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Foreword

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Emerging digital-information technologies are reshaping education. An abundance of online courses are offered for free by the most prestigious universities in the United States, and popular web-based schools such as Khan Academy provide curricula from kindergarten to early undergraduate courses. Universities remain hubs of enlightenment, largely because of the massive digital archives their libraries have purchased access to, but the archives themselves call into question the usefulness of conventional textbooks. Put simply, there is quite a bit of uncertainty regarding how the university will look and function in the next 5 to 10 years.

For some this is an exciting prospect, and for others the thought inspires shudders. The professors I’ve known tend to consider the classes they teach as more than a relay of fact-based content. Time at university should include mentorship, a chance to practice career skills, and require students to develop interpersonal skills. The idea that education is simply fact-based, and therefore interchangeable with online lectures, would rob students of these valuable, but less tangible skills. Proponents of the integration of technology and academics suggest that students are being challenged to handle meaning in new ways and are better prepared for the digital marketplace in which they will work.

Clickers, interactive-digital classrooms, and online assignments suggest that technological integration is trending, and 60% of those surveyed by the Pew Research Center believe that by 2020 education will have been completely transformed (Anderson et al., 2016). An implication of all this is that universities will need faculty who are skilled at navigating the digital environment and are able to work the newest communication methods into their coursework and assignments.

As an academic professional there is a certain pressure to stay
up-to-date on the latest and best practices. This is particularly true in STEM disciplines where technology is considered a cornerstone, but a surprising number of professionals are still uncomfortable using social media. On a larger scale, there is a similar pressure for communication. The recent Scientific Research in the National Interest Act (H.R. 3293) would require research proposals to include a section where the content of the proposed study is described in such a way so that a non-practitioner could understand its goal. The idea that technical disciplines should be more accessible to the general public isn’t surprising given that almost 40% of American adults report they regularly follow news about science (Raine, et al., 2016). Furthermore, it was funding dedicated to this purpose that allowed this guide to be written.

Our focus moving forward will be the concepts and best-practices underlying digital communication. These techniques and tools should allow an instructor to reach his or her students through a medium that they are most comfortable with, or provide a principal investigator with a mechanism to widely publicize their latest findings. Students may also find this guide useful as many of these communication skills have the potential to distinguish individuals within their professional field, and they are powerful when employed in the career market of the 21st Century.

References