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Opinion

Corporate communication strategies are applicable for teaching non-science communication skills to pharmaceutical sciences PhD students

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Abstract

The Graduate Program in Pharmaceutical Sciences recognizes that employers value certain soft skills such as communication with non-science audiences and mentoring ability, both of which are not part of our formal curriculum. We sought to evaluate the utility of a corporate tool, the "Elevator Speech," to introduce Pharmaceutical Sciences graduate students to communicating scientific research to a non-expert audience and to understand why soft skills are necessary for future success. Graduate students and postdoctoral scholars were invited to present their research in an elevator pitch competition. A pre-survey and a post-survey were administered to participants, mentors, and judges. Judges were members of the College External Advisory Board. The pre-event survey was completed by all participants and most mentors (82%, $n = 11$). The post-event survey was completed by all participants and judges, but fewer mentors (27%, $n = 3$). Participants and their mentors hoped that participants improved their public speaking skills and learned how to communicate with an audience naïve to their research. The post-event survey indicated that participants and mentors felt that participants improved simple speaking skills, confidence in speaking, and speaking without tools/devices. The judges applauded the event but highlighted the need for formal mechanisms to improve soft skills necessary for professional development. Both judges and organizers recognized that participation was poor, and the expected content of the "pitch" was poorly defined. Intentional use of the elevator pitch model may be valuable as part of the formal graduate program curriculum to teach non-traditional communication skills and better prepare graduates for a variety of future employers.

Keywords: Elevator speech; Communication; Soft skills

Introduction

Traditionally, doctoral students in the sciences have been trained under the "science-first" mantra with little regard for career aspirations or job market requirements since it was assumed that each student will find employment in either academia or industry. It has also been an assumption that each Doctor of Philosophy (PhD) candidate will acquire all the communication and mentoring skills needed for a successful career through a hidden or un-official curriculum during their graduate training. Efforts to teach communication and mentoring skills during a graduate program in the basic sciences are often disregarded in favor of development of technical skills despite the fact that most graduates will be employed in an academic appointment or a position in industry that requires "soft skills" in communication, team building, and leadership. Importantly, one reason for our

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study was the recent publication of the CAPE 2013 guidelines that emphasizes similar "soft skill training" for Doctor of Pharmacy (PharmD) students.[1]

A recent report was commissioned by the American Association of Colleges of Pharmacy (AACP) that described evaluation of graduate education in the pharmaceutical sciences in light of an evolving job market. The report provided evidence that graduates of basic science PhD programs should seek to develop soft skills, independent of laboratory-based abilities.[2] Specifically mentioned in this report were skills in "business, communication, teamwork, and leadership," similar to those found as components of the Center for Advancement of Pharmacy Education (CAPE) 2013 outcomes. Surratt[3] noted in a 2006 report that communication skills were lacking in graduate students, especially those who claim English as a second language. He points out that these graduate students are often used as teaching assistants in many colleges of pharmacy that self-describe as research institutions. Chuck Taber (Dean of the Graduate School, Stony Brook) and James Plummer (Dean of the College of Engineering, Stanford) have independently suggested that graduate students of today cannot be trained the same as graduate students of the past in light of the increase in technological advances and the current landscape of employment.[4,5] Many graduate training programs have embraced the nationwide program, Preparing Future Faculty (PFF), that helps develop communication skills among graduate students interested in a career in academia.[6]

Rationale and objectives

In our own college, we recognize that we must re-evaluate both the formal and the informal training our graduate students receive. Currently, the student learning outcome encompassing communication skills for our graduate program states that students will be able to "effectively, competently communicate scientific findings orally and in scholarly writing." Activities and assessments for the communications outcome are mapped to internal journal clubs and seminar courses, as well presentations of research at scientific conferences. Importantly, the outcome does not define the audience receiving the communication, and assessments focus only on the ability to communicate in a scholarly way.

In conversations surrounding the strategic vision and plan for the College, our External Advisory Board (EAB), comprised of leaders in academia, industry, pharmacy practice, and managed care, has noted that leaders in their respective fields possess soft skills, such as communication, creativity, leadership, and collaborative abilities. As faculty members, we have observed that the landscape of academic basic research has moved to more "team science," requiring that our students successfully communicate their research to people not intimately familiar with their work. Further, PhD graduates who pursue careers in the pharmaceutical industry and move beyond the bench to management positions unfortunately may not possess the skills required to communicate with those above and below their pay grade. Faculty in the College, as well as our Office of Education, acknowledge the need for formal soft skills training for our graduate students rather than assuming it will be taught as part of the hidden curriculum. To explore development of soft skills education, we initiated a competition that utilizes the "elevator pitch" strategy often employed in corporate America. We hypothesized that graduate students in the pharmaceutical sciences can utilize the elevator pitch model to practice communicating scientific research to an educated, but non-expert, audience and to understand why soft skills are necessary for future success.

The "elevator pitch" model was popularized by corporations as a mechanism used, mostly by salespersons, to provide a brief and concise overview of a product or service to a potential buyer. It is called an "elevator pitch" because it should be completed in no longer than an average ride on an elevator.[7] However, it may represent an important teaching moment for students because constructing an "elevator pitch" requires that their research projects be condensed to the essential facts easily understood by a lay audience. Guidance and direction in this process should also be the responsibility of the College faculty. We sought to test this hypothesis by first developing a voluntary contest and then soliciting feedback from participants, mentors, and the EAB.

Materials and methods

All graduate students and postdoctoral scholars (n = 100) at the University of Kentucky, College of Pharmacy, were invited to participate in an elevator speech competition with monetary prizes. Participants were provided guidelines (as stated below) and examples [American Society of Cell Biology (ASCB) competition, 2012] on how to craft an elevator pitch structured to be understandable to a wide audience.[8,9] Each participant was limited to two minutes to present a speech describing his/her research project without the aid of tools or devices (no PowerPoint slides, props, notecards, etc.). Students were expected to work with their mentor to prepare the speech. Participants were asked to consent to taking part in this Institutional Review Board-approved study. After consent, each participant and their mentors were asked to complete a survey (pre-test) instrument on what they expected to gain from the event from a list of possible options (Appendix 1). A summary of the demographic characteristics of the participants, mentors, and judges, compared with their College peer-groups, when applicable, is presented in Appendix 2.

The EAB of the College was recruited to serve as the judging panel for the competition. The EAB is comprised of pharmacists, educators, and researchers in academia, industry, and managed care. The judges were trained immediately prior to the competition for logistical reasons because the