

## Editorial

# Do Our Students Really Possess Information Literacy?

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In 2011, the Board of Directors of the Association of Schools and Colleges of Optometry (ASCO) approved an updated “Attributes of Students Graduating from Schools and Colleges of Optometry” report. The report represents contemporary thinking about the requisite competencies for new graduates of optometry degree programs. It states that graduates are “responsible for ongoing self-learning and for remaining current and competent in their knowledge and skills.”<sup>1</sup> Additionally, it states that “The school or college of optometry shall ensure that before graduation each student will have demonstrated the ability to access evidence-based knowledge (including through the use of information technology) and manage information, and to apply that information in making decisions about patient care and health care delivery.” As clinicians and educators we all have experienced the explosion in the availability of information on the Internet. This information is a valuable resource for all health care professionals and students. However, there may be a gap in students’ ability to use these tools.

Though not new, the concepts of “information literacy,” “fluency in technology” and “computer literacy” have recently received a lot of attention in higher education. The concept of information literacy involves more than the ability to look up a topic on the Internet. It includes critical thinking related to determining the purpose of gaining information, identifying assumptions, critically evaluating literature, determining biases, forming conclusions and evaluating implications. According to the Association of College and Research Libraries (ACRL), computer literacy focuses on the “rote learning of specific hardware and software applications, while ‘fluency with technology’ focuses on understanding the underlying concepts of technology and applying problem-solving and critical thinking to using technology.”<sup>2</sup> Although this definition introduces the concepts of critical thinking and problem-solving, they are applied directly to technology. In 2000, the ACRL defined information literacy as “a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.”<sup>2</sup> In 2015, the organization presented an expanded definition: “Information literacy is

the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.”<sup>3</sup> Information literacy allows doctors more control over their learning and the ability to stay current.<sup>2</sup>

### **Information Literacy Must Be Taught, Even to Millennials**

The ability to identify appropriate databases, efficiently use the databases, critically evaluate clinical studies and appropriately reference sources can be particularly daunting skills for students. Because most students in the millennial generation are savvy in the use of technology, it is easy to assume that navigating the Internet for information related to the acquisition and use of knowledge would come naturally. In my experience, many students are significantly lacking in information literacy skills. Therefore, these skills need to be taught in an organized and concrete manner and then practiced. Projects that require students to research ocular conditions, use evidence-based practice and evaluate information should be incorporated into every year of the curriculum. The utilization of information literacy skills should become a habit of mind, so it is automatic. The efficient utilization of information is particularly important in the clinical environment. In today’s world, the emphasis in most clinical environments is productivity. If obtaining and using information is not a habit, it has potential to interfere with productivity and may not be utilized. Developing a culture of information literacy while also focusing on teaching, patient care and productivity can be challenging for clinical faculty, but students must be prepared to use these skills in the clinical environment, and faculty must act as role models.

### **How Does Your Institution Foster Information Literacy?**

What is the best method for teaching information literacy skills to our students? Are we achieving the goals set forth by ASCO? Are we evaluating outcomes and disseminating information so that best practices can be achieved? A search of PubMed, VisionCite and Education Resources Information Center (ERIC) using the terms “information literacy,” “computer literacy,” and “optometry or optometric education” produced only a few articles in the profession of optometry. What is your institution doing to teach, utilize and reinforce information literacy skills?

### **References**

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3. Association of College and Research Libraries. Framework for Information Literacy for Higher Education. Chicago (IL) 2015 [cited 2016 January 26]. Available from: <https://www.ala.org/acrl/standards/ilframework>.

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