DOES BUSINESS WRITING REQUIRE INFORMATION LITERACY?

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Although the business community increasingly recognizes information literacy as central to its work, there remains the critical problem of measurement: How should employers assess the information literacy of their current or potential workers? In this article, we use a commercially available assessment to investigate the relationship between information literacy and the key business communication skill of business writing. Information literacy scores obtained prior to instruction predicted performance in an undergraduate, upper-division business writing course. Similar results emerged regardless of whether participants considered English their best language.

Keywords: assessment; ESL; experimental methods; information literacy

BEING READY FOR the workplace does not simply mean possessing adequate technological skills. For example, skill at using presentation software does not directly lead to good business communication. Increasingly, the business community recognizes the value of an information-literate workforce: employees who can effectively and efficiently use technology to locate, manage, and communicate business information. Information literate workers know when to seek new information, how to seek that information efficiently via technology, how to judge relevance and reliability of information, how to integrate information to reach new conclusions, and how to use technology to communicate information effectively, clearly, and ethically (Candy, 2005).

Evidence of an increased emphasis on information literacy in the workplace comes from surveys of business leaders (Ali, 2006; National Center on Education and the Economy, 2007; Workforce Readiness Project, 2006), corporate studies of the strategic value of information literacy (cited by Kirton & Barham, 2005; cited by Wu & Kendall, 2006),
widely cited anecdotal reports (Cheuk, 2002; Feldman, 2004), and observational studies of information literacy in the workplace (Kirk, 2004; Kuhlthau & Tama, 2001). In addition, corporations have begun information literacy training programs (reviewed by Kirton & Barham, 2005) that parallel much of the increased emphasis on information literacy instruction by business schools (Blaszczyński & Haras, 2008; Cooney, 2005).

Effective instruction in researching and communicating information, a critical component of the business communication curriculum, calls for reliable and valid measurement of information literacy skills both to inform instruction and to evaluate instructional effectiveness. Until recently, information literacy assessments have been primarily “home grown” and of uneven quality (Cooney, 2005; Neely, 2006). Even before using a well-constructed assessment to support instruction, however, there should be evidence that the skills measured align with the skills being taught.

The research reported in this article investigates the extent to which an information literacy assessment provides useful information to inform instruction in the critical business communication skill of business writing. Although strong writing skills are critical, employers have complained that new hires lack such skills (Workforce Readiness Project, 2006). Instruction in information literacy skills, supported by information literacy assessment, may lead to stronger business writing (Scharf, Elliot, Huey, Briller, & Joshi, 2007). In this work, we use the iSkills assessment—a commercially available information literacy assessment—to investigate the relationship between information literacy and business writing in the context of business communication instruction.

Business communication instruction and practice tends to view the acquisition of technological skills as distinct from critical thinking, whereas information literacy might be seen as a business communication curricular objective, incorporating critical thinking, writing, and technology into more effective classroom instruction. This approach of integrating information literacy and business communication could provide researchers, teachers, and practitioners with a model for strengthening core communication practices in anticipation of workplace performance.
INFORMATION LITERACY AND BUSINESS COMMUNICATION

Over the past several decades, the business community has increasingly valued information skills, contributing to the increased emphasis on business communication practices generally. Although Peter Drucker coined the term “knowledge worker” almost 40 years ago, it was in 1989 that the American Library Association (ALA) codified most clearly the abilities associated with the skillful use of information (ALA, 1989). Soon after, a group commissioned by the Secretary of Labor identified information literacy among the key skills for the future workforce (Secretary’s Commission on Achieving Necessary Skills, 1991). Since then, the predictions of this report have been borne out in studies showing the increasing demands for effective use of information. For example, in a survey of 6,300 knowledge workers, respondents reported spending 8 hours per week on average “obtaining, reviewing, and analyzing external information,” while 10% of all respondents spent more than 20 hours per week “looking for information” (Outsell, 2001, p. 3). More recently, information management executives ($N = 1,109$) reported spending an average of 12 hours per week on information tasks (Outsell, 2008, p. 9). A survey of business executives (Workforce Readiness Project, 2006) and conclusions of a policy-level panel (National Center on Education and the Economy, 2007) both confirmed the need for information skills as outlined in the Labor Secretary’s 1991 report.

The skills that make up information literacy should be familiar to business communication instructors and practitioners alike. The ALA (1989) published the most widely cited definition of information literacy: A person who is information literate has “the ability to locate, evaluate and use effectively the needed information.” This definition was elaborated in the ALA’s information literacy standards document, which specifies the following five standards for students in higher education along with performance indicators for each standard (Association of College & Research Libraries, 2000):

1. The information-literate student determines the nature and extent of the information needed.
2. The information-literate student accesses needed information effectively and efficiently.
3. The information-literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.
4. The information-literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.
5. The information-literate student understands many of the economic, legal, and social issues surrounding the use of information, and accesses and uses information ethically and legally.

Although the term “information literacy” rarely appears in the business communication literature, several researchers have drawn connections between the definition of information literacy and the definitions of more common business terms. O’Sullivan (2002) identified a variety of terms related to information literacy in job descriptions and other workplace documents (e.g., information management, online search skills). Klusek and Bornstein (2006) analyzed the Department of Labor’s O*Net database of job descriptions for evidence of information literacy skills. Several of the database’s basic skills, which serve as keywords when users search through the job descriptions, are defined using phrases that correspond to phrases in the American Library Association information literacy standards.

More direct evidence of the use of information literacy in the workplace comes from observational studies of workers. Kuhlthau and Tama (2001) interviewed lawyers as to their information-seeking approaches. As compared with their previous studies involving college students, the researchers uncovered differences in the lawyers’ attitudes toward information search, their information-seeking strategies, and their view of the role of mediators (e.g., librarians). For example, while students felt anxiety when facing an undefined information task, lawyers reported viewing the situation as an engaging puzzle to be solved. Kirk (2004) interviewed 15 senior managers from two organizations regarding their views of information, information use in their organizations, and expectations for information use by their subordinates. Managers reported perceiving information and its flow as integral to their organizations and the strategic and effective handling of information as a critical skill, both multifaceted and inexorably integrated into business
communication processes: shaping judgments and decisions, supporting new knowledge and insights, and influencing others.

Business writing is among the most critical business communication skills related to information literacy. The Workforce Readiness Project (2006) reports that business executives and human resource staff rate writing skill as the most important skill that a new employee should possess. Unfortunately, it was also the skill that new workers were rated the weakest on, especially those entering the workforce directly from high school or community college. As well, business faculty recognize the importance of instruction in writing skills as part of the curriculum. Wu and Kendall (2006) surveyed business faculty across the 23 campuses of the California State University. Faculty ranked business writing as the most important focus for instruction, followed by critical thinking and researching skills (e.g., finding and synthesizing information).

Within business writing practices, information literacy skills should contribute to crafting clear and effective memos, composing presentations that persuade effectively, and developing analytic reports that summarize information in a way that supports decision making. In this work, we investigate this hypothesized relationship between information literacy skills and business writing practices through the use of a commercial information literacy assessment administered in support of business writing instruction.

INFORMATION LITERACY ASSESSMENT

The iSkills assessment was designed to measure information literacy as these skills are demonstrated while using technology (Katz, 2005). The assessment, delivered over the Internet in a secured testing environment, presents 15 scenario-based performance tasks in which test takers solve information problems using simulated software (e.g., email, web browser, presentation software). Many tasks parallel the types of assignments appearing in business communications courses or workplace business communication assignments. For example, test takers might be asked to select and arrange a set of presentation slides to persuade donors to contribute to an event for charity. In other tasks, test takers conduct simulated searches of the web or library databases to locate relevant and trustworthy information to support business decisions. For example, test takers might be asked by their “supervisor” to
summarize a variety of materials to inform the choice of a product vendor. Based on simulated emails describing the vendors, vendor websites, and vendor advertisements, test takers compile key information in a table to facilitate comparisons among vendors. Test takers draw conclusions from this summary, recommending the vendor to their supervisor that best meets the stated needs.

The assessment represents a broader perspective of information literacy than is typically taken in locally developed measures. The iSkills assessment is based on a framework established by an international panel (International ICT Literacy Panel, 2002). This framework was further refined by librarians and other information literacy experts from across the United States throughout the development of the iSkills assessment (Katz, 2007). The framework aligns with many descriptions of information literacy, such as those published by the American Library Association (Association of College & Research Libraries, 2000). Ongoing studies support the construct validity of the assessment (e.g., Katz et al., 2008; Katz & Smith-Macklin, 2007; Snow, Katz, 2009) and the connection of the underlying information literacy framework to business communication and other workplace skills (Ali, 2006).

**THIS STUDY**

This article investigates the relationship between information literacy and business writing. In particular, we address two questions:

- Does information literacy skill correlate with business writing skills?
- How does familiarity with English affect the relationship between information literacy and business writing?

For the first question, this study examines the relationship between performance on the iSkills assessment and performance in a business communications course. This course is offered in a College of Business and Economics that meets the standards set by the Association to Advance Collegiate Schools of Business. Assessing writing skill within a real business environment would present several challenges. The degree of writing required differs among job functions and might differ within a job over time. Writing “assignments” in the workplace are
idiosyncratic and embedded in the flow of other work. To address these challenges, the present study uses grades in an accredited business communications course (which emphasizes business writing) as a proxy for measurement of workplace writing skill. Business communications courses are designed to simulate the types of assignments that appear in the workplace. A course grade provides an assessment of several writing and other communication tasks, each described and scored in a manner that assures grading consistency across students and assignments.

The second question derives from the recognition that business writing instruction can be challenged by students’ language skills. This study was conducted at a comprehensive university located in East Los Angeles. Many students speak English as a second language, and over 50% of students are Latino. Knowledge of a second language is correlated with the successful development of second language composition skills (Cumming, 1989). Second language writing presents a natural challenge for the business classroom where students may not be comfortable speaking or presenting in class, and where English composition is often a challenge (Penrose, 2007). This population is nonetheless important to the U.S. workforce, as second language learners represent 20% of the current U.S. school-age population (National Center for Education Statistics, 2009), and the second-language learner segment is growing explosively (National Clearinghouse for English Language Acquisition, 2008).

METHOD

Sample

Test takers were 166 university juniors and seniors (48% female, with one student not reporting gender) who completed a business communications course during any one of three consecutive academic quarters (fall 2006, winter 2007, spring 2007), corresponding to the timeframe of a grant that supported administration of the iSkills assessment. Students took the iSkills assessment at the beginning of their quarter and the same assessment at the end of their quarter. Analyses excluded 9 students whose test-taking behavior cast doubt on the reliability of their scores because they either did not complete at least half the tasks
in the pretest or posttest or because they took an unusually short time (less than 10 minutes in either test section) to complete the assessment (cf. Wise & Kong, 2005). Also excluded were 4 students whose grade point averages (GPAs) were unavailable and 1 student who did not indicate whether he knows English best (see below). Thus, analyses include data from 152 students.

To investigate the impact of English language level on business writing and information literacy, students were separated into two groups based on their self-reported English language level. Self-reports of language skill have been shown to correlate strongly with objective measures of language skill (Powers, Roever, Huff, & Trapani, 2003). During the pretest, all students completed a demographic questionnaire that included the question, “What language do you know best?” with one of three options: “English best,” “English and another language about the same,” and “A language other than English best.” Because few students reported knowing a language other than English best (third option), all analyses combine the students who responded with either of the second two options. Students selecting the first option will be referred to as “English-best” students. Students selecting the second or third option will be referred to as “English language learners” (ELL) or “ELL students.” Of the 152 students in the study, 81 were English-best students (48% female, with one student not reporting gender) and 71 were ELL students (55% female).

Measures

- **iSkills pretest score.** Students’ performance on the pretest, which was administered at the beginning of the academic quarter. Assessment scores can range from 400 to 700, with the mean set to 550 ($SD = 35$) based on a calibration group who took the assessment in early 2006. The estimated Cronbach alpha reliability for the assessment is .80.
- **iSkills posttest score.** Students’ performance on the posttest, which was administered at the end of the quarter before course grades were distributed.
- **Undergraduate GPA.** Students’ response to the question, “What is your overall undergraduate GPA?” which was asked in a background questionnaire. Response options ranged from F to A and were translated into a 0–4.0 scale for analyses (e.g., C− = 1.7, C = 2.0, C+ = 2.3).
• **Course grade.** The grade assigned by the course instructor, ranging from F to A. The letter grade was transformed into a 0–4.0 scale identically to the GPA.

**RESULTS**

Table 1 shows the means and standard deviations for the four measures separated by ELL and English-best students. The students who reported knowing English better than another language outperformed the other students on the iSkills pretest, the iSkills posttest, and their final course grade. However, both groups showed similar general academic performance, as measured by GPA.

Both groups showed similar increases in information literacy scores between the beginning and end of the course. A repeated-measures analysis of variance (ANOVA), with iSkills administration (pre or post) as a within-subject variable and English skill as a between-subjects variable, showed the expected main effects of pretest to posttest, $F(1, 150) = 39.3, p < .001$, partial $\eta^2 = .21$, and English skill, $F(1, 150) = 21.1, p < .001$, partial $\eta^2 = .12$, but no interaction, $F(1, 150) = 1.3, ns$. The lack of interaction suggests that both groups achieved similar gains in iSkills scores between the start and end of the course.

Table 2 shows the correlations among the measures for the ELL and English-best students, respectively. Supporting the hypothesized relationship between information literacy and business writing, both groups show a significant correlation between iSkills posttest scores and course grade. Irrespective of English skill, stronger information literacy skills are associated with producing better emails, memos,
and technical reports—the tasks that make up the business communications course grade. With respect to general academic performance, English-best students’ GPA was more strongly related to the other measures compared with the GPA of ELL students. The level of correlation between GPA and iSkills scores is consistent with that found in other studies (e.g., Katz et al., 2008; Katz & Smith-Macklin, 2007).

In addition, level of information literacy skill predicts success in learning about business writing. For both groups, there is a significant correlation between pretest iSkills scores and final course grades (see Table 2; ELL students: $r = .33, p < .01$; English-best students: $r = .38, p < .001$). In other words, performance on an information literacy assessment at the beginning of a quarter provides information about the end-of-quarter course grade.

How practically significant are these correlations? The U.S. Department of Labor (1999) provides “job performance predictors” (pp. 3–10), guidelines for the usefulness of assessments as predictors of workplace performance: The higher the correlation between a measure and later performance, the more useful that measure is regarded with respect to its predictive power. The Department of Labor guidelines suggest that the iSkills assessment is a useful predictor of course performance for both language groups. The ELL students’ correlation falls within the range labeled as “likely to be useful” (.21–.35); the English-best group’s correlation falls in the “very beneficial” range (above .35). As another

Table 2. Intercorrelations Between Measures for English Language Learners and English-Best Students

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
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<tr>
<td>ELL students (n = 71)</td>
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<tr>
<td>1. iSkills pretest</td>
<td>—</td>
<td>0.77***</td>
<td>0.03</td>
<td>0.33**</td>
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<tr>
<td>2. iSkills posttest</td>
<td>—</td>
<td>0.18</td>
<td>0.35**</td>
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<tr>
<td>3. Undergraduate GPA</td>
<td>—</td>
<td>0.14</td>
<td>0.38**</td>
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<tr>
<td>4. Business writing grade</td>
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<tr>
<td>English-best students (n = 81)</td>
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<tr>
<td>1. iSkills pretest</td>
<td>—</td>
<td>0.78***</td>
<td>0.23*</td>
<td>0.38***</td>
</tr>
<tr>
<td>2. iSkills posttest</td>
<td>—</td>
<td>0.14</td>
<td>0.38**</td>
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<tr>
<td>3. Undergraduate GPA</td>
<td>—</td>
<td>0.41***</td>
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<td>4. Business writing grade</td>
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NOTE: ELL = English language learner.

*p < .05. **p < .01. ***p < .001.
indicator of the level of prediction, for course grades across all students, those who scored in the top quartile of iSkills performance (575 and above) were 11 times more likely to earn an A in the course (33% received an A) compared with lower scoring students (below 520; 3% received an A). Similarly, the lower scoring students were 6 times more likely to earn a C (36%) compared with the students who entered the course with a higher level of information literacy skill (only 6% earned a C).

The prediction of course grades is further examined through hierarchical multiple-regression analysis, using both undergraduate GPA and iSkills pretest scores as predictors. Together, these measures predict 12% of the variability in course grades for ELL students (see Table 3) and 25% of the variability for English-best students (see Table 4). Importantly, the difference in prediction seems to be due to the weaker connection between GPA and other variables for ELL students. Step 2 of the regression analyses shows information literacy scores providing a similar prediction of course grades—about 9% to 10% for both

<p>| Table 3. Hierarchical Regression Analysis for English Language Learner Students (N = 71) |</p>
<table>
<thead>
<tr>
<th>Variable</th>
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<tr>
<td>Step 1</td>
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<tr>
<td>GPA</td>
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<td>.160</td>
<td>.138</td>
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<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPA</td>
<td>.174</td>
<td>.152</td>
<td>.130</td>
</tr>
<tr>
<td>iSkills pretest</td>
<td>.008</td>
<td>.003</td>
<td>.322**</td>
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</tbody>
</table>

NOTE: $R^2 = .02$ (ns) for Step 1; $\Delta R^2 = .10$ for Step 2 ($p < .01$).

<p>| Table 4. Hierarchical Regression Analysis for English-Best Students (N = 81) |</p>
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<th>Variable</th>
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<td>Step 1</td>
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<tr>
<td>GPA</td>
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<td>.405***</td>
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<tr>
<td>Step 2</td>
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<tr>
<td>GPA</td>
<td>.327</td>
<td>.098</td>
<td>.336**</td>
</tr>
<tr>
<td>iSkills pretest</td>
<td>.006</td>
<td>.002</td>
<td>.304**</td>
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NOTE: $R^2 = .16$ for Step 1 ($p < .001$); $\Delta R^2 = .09$ for Step 2 ($p < .01$).

**$p < .01$. ***$p < .001$. **
groups—after controlling for general academic ability (GPA). These percentages represent a solid degree of prediction. By comparison, the incremental prediction (beyond high school GPA) by SAT I scores of 1st-year college GPA is 6% (Morgan, 1989).

**DISCUSSION**

This research presents evidence linking the critical business communication skill of business writing and information literacy. The university students who performed better on a commercial assessment of information literacy produced better emails, memos, and technical reports as reflected in their grade in a business communications course. While we do not claim that all academic writing necessarily involves the type of technology-intensive and time-constrained information literacy we assessed (see Katz et al., 2008, for a comparison between iSkills and humanities-based writing), it appears that business writing, which is similarly time-constrained, is related to information literacy as assessed by iSkills.

This connection between business writing and information literacy held regardless of language known best. Students who know English best have certain advantages at English-speaking institutions because the medium of instruction aligns with their most proficient language. While this difference in language skill might have only moderate influences overall, as suggested by equivalent GPAs between the language groups, grades in the language-intensive business communications course and scores on the information literacy assessment reflect differences in English skill. Nevertheless, both language groups showed similar increases in iSkills scores between the beginning and end of the course, suggesting that all students gained similarly from the combined experience of taking the iSkills assessment and completing the business communications course.

Furthermore, regardless of students’ English skill, there was a similar relationship between information literacy and business writing performance as shown in the correlations between iSkills posttest scores and course grades. Thus, even though the ELL students performed worse on the assessment, this performance appears to reflect their relatively poor writing performance generally. Most importantly, iSkills pretest scores predicted final course grades equally well across both populations.
How should employers assess the information literacy of their current or potential workers? The results of this research suggest that an assessment of information literacy might be validly used to assess the business writing potential of college students and workers regardless of their English skill. Such an assessment might help instructors tailor instruction, providing more scaffolded instruction to learners with weaker information literacy skills or more challenging instruction to learners with stronger information literacy skills. A similar usage for corporate training may help companies use their training budgets more effectively by identifying employees with greater need for information literacy instruction.

For the field of business communication generally, the challenge may be to acknowledge information literacy as a distinct set of skills that enhance business communication practice. Information literacy assessments such as iSkills can point the way toward these workplace skills that have been, to date, unevenly taught or even recognized in instruction. As the trainers of future workers, post-secondary business schools should examine information literacy and its use in the workplace, formatively assessing such skills to inform educational practice.

References


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