Library Instruction versus Employers Needs: Do Recent Graduates Have the Critical Thinking Skills and Soft Skills Needed for Success?

Jocelyn Pedersen, Instructor of Business Communication, Student Center for Success, Michael F. Price College of Business, University of Oklahoma, Norman, Oklahoma, United States of America

Susan E. Hahn, Business Librarian, Librarian in Residence, Michael F. Price College of Business, University of Oklahoma, Norman, Oklahoma, United States of America

Correspondence concerning this article should be addressed to Susan E. Hahn, University Libraries, University of Oklahoma, Norman, OK 73019 / Contact: shahn@ou.edu

Abstract

This paper is a review of the skills employers seek in new graduates and the skill sets new graduates have to offer. Employers report they want to hire people with solid soft skills, research, critical thinking, and problem-solving skills (Stewart, Wall, & Marciniec, 2016). The question is: Does the literature support recent graduates’ media education and training in research, critical thinking, and problem-solving skills?

This paper will examine literature to glean an understanding about the divide between what recent graduates ultimately bring to the table as new hires and what employers need. Identifying disparities and where they exist can provide useful information to universities.
seeking ways to best educate and prepare students for the working world. Current undergraduate students possess computer and Internet skills, but the question remains whether they are able to apply critical thinking skills to what they are able to find on the Internet. Are they able to determine bias, identify fake news, and locate credible sources? Do they know the difference between native content and editorial content, and can they identify it? Are they able to read information, synthesize it, and apply it to a given task at hand? This paper takes a look into these issues and hones in on identified disparities, paving the way for researchers to delve further into these questions.

Keywords: education, instruction, information literacy

Introduction

Students work hard to graduate from college with degrees that will help them be successful in the business world. Employers work hard to find and hire qualified candidates. In particular, employers in the business world often seek to hire employees who have solid soft skills and those who can conduct research. This conceptual paper reviews how new graduates and employers come together. It looks at whether student perceptions and expectations meet those of their future employers, and whether new graduates are soft-skill ready and information literate.

Numerous studies and surveys regarding university graduates’ preparedness for entering the job market have been conducted from the employer’s standpoint including a 2015 overview of the job market itself (Anderson). However, other than a study done by Central Arkansas University (Griffin, Cangelosi, & Hargis, 2014), few other studies have been conducted to reflect university and student perceptions of what employers really want or what they’re looking for in recent college graduates. Soft skills and information literacy are a large part of what many employers look for in recent graduates because those who have them make better, more successful employees (White, 2013; Deepa & Seth, 2013; Decarie, 2012; Stewart, Wall, & Marciniec, 2016; Hicks, 2015). Employers wanted “candidates who are team players, problem solvers and can plan, organize and prioritize their work” (White, 2013, para. 5). Klusek and Bornstein (2006) found that most jobs “demand an information-literate worker” (p. 3).

Because there is a need for employees who have soft skills and who are information literate, this paper is a review of the skills employers seek in new graduates and the skill sets new
graduates have to offer in an effort to close the gap between the need for and the availability of these skills.

In so doing, this paper examined literature and determined that there is a disparity between employers’ needs and the abilities and skills recent graduates have to offer while attempting to outline where those disparities exist. Synthesizing this information has broad implications for future research into how universities can best educate and prepare students for success after graduation. Certainly, today’s undergraduate students are computer and Internet savvy, but can they apply critical thinking skills to the vast amount information available to determine reliable sources? When using Google, can students identify a credible source, determine fake news from real, identify native advertising from editorial content, or learn to take researched information in, digest it, and apply it to real-world applications? This paper sets the stage for future research into the above questions and beyond.

**Definition of Hard Skills**

Hard skills are technical, tangible, measurable competencies or skills pertaining to a specific job and can be taught (Stewart et al., 2016; Griffin et al., 2014; Deepa & Seth, 2013; El-Attrash, 2015). Skills that can be learned and improved upon with practice, hard skills are typically learned in the classroom, through books or other training materials, or on the job. Examples would include accounting, data analysis, second language, understanding or expertise in carpentry (Charles Stuart University, 2020). Hard skill competencies give students clout on their resumes. They’re quantifiable and therefore equip students to actually perform their work duties (El-Attrash, 2015).

More often than not employers believe people can be trained in the hard skills required for a job much more readily than soft skills. Consequently, less qualified employees are hired because employers know that hiring employees with no soft skills can cause far more havoc to their bottom line than employees with no hard skills. There are employers who hire solely based on hard skills. Sooner or later, though, they realize the price they will pay (Simko, 2015a).

The time and effort it takes to teach or train the required hard skills is truly nothing compared to the energy suck from an employee who lacks critical soft skills (Simko, 2015a). “While hard skills are the skills employees should have to actually do their job (education, training, and experience) those alone simply are not enough to land jobs in many companies” (Simko, 2015a, para. 1). Hence, employers are finding themselves open to considering less qualified candidates with highly impressive soft skills (Simko, 2015a).
Definition of Soft Skills

Soft skills refer to various skills that help employees survive in the workplace. Deepa and Seth (2013) describe them this way: “communication and interpersonal skills, emotional intelligence, leadership qualities, team skills, negation skills, time and stress management and business etiquettes” (p. 7). To this list, the authors later add leadership, customer service, and problem-solving skills. Researchers (Deepa & Seth, 2013; Stewart et al., 2016; Lloyd, 2013) say that soft skills can help provide employees or prospective employees who possess them with a competitive edge over their counterparts who do not. Deepa and Seth (2013) continue, “it is rightly said that people rise in organizations because of their hard skills and fall due to a shortage of soft skills” (p. 8). Studies found that employers join workers in feeling that “generic skills, such as problem solving, communications and the ability to work in teams, are more significant for workplace success” (Deepa & Seth, 2013, p. 9).

Teamwork is very common in the workforce today. Employees are required to work together toward a common goal which Deepa and Seth (2013) describe as soft skills which “have become indispensable to function competently in any interpersonal relationship” (p. 7). In an article titled “Do Soft Skills Matter?—Implications for Educators Based on Recruiters’ Perspectives,” Deepa & Seth (2013) referred to Kelly Pierce’s quote in “eSight Trend Watch: Increased Value in Soft Skills,” where he lists the following qualities as soft skills: “attitude, initiative, cooperation, teamwork, communication, [and] perception” (p. 8).

Stewart et al. (2016) cited a survey conducted by the Society of Human Resources Management (SHRM) as saying the “top five applied skills employers believe college graduates lack [are] professionalism/work ethic (43%), relationship building/soft skills (20%), business acumen (28%), written communications (26%), and critical thinking/problem-solving (26%). Leadership came in at number six (18%), with teamwork/collaboration number eight (12%)” (p. 278). Green (2012) asserts that employers want to know if jobseekers have concrete evidence that they can do a job.

Definition of Information Literacy

Students entering college in 2017 and beyond have never known what it is like to live in a world without computers, tablets, electronic games, or screens of all types. Prensky (2001) defines these people as digital natives. Since the World Wide Web as we know it today began in 1990 (Andrews, 2013), students entering college are, by definition, digital natives. As such, they
look to the Internet first for information of all kinds.

However, information literacy involves more than just being able to find information. After locating information—whether found online or in other traditional formats—researchers, students, and employees must be able to interact with information professionally by being able to evaluate it, determine its usefulness and validity, know how to use it properly, think about it critically, and be able to conceptualize and organize it all while practicing personal and professional ethics (Decarie, 2012; Bruce, 1999). Information literacy also encompasses an individual’s “ability to operate effectively in an information society” (Bruce, 1999, p. 46). In turn, O’Sullivan (2002) adds that information literacy “focuses on the interaction with information including sharing and learning from it” (p. 12). It is clear that digital natives must be able to do more than find information; they must be able to use it properly in college and in their professional careers. In short, information literacy “lies at the core of lifelong learning” (Inskip, 2015).

Need for Information Literacy and Soft Skills

Because information literacy is so important to corporations (and in general) in the digital age and because research is common in business, Decarie (2012) said, “information literacy is a necessary aspect of training future business professionals” (p. 167). Users endow information with meaning not just as a commodity but as a communication skill (Mutch, 1997), but sometimes, it is hard to understand what all that information means. O’Sullivan (2002) said, “workers are floundering with too much information readily available. Too little relevant and timely information when they need it, and with few tools or skills to deal with information effectively” (p. 9).

So important are soft skills and informational literacy, that the National Association of Colleges and Employers (NACE) Job Outlook Guide 2015 states that “in addition to looking at a student’s GPA, employers look at resumes for leadership skills and some evidence of teamwork as the most-important attributes” (National Association of Colleges and Employers, 2014, p. 32). In fact, in an article entitled “What Do Employers Really Want? Top Skills and Values Employers Seek from Job-Seekers,” Hansen and Hansen (2018) say, “numerous studies have identified these critical employability skills, sometimes referred to as ‘soft skills’” (para. 4). Hansen and Hansen (2018) list the following soft skills as being the most important: communication, analytical/research, computer/technical literacy, flexibility/adaptability/managing multiple priorities, interpersonal abilities, leadership/management skills, multicultural
sensitivity/awareness, planning/organizing, problem-solving/reasoning/creativity, teamwork, personal values employers seek in employees, among others (para. 6-15). The NACE job guide supports this claim by pointing out that “when employers are forced to choose between two equally qualified candidates, they will choose the candidate with leadership skills” (National Association of Colleges and Employers, 2014, p. 33). The same guide indicates that verbal communication skills have “crept above planning, organizing, and prioritizing work” (p. 34).

While leadership and teamwork are top-rated skills, so are decision-making, problem-solving, information processing, and communication (Adams, 2013; National Association of Colleges and Employers, 2014)—all of which go hand in hand with the ability to obtain information and know-how to put it to use. Some workers report that research was directly related to their jobs (Sokoloff, 2012). In fact, according to Watkins (2004), “it’s almost impossible for bosses to work effectively if they cannot rely on a fairly accurate reading from their subordinates.” Stewart et al. (2016) identify a gap between college graduates and their belief in and strength of their abilities versus their lack of basic soft skills. To this, Lloyd (2013) adds that students lack “critical information literacies that enable them to think creatively, [and] to find solutions to real world problems” (p. 221). Furthermore, Stewart et al. (2016) say, “The majority of college graduates are confident in the level of their abilities, while in reality their skills fall short of employer expectations” (p. 276). As Deepa and Seth summed it up, “proficiency in soft skills is extremely important from employers’ perspective. However, many employees in business are reported to be lacking in soft skills” (p. 12). In fact, Eisner (2010) reports that “practitioners appear to be in wide agreement on the importance of today’s college graduates possessing interpersonal, conceptual, and informational ability, coupled with drive and adaptability” (p. 29).

Goldstein (2014) describes information literacy (IL) as “an implicit component of more obvious attributes: not recognized as such, but inherent in or closely related to competencies that are more widely sought after, such as analytical and problem-solving skills” (p. 2), and in so doing, he further supports the necessity for a combination of IL and soft skills, stating that some disciplines require it. Bruce (1999) points out that the need to make decisions, solve problems, and do research is common in organizations and therefore, being able to work with technology and information is important.

Because finding and manipulating data is such an important skill, in their quest to complete assignments (ultimately having the result of gaining some information literacy) students often turn to librarians for help. Highly trained research librarians can educate patrons about research sources, but some fall short when they fail to align information literacy with the
corporate world’s needs and wants and when they fail to speak the same “language” as is spoken in business (O’Sullivan, 2002; Stewart et al., 2016).

So, the question for educators becomes: where to start? Typically, when students are asked to conduct research, Google is the go-to starting place. Although a Google search is a valid place to start, there are many places and ways to conduct research—including Google, if used well. Students who don’t know how to use Google or other databases well (i.e. those who are not information literate) often give up when they come up dry. When students or employees are adrift in too much information being “readily available” coupled with having “few tools or skills to deal with information effectively” (O’Sullivan, 2002, p. 9), even more problems arise.

Therefore, blending research skills with soft skills like information processing, problem solving, and decision-making can make recent graduates appealing to employers (Goldstein, 2014). Sometimes, soft skills can be the tie-breaker for hiring one candidate over another (Simko, 2015a). In an article entitled “Why Your Experience and Education Won’t Get You Hired,” Simko (2015b) says, “a company who wants to rise up to the next level needs employees who are present, excited, and passionate about their work. No matter what education and past work you have, at best, you can only give approximately 77% of your true potential if you are not excited to be there doing your job” (para. 2). Simko (2015b) goes on to say that employers want to know that the people they hire “truly will care about the job and the company and consistently and enthusiastically show it in how they operate at work” (para. 2).

While still in school, students must learn how to identify reliable sources, and when they are unsure, have the skills to properly evaluate information to determine its reliability, accuracy, authority, and bias. Evaluation of this type requires critical thinking skills and information literacy. It is vital that students and future employees know how to think critically about the information they find. In their future work environment, most will not have access to the databases previously provided by their colleges and universities; they will be using Google for the most part. Critical thinking about information involves analysis, applying standards, discrimination, information seeking, logical reasoning, prediction, and transforming knowledge (“Critical Thinking Skills,” 2000).

Therefore, information literacy reaches beyond searching databases. It is “the ability to think critically about the information that can be found in books and magazines, online journals, websites, social media, wikis, and more” (Decarie, 2012, p. 167). Experts agree that being information literate means being able to determine what information is needed, knowing where to find that information, being able to decide if the information is suitable, and, ultimately, having the ability to apply it in a given context (Decarie, 2012; Goldstein,
Goldstein (2014) adds that information handling is essential in some professions. Therefore, learning to use Google well and having the ability to determine results as being reliable and unbiased is an essential skill for graduates to take with them into the workforce where executives and employees are computer literate, but not all are information literate. It is essential for researchers to be wary of attractively presented information, and not simply take it at face value (Goldstein, 2014).

Peter Drucker (1992) wrote an article in The Wall Street Journal entitled “Drucker on Management: Be Data Literate—Know What to Know” in which he says, “Executives have become computer literate. The younger ones, especially, know more about the way the computer works than they know about the mechanics of the automobile or the telephone. But not many executives are information literate. Most know how to get data. But most still have to learn how to use data” (p. A16).

Therefore, it is even more important for new graduates to be information literate to succeed in their careers. In school, students have access to library databases. “A ‘database,’ no matter how copious, is not information. It is information ore. For raw material to become information, it must be organized for a task directed toward specific performance, applied to a decision” (Drucker, 1992, p. A16). Knowing what information to use and for what purpose is imperative and part of being information literate (Goldstein, 2014; Drucker, 1992). An organization as a whole needs to become information literate because it is the organization’s executives or professionals who must determine “what information to use, what to use it for and how to use it” (Drucker, 1992, p. A16).

**Employer Expectations**

Employers believe it is essential for potential employees to have certain skills and behaviors regardless of the job. At the same time, employers are looking for specific skills, hard skills, necessary to perform a particular job (Hansen & Hansen, 2018). The skills, attributes, and qualities employers look for are: communication skills, a strong work ethic, ability to work in a team, and initiative (Griffin et al., 2014). Employers place the highest value on demonstrated proficiency in skills and knowledge across the board—including all majors. The learning outcomes they rate as most important include written and oral communication skills, teamwork skills, ethical decision-making, critical thinking, and the ability to apply knowledge in real-world settings (Hart Research Associates, 2015).

Regrettably, graduating college students’ perceptions of their preparedness to enter the
workforce and employers’ perceptions of college student’s preparedness on a wide range of skills and knowledge areas are two different things. Students express much greater confidence in their level of preparedness in all areas than employers indicate they see demonstrated (Hart Research Associates, 2015).

**Student Perceptions**

The Hart Research Associates (2015) performed a study in which they found that college students understood the importance of having both hard and soft skills. Julien, Detlor, Serenko, Willson & Lavallee (2011) as well as Goldstein (2014) found students’ expectations of their ability to transfer their IL skills was limited. However, some students reported that although they received instruction in search techniques, planning, and evaluation, they found their skills to be lacking, although they didn’t report concerns with determining information credibility or quality (Julien et al., 2011). IL skills were cited as being the skill they were most interested in improving to reduce search time while gaining relevant results (Julien et al., 2011). However, despite college graduates’ belief in the strength of their hard and soft abilities and skills, employers beg to differ (Twenge, Campbell, & Gentile, 2011), citing their increasing frustration with graduates’ lack of soft skills. Whitesell and Helms (2013) also reported that “business students also tend to overrate their research skill” (p. 17). Added to the list of frustrated employers are career advisers who “expressed their concern that graduates often do not display or communicate the ability to put their information skills to use for the purposes of furthering their post-university careers” (Goldstein, 2014, p. 18)

**Solution**

It has been determined that hard skills, including but not limited to information literacy, and soft skills are important skills that enable new graduates to enter the workforce and that students are confident in their abilities when they graduate. But in reality, employers find many of them lacking in the skills they need to be competent in the workforce. Students cite IL as an area where they know they need improvement (Julien et al., 2011).

A report by Goldstein (2014) entitled “Transferring information know-how: Information literacy at the interface between higher education and employment” examined the ways information literacy can transfer from higher education to the professional business environment. The report analyzed and presented “views and perceptions from a selection of
players at the interface between higher education and employment, notably career services, professional and accreditation bodies, employers and representative or specialist bodies relating to employment and skills” (Goldstein, 2014, p. 2). In addition, the same report found that information literacy is a widely sought-after skill along with analytical and problem-solving skills. Goldstein (2014) points out that some professions expect entrants to possess “appropriate information skills and know-how” (p. 2) where some disciplines require familiarity with information literacy “and particular components of information literacy may additionally be explicitly set out as a contribution to the attainment of professional standards” (p. 2). Regardless of the level of expectation for entrants into the professional realm, Goldstein (2014) reports that graduates often find it difficult to apply what they learned in college to what they need in their careers. Because graduates find it difficult to transfer what they learned in college and apply that knowledge professionally, the question becomes how to bridge the gap between what students learn in school and what they need to know when they become employed professionally. Therefore, a solution to the education vs. employability conundrum must be found.

Since students reported knowing that they lacked IL skills and cited interest in improving them (Julian et al., 2011), a logical solution would be for more instruction in the classroom.

In an article entitled “Dead or Alive: Information Literacy and Dead(?) Celebrities,” author Decarie (2012) points out that librarians typically teach information literacy. Goldstein (2014) also discusses how librarians teach IL, and Stonebraker and Fundator (2016) said specifically that, “standalone subject-specific information literacy classes taught by librarians (or those courses included in learning communities) have been shown to positively impact students’ information literacy within their academic program, since the instructors emphasize and prioritize information literacy instruction throughout the duration of the course,” (p. 438). Since there aren’t enough librarians to fill the education gap, Decarie (2012) promotes adding information literacy to business communication curricula because, along with the aforementioned reasons, “information literacy is a vital skill for students” (p.167). Goldstein (2014) echoes this sentiment when he points out that the ability to locate and handle information extends to “teachers, trainers, data managers, information scientists, researchers, professional bodies, accreditation bodies, employers, trade unions, policy-makers and the not-for-profit sector” (p. 3).

Julien et al. (2011) suggest teaching students how to use Google and Wikipedia judiciously as a way of engaging them while teaching IL. A study conducted by Jason Sokoloff (2012) at James Madison University Library revealed that over half of the people surveyed said
they used Google as their primary means of finding information, adding that information can be found through no-cost Google searches instead of through costly databases resulting in a savings for organizations. Additionally, Wikipedia is not the final authority on any particular subject, but students can learn to mine the references at the end of an article. Likewise, Julien et al. (2011) say, “students who rely on Google Scholar would benefit more from IL instruction focusing on source evaluation” (p. 360).

Bridging the gap can be done, Goldstein (2014) says, by ensuring that students, instructors, and employers are all cognizant of what it means to be competent and capable in information literacy while understanding “the distinct needs of different disciplines and sectors” (p. 2). Knowing why information literacy is an important factor in employability after graduation can help them understand the benefits of what they’re studying. Bernoff (2017) provides an example of the ways information is used routinely in the banking industry to produce detailed reports, collaborative work, and emails all of which must be clearly written and communicated. Acquiring information, being able to determine a source’s credibility, and taking the information and presenting it in an understandable format is but one way that IL meets soft skills in the workplace.

Librarians, instructors, and administrators must work together to teach students how important IL and soft skills are. Librarians can teach an entire class, serve as a guest lecturer, or work one-on-one with students to show the inner workings of various databases and how to manipulate them. Librarians should be competent in citing information to help instruct students in proper citation methods and be certain to explain to students that not all databases available on a college campus will be available to them in the workforce after graduation. They must also be able to show students alternate ways of obtaining information.

Working alongside librarians, instructors should be knowledgeable about Google searches, the hidden Internet (government websites, county assessor websites, etc.), and Wikipedia to teach students how to identify reliable sources, spot (and avoid) bias, and how to mine references. Stonebraker and Fundator (2016) cite a study by Walton and Archer in which they said practice and instruction helps students “generalize techniques and content knowledge to other situations” (Stonebraker and Fundator, 2016, p. 439). When instructors reinforce the necessity for citations and teach and expect proper citation methods, students learn ethical communication behavior. Stonebraker and Fundator’s (2016) study suggests that “discipline-specific instruction, even in the lower-division, can yield significant, positive results that can influence pedagogy and student learning” (p. 441). Instructors who are not necessarily
writing instructors can also assist students with their writing when encouraging them to utilize a college’s writing center or tutoring facilities. Solid writing skills do “not undo all the good work their face-to-face communication creates” (Deepa & Seth, 2013, p. 12). Instructors who teach presentation skills are demonstrating, reinforcing, and evaluating soft skills—as well as enforcing proper citation methods. Instructors’ office hours comprise educational and administrative duties. When instructors see students in office hours, they can point out and reinforce IL and soft skills one-on-one. Furthermore, even businesses can benefit from having a writing center to help employees write better reports (Bernoff, 2017).

Administrators can model soft skills when they meet students in their offices or in the hallway and point out the soft skills that they’re using. For example, if a student has a schedule conflict and he or she goes to see an academic advisor, the advisor could point out that negotiating is an important soft skill along with listening, responding, making eye contact, being polite, and more. Deepa and Seth (2013) state clearly that people have to be educated about soft skills so they can use them on the job. Stewart et al. (2016) explain it well when they said, “people learn soft skills by doing them” (p. 277).

**Conclusion**

Experts agree, then, the winning combination for a new hire is a person who has soft skills and who is information literate. It is clear that universities and employers must come together to make sure graduates are information literate and soft-skill ready before graduation. Recruiters who come to campus need to communicate clearly as to what needs are being met and what needs are still being sought in the workforce. Working in concert, campus recruiters, instructors, and career counselors should hold workshops for students clearly communicating the need for soft skills and information literacy skills. Skills discussed in these workshops should then be reinforced in the classroom. Classroom instructors should follow closely to ensure these needs and requirements are placed in the hands of those who can incorporate necessary skills into their curriculum. Therefore, librarians, administrators, and instructors who are cognizant of these needs and incorporate discussion about these skills into their classrooms and everyday communication can help mold students who then become attractive, employable candidates. Future studies into this topic can provide quantitative data to support educators, students, and employers in support of information literacy and soft skills.
References


Simko, J. (2015b, December 02). Why your experience and education won’t get you


