 Information quality*6 Credibility*4 Affect*2 Personal preference*1

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Table 4. Task-genre-criterion Associations (Continue)

Teaching tasks	Information use tasks	The selected genres (*N*)	Evaluative criteria (*N*)
	Present different authorities	News*3, Editorials*2, Executive order*1, Webpages*1	**Credibility*6: Expertise*5(Source*5)** Suitability*1
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: Trustworthiness of information*10 (Tangibility*8)** Information quality*8 Suitability*1 Public acceptance/Endorsed usage*2
	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*7: Form*7 (Form*6)** Suitability*2 Credibility*2
	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: Trustworthiness of information*8 (Recency*6)** Suitability*3 Affect*2 Personal preference*1 Information quality*1
	Help students visualize the goals	Rubrics*3, Technical marketing videos*1, Guidelines*1, Interviews*1	**Credibility*4: 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: Trustworthiness of information*8 (Has been reviewed and edited*7)** Information quality*8 Public acceptance/Endorsed usage*2 Suitability*1

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Table 4. Task-genre-criterion Associations (Continue)

Teaching tasks	Information use tasks	The selected genres (*N*)	Evaluative criteria (*N*)
	Look for examples/ problems	Textbooks*8, Concept test database*1	**Credibility*11: Expertise*5 (Source*5)** Information quality*5 Suitability*3 Cost effectiveness*2
	Help students find jobs	Listserv*2, Professional organization's website*2, Website for job search*1	Credibility*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: Trustworthiness of information*12** Suitability*10 Information quality*1 Affect*1
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: Form*6 (Form*4, Presentation*2)** Credibility*6 Affect*3 Suitability*2

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Table 4. Task-genre-criterion Associations (Continue)

Teaching tasks	Information use tasks	The selected genres (*N*)	Evaluative criteria (*N*)
	Have fun	Demonstrations/Comedies*4, Videos*2, Pictures/Images*1	**Affect*5** Credibility*4 Information quality*3 Public acceptance/Endorsed usage*1
Point students to resources	Provide authoritative references	Authoritative references*2	**Credibility*8: Expertise*4 (Position*2, Source*2)** Suitability*3 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*1
	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,	**Credibility*20: Trustworthiness of information*10 (Recency*6, Accuracy*3, Objectivity*1)** **Suitability*16** **Information quality*11: Content*11 (Quality of sub-genres/information elements*6, Depth*5)** Cost effectiveness*4

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Table 4. Task-genre-criterion Associations (Continue)

Teaching tasks	Information use tasks	The selected genres (*N*)	Evaluative criteria (*N*)
		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	
	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

Note. ***Dimensions or criteria that stood out*** were highlighted in bold.

was employed frequently. Genres should match the subjects, topic coverage and intellectual levels of the courses, students' levels and course activities. *Coverage* was the most frequently associated criterion. Participants used genres containing most of the information they needed because it's "all in one place" and "it just makes things simpler." However, almost all participants used other genres to complement because "no one book does everything." Second, most of the genres used to *enable students to understand an area/a topic* were articles, individual pieces. Most of these belonged to academic, research genres. The topics of these genres were relatively specific and focused. ***Suitability*** played a leading role. Among all, *content orientation: overview* was frequently associated with this IUT. Participants tended to use genres that gave an overview of specific topics. Third, genres used to *complement/supplement other resources* were relatively diverse. ***Information quality*** played a leading role because participants used genres that contained in-depth information or in different forms to complement the textbooks they used. *Depth* was frequently associated with this IUT because it was often performed when there was a lack of in-depth information within major textbooks. Participants were also concerned about ***credibility*** and ***suitability***, especially recency, partly because the topics participants wanted to teach were so recent that major textbooks did not cover.

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Fourth, all of the genres used to *enable students to explore interests* were textbooks and *suitability* was the most frequently associated criterion. Textbooks were broad in coverage. They provided overviews of specific subjects and gave students information on different topics, which helped students identify topics they might be interested in. Fifth, genres used to *provide learning content* tended to be individual pieces, rather than big, whole documents. *Credibility* played a leading role and source was frequently associated with it. Authors or professional organizations who created some of these genres 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." Sixth, most of the genres used to *expose students to influential thinkers* were these thinkers' publications. Participants were concerned about *credibility* and *suitability*. Although *suitability* was less frequently associated with this IUT than *credibility, contain important/unusual perspectives* was frequently associated. Participants used genres created by subject experts to help students know these experts. Some of these genres were perceived as classic in specific fields because these experts' thinking was influential. Seventh, genres used to *expose students to important perspectives* contained ideas or perspectives that participants wanted students to know, regardless of their validity. Textbooks used to perform it were written by authors who approached the subjects from unique perspectives. Genres such as book reviews, editorials and blog posts were opinion-based. Participants were concerned about *credibility* and *suitability* primarily. *Contain important/unusual perspectives* was frequently associated with this IUT because the documents participants used contained important or unusual perspectives. *Expertise* also played an important role partly because some of the perspectives were perceived as narrow, limited. These were "slices of the field, not the entire pie." In some cases, the perspectives were well-researched in the documents. Eighth, genres used to *introduce a professional organization* were created by professional organizations. These helped students understand these organizations and what they did. *Credibility* and *suitability* were the only criteria associated with it, especially *source*. The professional organizations participants introduced had subject expertise.

Ninth, guidelines and standards were used to *teach the highest expectations* because they helped students understand what the best looked like and achieve the best. No criteria were identified as being associated with this IUT. Tenth, *highlight topic(s)* was only performed once and the genre used was a magazine article. It was used to emphasize the importance of a topic(s). Eleventh, most of the genres used to *prepare students for the job* belonged to professional work genres. *Public acceptance/endorsed usage*, *suitability* and *credibility* played equivalent roles. Participants tended to use widely used genres (e.g., standards) because professionals in the fields used these. It was important for students to learn from these genres. *Credibility* played a role partly because these genres were created by professional organizations with subject expertise.

Twelfth, *draw on scholarship* was only performed once by a participant who used academic publications to teach because he wanted students to learn from scholarly work. The

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criteria associated with it included *suitability* and *credibility*. The contents of academic publications were perceived as scholarly and these publications were created by scholars who have been dedicated to the subject for a long time. Thirteenth, *develop a conceptual vocabulary/terminology* was only performed by two participants. The criterion the most frequently associated with it was *public acceptance/endorsed usage*. This was because the guides, standards and recommendations used were widely used by working professionals. Fourteenth, all the genres used to *walk students through the process* contained step-by-step, procedural information. *Suitability* played a leading role because participants were concerned about how useful and applicable these genres were to students' tasks at hand. Fifteenth, most of the genres used to *facilitate lab practice* contained how-to, procedure information that helped students perform specific tasks. The genres used to perform it overlapped with those used to *walk students through the process*. Students usually had to perform specific activities step-by-step to accomplish their lab tasks. However, not all the genres that *walked students through the process* can be used to facilitate lab practices because some were not related. *Suitability* and *information quality* were the only criteria associated with it. Participants were concerned about the match between genres and what they wanted students to perform in labs. Sixteenth, *balance research and practices* was only performed once by a participant who used journal articles to perform it. *Suitability* played a role because some of these articles were research-based, while some were practice-based.

4.4.3 Enhance students' understanding

Five IUTs were performed. Overall, *suitability*, *credibility* and *information quality* played a major role in this TT. The importance of *cost effectiveness* and *public acceptance/endorsed usage* decreased. First, *provide an example(s)* was the most frequently performed IUT and genres in use were extremely diverse. Several participants emphasized the importance of examples in their teaching. Some genres were used in professional practices in specific fields. These were related to the subjects that participants were teaching. For example, 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. Textbook genres and academic, research genres were not frequently used because examples were often used to explain the concepts or theories participants were teaching. Hence, genres providing the major learning content were excluded. *Credibility* was frequently associated with this IUT. Specifically, *tangibility* was the most frequently associated criterion because participants used genres to provide real-world examples. *Recency* was frequently associated with this IUT as well because some participants tried to keep examples fresh. In several cases, the examples that participants provided were real and recent. Moreover, expertise was also frequently associated with this IUT because *source* and *breadth of perspectives* were considered. In the former cases, participants used genres 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

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were only examples. Students had to understand these were snapshots of the learning content.

Second, *explain/illustrate/demonstrate* was one of the most frequently performed IUTs and genres in use were extremely diverse. Textbook genres and most academic, research genres were not used probably because participants tried to explain concepts or illustrate the major learning content. *Credibility* associated with it the most frequently, especially *source*. Participants used genres created by subject experts or reputable organizations to illustrate the points they wanted to make. Moreover, form, one of the dimensions of *information quality,* associated with this IUT more frequently than other criteria. Participants used genres that had different forms because these helped explain a concept(s) or illustrate the points. 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." Third, most of the genres used to *improve students' understanding* belonged to instructional, multimodal genres and Internet genres. *Information quality*, *credibility* and *suitability* were the major criteria associated with it. Among all, form was more frequently associated because participants used genres that expressed information in different forms. These brought students different learning experiences and improved their understanding. Several individual pieces, including journal articles, magazine articles and essays were used with textbooks to help students understand specific topics because the information within these genres was written in different ways. In these cases, *writing style* was associated with this IUT. Fourth, genres used to *provide theoretical/contextual information* contained background information, which helped students understand the major learning content. *Suitability* and *information quality* were frequently associated with it. Participants considered the match between documents and their courses, such as the match between the length/amount of documents and the time they had in the class. Participants also concerned how deep the contextual information was. They preferred to use short documents with the most important details. Fifth, several genres were used to *present different authorities*. *Credibility* played a leading role because these genres were created by reputable organizations or spoken by authoritative figures.

4.4.4 Make the learning content concrete and real

The four IUTs helped make the learning more concrete and realistic, which improved students' understanding and justified the relevance of the learning content. Overall, *credibility* played a leading role in these IUTs, except for *provide multimodal information*. The importance of *suitability* decreased substantially. *Cost effectiveness* did not play a role probably because most of these genres were freely available online. First, most of the genres used *to present reality* belonged to instructional, multimodal genres and Internet genres. *Credibility* played a leading role partly because *tangibility* was often associated with it. *Tangibility* refers to participants' concerns about the extent to which the content was real and concrete. In contrast, textbook genres and academic, research genres, which were used as foundational text or used to provide the major learning content, were excluded. Several participants perceived textbooks as unrealistic, fixed and ideal.

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Second, all the genres used to *provide multimodal information* belonged to instructional, multimodal genres. *Information quality* played a leading role because *form* was often associated with it. Several participants looked for videos to support or reinforce the content of textbooks deliberately because presenting the learning content in multimodal modes made it concrete. Students were able to learn better. Several participants also looked for videos in which authors of textbooks or journal articles talked about what they did. Additionally, different students learned in different ways. Participants were able to accommodate different learning styles by presenting the learning content in multimodal modes. Third, the genre the most frequently used to *connect with the real world/make a connection* was news. Other genres used to perform it were created for public consumption. Their target audience was relatively broad, which enabled students to connect the learning content with real-world occurrences. *Credibility* played a leading role partly because *recency* was often associated with it. Participants used documents that contained recent information. 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. Fourth, participants used several genres to *help students visualize goals*. Technical marketing videos and interviews helped students visualize what they will be doing when they become professionals in the future. Rubrics and guidelines helped students visualize what the best looked like and develop a concrete picture. The criterion associated with this IUT was *credibility* because participants used genres created by reputable organizations.

4.4.5 Obtain reference information

The five IUTs were classified based on the types of information that participants or students looked for. Overall, *credibility* played a leading role. *Information quality* played a secondary role and the importance of *suitability* decreased substantially. First, all the genres used to *look up/ provide references* were classified as reference genres. *Credibility* played a leading role partly because participants used genres that had been reviewed and edited by subject experts. The information was trustworthy. Second, *look for examples/problems* was only performed in sciences, although participants in social sciences also used problems in textbooks for students' assignments. Textbooks were the major genre in use, although a concept test database was also used. Participants looked for and adapted examples or problems for students to work on. Third, *help students find jobs* was only performed by a participant who provided several genres for students to search job advertisements. The only criterion associated with it was *credibility*. This was because she was concerned about the stability of small job search websites. Fourth, *enable students to get citation information* was only performed by a participant who provided book/ product information pages for students to cite because these contained bibliographic information. Fifth, genres used to *provide guidelines for writing* include guides and reference guidelines, which contained information about how to write. No criterion was associated with it.

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4.4.6 Develop students' advanced learning skills

The two IUTs involved higher-level learning skills. Overall, *credibility* played a leading role in this TT. The importance of *information quality* and *suitability* decreased. *Cost effectiveness* did not play a role probably because this TT emphasized students' intellectual processing. First, genres used to *help students apply the learning content* included memoirs and demonstrations/comedies. These were used because they contained real events for students to analyze. *Credibility* played a leading role partly because these memoirs and demonstrations/comedies contained real-world events. However, it was important for students to understand the perspectives in the memoirs were narrow, limited. Although the participant used memoirs that contained diverse perspectives deliberately, these did not represent the whole. Second, more genres were used to *develop students' critical thinking skills*. *Credibility* played a leading role, especially the *trustworthiness of information*. Genres in use contained valid and invalid perspectives, real events (e.g., actual law cases) or questions that stimulated students' thinking.

4.4.7 Enhance students' participation

Three IUTs were performed. The role of different criteria varied. First, multiple genres were used to *trigger discussion*. *Suitability* was the only criterion associated with it. Participants considered the match of genres to the class in terms of relevance, length/amount and originality. Second, more genres were used *to engage students*. *Information quality* played a leading role because *form* was often associated. Participants used genres in different, unique forms *to engage students*. Several participants used image genres and instructional, multimodal genres. Genres that presented textual information in unique forms, such as poems, were also used. Third, all the genres used to *have fun* were multimodal. *Affect* played a leading role because participants perceived these genres as interesting, engaging or challenging. *Credibility* played a secondary role because sometimes participants were concerned about the *trustworthiness of information* within these genres. Participants had to be careful because funny documents were not always trustworthy.

4.4.8 Point students to resources

Three IUTs 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 TT. First, *provide authoritative references* was only performed by a participant who provided students with access to two professional organizations' websites. These websites were viewed as authoritative references because both were created by the authoritative bodies in his field. These websites served as the ultimate guide for students who wanted to be certified as professionals. *Credibility* played a leading role because these organizations were perceived as having subject expertise. Second, multiple genres were used to *provide original sources*. *Suitability* played a leading role because the information within these genres was original. Sometimes participants preferred to use documents that provided original, first-hand information. Third, genres used to *provide access* included subject guides and annotated bibliographies. The former enabled students to access to reference genres. The latter were full-text documents that students could use if they did not purchase the

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textbooks, which helped reduce students' cost. Thus, *cost effectiveness* was associated with this IUT.

4.4.9 Improve teaching immediately

Genres used to perform this TT were clicker assessments. First, participants designed questions that asked students about their teaching to *get timely feedback*. They were able to receive students' feedback and responded to it immediately. 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." *Credibility* played a role because students' feedback was rude. Second, participants also used clicker assessments to design questions to understand whether students understood the learning content in the class, because students' answers were presented immediately. They were able to adjust their teaching accordingly. No criterion was identified as being associated.

4.4.10 Encourage students to read

The IUTs classified into this TT were performed only once or twice. The only associated criteria were *information quality* and *credibility*. Other criteria did not play a role. First, genres used to *motivate reading* included 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. Second, genres used to enable students to *reflect on self-learning* were clicker assessments. A participant used these to design questions that helped students reflect on their study habits. However, students did not respond honestly. She perceived their responses as not trustworthy. Hence, *credibility* played a role.

4.4.11 Continue to learn

Credibility played a leading role, while *suitability* and *information quality* played a secondary role in this TT. *Affect* did not play a role probably because this TT emphasized intellectual pursuit. First, genres used to *provide suggested readings/more information* were highly diverse. These genres contained topics that have not been covered in the courses. *Credibility* played a leading role in this IUT partly because the sources of these genres had subject expertise and these genres contained recent and accurate information. Second, genres used to *keep up* were quite diverse. *Credibility* played a leading role because the sources of these genres were trustworthy and had subject expertise in specific fields.

5. Discussion

Suitability, *credibility* and *information quality* were the major criteria that participants employed to assess the selected genres. *Suitability* played a leading role in *prepare the course* and *teach about the field*. *Credibility* and *information quality* also played a role in these TTs. Most of the genres used to perform these TTs were specifically designed for the teaching context, the research context and the professions in which participants were teaching. The associations between these TTs and these criteria were established based on a fusion of purposes, forms and contents of genres. *Credibility* played a leading role in *develop students' advanced learning skills* and *continue to learn*. These TTs involved intellectual development. Expertise, one of the dimensions of *credibility*,

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played an important role in IUTs involving subject experts, professional organizations or authoritative figures. The associations between credibility and these IUTs tended to be established based on sources of genres. Sources including experts and professional organizations were perceived as having subject expertise, reputation or authority. *Trustworthiness of information*, one of the dimensions of *credibility*, played an important role in IUTs involving a wide variety of genres. The associations between credibility and these IUTs tended to be established based on contents because the information within these genres was perceived as trustworthy frequently. The information was perceived as trustworthy because it depicted concrete, real things or because it was recent, updated. *Information quality* played a leading role in several IUTs. The associations between *information quality* and these IUTs were established based on either forms or contents of genres. For example, the association between *complement/supplement other resources* and *information quality* was primarily established based on contents because the genres used contained in-depth information. The associations between IUTs including *improve students' understanding*, *provide multimodal information* and *engage students* were primarily established based on forms. A lot of multimodal genres and image genres were used to perform these. Genres having different forms enabled participants to perform these IUTs.

This study took the goal-based approach to tasks, which focused on applying information to achieve professional goals. It took the bottom-up approach to identifying the tasks faculty performed to use information to achieve their teaching goals. These tasks were context-specific, which were different from the five generic information tasks Freund (2008b; 2013) and Zhang et al. (2011) identified. The tasks participants performed reflected different aspects of genre assessments and use. Specifically, these tasks reflected participants' rationale behind their assessments and use of genres, the functions of these genres and the associations between different documents and/or genres (e.g., the task *complement/supplement other resources*). These tasks also represented the teaching activities that different genres organized and accomplished (Andersen, 2008).

This study also took the bottom-up approach to identifying the genres participants used. Genres in use were directly identified from the use contexts. Participants' perspectives were reflected in the genre labels they came up with and their descriptions. The selected genres included those specifically created for the context of university teaching (e.g., textbooks) as well as those created for other contexts. Documents belong to academic, research genres were created to report research, but they were used in the courses in which scholarship or research was an integral part. Most example genres were used in professional practices in specific areas. Example genres and professional work genres were used in professionally oriented courses. Most 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 for their own use. Freund (2008a) argued task-genre associations

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acted as an implicit link between task performers and document creators who share similar intents in the same organizational and domain contexts. Creators of the genres used to perform *prepare the course* and *teach about the field* probably share similar or closely related intents with participants. Participants were familiar with 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 used genres that had broader normative scopes (Rosso & Haas, 2011). 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 shared similar knowledge about these genres. Thus, participants were able to repurpose these genres without causing understanding difficulties.

6. Conclusions and Suggestions

This study uncovered three types of associations. The task-criterion associations illustrate the information requirements of different tasks and the roles and relative importance of different criteria in different tasks. The task-genre associations illustrate the functions of genres and genres that fulfilled the information requirements of different tasks. The genre-criterion associations illustrate the criteria participants employed to assess different genres in their task performance and salient information characteristics of genres that enabled task performance. The results demonstrate the criteria associated with a task served as function enablers. Because participants made evaluative assessments based on their use purposes, the criteria associated with a task represented the information characteristics of genres that enabled them to perform this task. The associated criteria represented the information characteristics of genres that mattered in a task.

This study enhanced our knowledge of task-genre associations in two ways: (1) Exploring these associations in a new context—the context of university teaching. It sheds new light because both domain experts and novice users were involved. Faculty transformed their students from novice users to domain experts through genre assessments and use. The task-genre associations that this study identified might help design search systems that filter genres based on the tasks faculty wish to perform because task serve as the inclusion and exclusion criteria for genres; and (2) Adding task-criterion associations and criterion-genre associations: This study identified the set of criteria faculty employed to make document assessments and the IUTs they performed. This has extended previous research's focus on task-genre associations through the perception of usefulness. The criteria this study identified can be used to develop instruments that help faculty make effective assessments. The task-criterion associations and criterion-genre associations this study uncovered can be modeled in search systems to facilitate faculty's document assessments and information use. Academic librarians, search engine companies, database providers, publishers and the education community can benefit from the results. For example, they can adjust ranking algorithms based on the criteria frequently employed to assess specific genres. Documents that carry information characteristics important for

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the tasks faculty wish to perform can be placed on top of the search results.

This study included faculty whose teaching experiences varied and courses opened in different disciplines and at different levels. Including diverse teaching contexts has helped collect a wide variety of genres because different disciplines and different levels required different sets of genres. This has also helped explore how genres that shared the same identities but varied in their labels have been assessed and used across disciplinary boundaries. However, this study only investigated how different genres were assessed and used from faculty's perspectives. Students and teaching assistants' perspectives were not investigated. Future research might explore how students and teaching assistants perceived the genres that faculty used and explore the differences. This will help understand how novice users are transformed to expert genre users and whether specific genres really perform the expected functions. Moreover, more social sciences faculty participated in this study. Recruiting more faculty from disciplines in hard sciences and humanities is important for future study to identify more variations of associations. Future research can also focus on specific subject disciplines and identify how different types of associations vary across disciplinary boundaries.

References

Andersen, J. (2008). LIS and genre: Between people, texts, activity and situation. *Bulletin of the American Society for Information Science and Technology, 34*(5), 31-34. doi: 10.1002/bult.2008.1720340511

Barry, C. L., & Schamber, L. (1998). Users' criteria for relevance evaluation: A cross-situational comparison. *Information Processing & Management, 34*(2/3), 219-236. doi: 10.1016/S0306-4573(97)00078-2

Boll, C. (2016). *Syracuse University jumps into top research tier in new Carnegie Classifications*. Retrieved from https://news.syr.edu/2016/02/syracuse-university-jumps-into-top-research-tier-in-new-carnegie-classifications-51145/

Borlund, P. (2003). The concept of relevance in IR. *Journal of the Association for Information Science and Technology, 54*(10), 913-925. doi: 10.1002/asi.10286

Byström, K., & Hansen, P. (2005). Conceptual framework for tasks in information studies. *Journal of the American Society for Information Science and Technology, 56*(10), 1050-1061. doi: 10.1002/asi.20197

Cooper, W. S. (1971). A definition of relevance for information retrieval. *Information Storage and Retrieval, 7*(1), 19-37. doi: 10.1016/0020-0271(71)90024-6

Crowston, K. (2010). Internet genres. In M. J. Bates & M. N. Maack, (Eds.), *Encyclopedia of library and information sciences* (3rd ed., pp. 2983-2995). New York, NY: CRC Press. doi: 10.1081/E-ELIS3-120043520

Crowston, K., & Kwasnik, B. H. (2003). Can document-genre metadata improve information access to large digital collections? *Library Trends, 52*(2), 345.

Dillon, A. (2008). Why information has shape. *Bulletin of the American Society for*

臺灣大學學術期刊資料庫

Information Science and Technology, 34(5), 17-19.

El Mhouti, A., Nasseh, A., & Erradi, M. (2013). How to evaluate the quality of digital learning resources? *International Journal of Computer Science Research and Application, 03*(03), 27-36.

Fogg, B. J., & Tseng, H. (1999). The elements of computer credibility. In *Proceedings of the SIGCHI conference on Human Factors in Computing Systems* (pp. 80-87). New York, NY: ACM. doi: 10.1145/302979.303001

Fogg, B. J., Soohoo, C., Danielson, D. R., Marable, L., Stanford, J., & Tauber, E. R. (2003). How do users evaluate the credibility of Web sites? A study with over 2,500 participants. In *Proceedings of the 2003 Conference on Designing for User Experiences*. New York, NY: ACM. doi: 10.1145/997078.997097

Freund, L. S. (2008a). *Exploiting task-document relations in support of information retrieval in the workplace* (Doctoral thesis, University of Toronto, Toronto, Canada). Retrieved from faculty.arts.ubc.ca/lfreund/

Freund, L. S. (2008b). Bringing genre into focus: Situating relevance through task-genre relationships. *Bulletin of the American Society for Information Science and Technology, 34*(5), 23-26. doi: 10.1002/bult.2008.1720340509

Freund, L. S. (2013). A cross-domain analysis of task and genre effects on perceptions of usefulness. *Information Processing & Management, 49*(5), 1108-1121. doi: 10.1016/j.ipm.2012.08.007

Green, R. (1995). Topical relevance relationships. I. Why topic matching fails. *Journal of the American Society for Information Science, 46*(9), 646. doi: 10.1002/(SICI)1097-4571(199510)46:9<646::AID-ASI2>3.0.CO;2-1

Hilligoss, B., & Rieh, S. Y. (2008). Developing a unifying framework of credibility assessment: Construct, heuristics, and interaction in context. *Information Processing & Management, 44*(4), 1467-1484. doi: 10.1016/j.ipm.2007.10.001

Li, Y., & Belkin, N. J. (2008). A faceted approach to conceptualizing tasks in information seeking. *Information Processing & Management, 44*(6), 1822-1837. doi: 10.1016/j.ipm.2008.07.005

Kari, J. (2010). Diversity in the conceptions of information use. *Information Research, 15*(3). Retrieved from http://www.informationr.net/ir/15-3/colis7/colis709.html

Nesbit, J., Belfer, K., & Leacock, T. (n.d.). *Learning object review instrument (LORI) user manual*. Retrieved from http://www.transplantedgoose.net/gradstudies/educ892/LORI1.5.pdf

Park, H. (1997). Relevance of science information: Origins and dimensions of relevance and their implications to information retrieval. *Information Processing & Management, 33*(3), 339-352. doi: 10.1016/S0306-4573(96)00072-6

Rieh, S. Y. (2002). Judgment of information quality and cognitive authority in the Web. *Journal of the Association for information*

臺灣大學學術期刊資料庫

Science and Technology, 53(2), 145-161. doi: 10.1002/asi.10017.abs

Rosso, M. A. (2008). User-based identification of web genres. *Journal of the American Society for Information Science and Technology, 59*(7), 1053-1072. doi: 10.1002/asi.20798

Rosso, M. A., & Haas, S. W. (2011). Identification of Web genres by user warrant. In A. Mehler, S. Sharoff, & M. Santini (Eds.), *Genres on the Web* (Vol. 42, pp. 47-67). Dordrecht, Netherlands: Springer. doi: 10.1007/978-90-481-9178-9_3

Roussinov, D., Crowston, K., Nilan, M., Kwasnik, B., Cai, J., & Liu, X. (2001). Genre based navigation on the web. In *Proceedings of the 34th Hawaii International Conference on System Sciences* (Vol. 9, p. 4013). Washington, DC: IEEE. doi: 10.1109/HICSS.2001.926478

Savolainen, R. (2011). Judging the quality and credibility of information in Internet discussion forums. *Journal of the American Society for Information Science and Technology, 62*(7), 1243-1256. doi: 10.1002/asi.21546

Schamber, L., Eisenberg, M. B., & Nilan, M. S. (1990). A re-examination of relevance: Toward a dynamic, situational definition. *Information Processing & Management, 26*(6), 755-776. doi: 10.1016/0306-4573(90)90050-C

Sundin, O., & Francke, H. (2009). In search of credibility: Pupils' information practices in learning environments. *Information Research, 14*(4). Retrieved from http://www.informationr.net/ir/14-4/paper418.html

Vakkari, P. (2000). Relevance and contributing information types of searched documents in task performance. In *Proceedings of the 23rd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval* (pp. 2-9). New York, NY: ACM. doi: 10.1145/345508.345512

Vakkari, P. (2001). A theory of the task-based information retrieval process: A summary and generalization of a longitudinal study. *Journal of Documentation, 57*(1), 44-60. doi: 10.1108/EUM0000000007075

Vakkari, P. (2003). Task-based information searching. *Annual Review of Information Science and Technology, 37*(1), 413-464. doi: 10.1002/aris.1440370110

Vakkari, P., & Hakala, N. (2000). Changes in relevance criteria and problem stages in task performance. *Journal of Documentation, 56*(5), 540-562. doi: 10.1108/EUM0000000007127

Vaughan, M. W., & Dillon, A. (2006). Why structure and genre matter for users of digital information: A longitudinal experiment with readers of a web-based newspaper. *International Journal of Human-Computer Studies, 64*(6), 502-526. doi: 10.1016/j.ijhcs.2005.11.002

Wang, P., & Soergel, D. (1998). A cognitive model of document use during a research project. Study I. Document selection. *Journal of the American Society for Information Science, 49*(2), 115-133. doi: 10.1002/(SICI)1097-4571(1998)49:2<115::AID-ASI3>3.0.CO;2-1

臺灣大學學術期刊資料庫

Wang, P., & White, M. D. (1999). A cognitive model of document use during a research project. Study II. Decisions at the reading and citing stages. *Journal of the American Society for Information Science, 50*(2), 98-114. doi: 10.1002/(SICI)1097-4571(1999)50:2<98::AID-ASI2>3.3.CO;2-C

Wilson, P. (1973). Situational relevance. *Information Storage and Retrieval, 9*(8), 457-471. doi: 10.1016/0020-0271(73)90096-X

Zhang, L., Kopak, R., Freund, L., & Rasmussen, E. (2011). Making functional units functional: The role of rhetorical structure in use of scholarly journal articles. *International Journal of Information Management, 31*(1), 21-29. doi: 10.1016/j.ijinfomgt.2010.10.003

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大學教學情境裡專業任務、文體與文件評鑑之關聯研究

An Investigation of the Associations Among Professional Tasks, Document Genres and Document Assessments in the Context of University Teaching

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摘　要

本研究旨在探索以下三種關聯之存在與內涵：(1)大學教師用以支援其教學之文體與運用這些文體來執行之任務之關聯；(2)這些文體及教師評鑑這些文體之標準之關聯；(3)其任務與標準之關聯。作者先採用質性引文分析，從教材（包含課程大綱與教學投影片等）裡分析出教師使用之文體，再採用半結構式訪談來搜集有關教師如何評鑑與使用不同文體之資料，最後以質性內容分析來分析訪談稿。共有27位來自不同領域之教師參與研究，貢獻了28門課。研究結果顯示教師採用之評鑑標準橋接了其所使用之文體與任務，任務則決定了哪些文體會被使用或會被排除在外，任務也決定了在教師執行特定任務時文體的哪些資訊特質是很重要的。

關鍵字：文體、文體集、任務分析、資訊使用、文件評鑑

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