DESIGN AND IMPLEMENTATION OF A CAMPUS-WIDE ONLINE PLAGIARISM TUTORIAL: ROLE PLAYED BY THE LIBRARY IN AN EMERGING RESEARCH INSTITUTION IN SAUDI ARABIA

Lee Yen Han
King Abdullah University of Science and Technology
Saudi Arabia
leeyen.han@kaust.edu.sa

Abstract

Academic dishonesty and plagiarism are serious issues in institutes of higher education especially in this Internet age with academic literature and information readily available on the web. Some research studies point to the students’ lack of understanding of the concept of plagiarism and how to cite sources as reasons why they plagiarize (Volkov, Volkov, & Tedford, 2011). Academic librarians have an important role to play in providing instruction in the ethical use of information and helping students develop abilities to attribute and cite sources in their academic writing (Mages & Garson, 2010; Maxymuk, 2006).

Recognizing this important role played by librarians, the University Library at King Abdullah University of Science and Technology (KAUST) started offering face-to-face workshops on the topic in the spring of 2015. While the workshops were positively received by the participants, informal feedback from students points to a need for an online course which would provide asynchronous just-in-time training for students. In this way, students who are not able to attend the face-to-face workshops would be able to access the tutorial in their own time and at their own pace.

This paper reports on the process the University Library took to create and embed an online plagiarism tutorial in Blackboard, the Learning Management System (LMS) used by the university. Drawing on and expanding on materials covered in the face-to-face workshop, the online tutorial included original multimedia material, and a summative evaluation quiz. Improvements were made based on feedback gathered from students, library staff, and other university departments, such as the Office of Writing Services, Graduate Affairs, and ESP Instructors from the Writing Center.

The online tutorial was initially planned as an optional course for students, but with the support of Academic Affairs and Graduate Affairs, it has been mandated as a compulsory course for all new in-coming students.

Keywords: plagiarism, academic integrity, online tutorials, information literacy, library instruction
Background

King Abdullah University of Science and Technology (KAUST) is a research-intensive graduate level university based in Thuwal, along the red sea coast of Saudi Arabia. The university started with the vision of the late King Abdullah to create an international community of scholars, a new “House of Wisdom,” to advance science and technology through collaborative research, for the benefit of the region and the world\(^1\).

The university started officially in the summer of 2009 with an inaugural class of 374 students and 72 faculty members. There are currently 940 students across the 3 different academic divisions of Biological and Environmental Science and Engineering, Computer, Electrical and Mathematical Science and Engineering, and Physical Science and Engineering. The majority, 83% of the students, are doctoral students. As the only institute of higher education in Saudi Arabia that is co-education, female students make up 37% of the population. And there are currently more international than Saudi students\(^2\).

The University Library, which has been an IATUL member since it began operation, is located at the center of the campus, providing a variety of services and resources for the students and research community. As a “Born Digital” Library, more than 90% of our collection is online; allowing our users access to information anytime, anywhere. For users who would like to access our print resources, or to use the library space, it is opened 24X7. As a reflection of the multinational, multicultural community in KAUST itself, library staff represent 12 different nationalities.

While the situation and the University Library at KAUST may be unique, the challenges the library faces are not any different from most libraries at other institutes of higher education dealing with graduate students.

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\(^1\) Message from the King, available at https://www.kaust.edu.sa/en/about/message-from-the-king

\(^2\) KAUST Quick Facts (as of 2016), available at https://www.kaust.edu.sa/en/about/media-relations#part3
Anti-plagiarism instruction in KAUST

Faculty advisors often assume that incoming graduate students would have the necessary information literacy skills for research work in graduate programs (Bellard, 2005; Kuruppu & Gruber, 2006; Rempel & Davidson, 2008; Saunders, Severny, Freundlich, Pirolli, & Shaw-Munderback, 2016). This applies to academic integrity and plagiarism as well. Faculty assume that students entering graduate programs would be able to cite and credit sources appropriately to avoid plagiarizing (Caravello, 2008). However, evidence, from student self-reporting (McCabe, Butterfield, & Treviño, 2006), from observations by faculty (McCabe, 2005) and the use of text-matching software (McCullough & Holmberg, 2005) suggest otherwise.

This is where academic libraries and librarians can step up and play an important role. Just as academic libraries and librarians provide information literacy programs to students to help them navigate library resources and appropriately evaluate information sources, they can play a significant role in helping students become well-informed on plagiarism and academic integrity (Caravello, 2008; Drinan & Gallant, 2008; Han, 2012; Lampert, 2008). This is what the University Library at KAUST is aiming to do with the creation of the online tutorial on Plagiarism and How to Avoid it.

Before the idea of creating the online tutorial was mooted by the Library Management, students’ exposure to the topic of plagiarism and academic integrity was restricted to the Academic Keynote and Panel organized by Graduate Affairs as part of the 2-week Student Orientation Program each fall. The keynote included presentations by select faculty members who are also in the panel to address any questions which the students may have. This is usually followed by a brief introduction to EndNote and Turnitin, a text-matching, anti-plagiarism software.

In the spring of 2015, the Library started offering a new one-shot face-to-face workshop on Plagiarism and How to Avoid it as part of a suite of training workshops which is offered to the students and the research community at the beginning of each new semester in Spring and Fall. Topics covered in the workshop include:

1. What is plagiarism – including some famous plagiarism cases in the literature, academia and politics
2. The difference between plagiarism and copyright infringement
3. How to avoid plagiarizing
4. Using Turnitin and interpreting Originality Reports
The workshop was designed to be interactive with discussion among participants, rather than straight up lecturing. As a supplement to the workshop, a LibGuide was created and promoted to the participants of the workshop.

Although there was a high level of interest for the workshop, as showed in the number of people who registered for it, attendance was comparatively low (Figure 1). This however, is not unusual as many of our workshops suffer from this 80/20 rule of attendance rate. On the whole, there was positive feedback from the participants on the usefulness of the workshop (Figure 2). However, due to the low attendance, not many students could benefit from it.

On the recommendation of the Student Council for online asynchronous training by the Library, it was decided that the Library would create an online version of the Plagiarism Workshop so that all students, regardless of their schedules, could benefit from it. Besides solving the problem of conflict in schedule preventing students from attending the face-to-face workshop, the self-paced online tutorial would be able to accommodate students with different learning styles as it can include audio, visual and interactive learning objects and would allow students to revisit the different topics covered at their point of need.
ADDIE

“At its root, instructional design is the process of solving instructional problems through a systematic analysis of the conditions for learning.” (Bell & Shank, 2007, p. 42)

While developing the online tutorial, the ADDIE model was used as a guide in the design process. ADDIE is an instructional design model or framework commonly used by instructional designers. It has been around since the mid-1970s and has been used widely by online course designers or developers to build effective training, including library instruction, and provides the foundation for several other models, including BLAAM (Blended Librarians Adapted ADDIE Model), suggested by Bell and Shank (2007).

ADDIE is the acronym for the five phases of the design process of analysis, design, develop, implement and evaluate. Some of the steps within each phrase may overlap, and in some literature, some steps may appear in different phases. ADDIE It is iterative and is often represented as a continuing cycle (see Fig 3), allowing constant reassessments and improvements to the design (Summey & Valenti, 2013).

![Fig 3: The ADDIE Model](image-url)
Analyze

The first phase in the ADDIE model is Analysis or Analyze. During the analysis phase, the instructional problem and goals, the learners’ needs, existing knowledge or characteristics, and the learning environment are identified (Davis, 2013).

The main instructional goals of the Library's online plagiarism tutorial was to help students to identify acts that would be considered as plagiarism, to understand what good practices in citations and attribution are, and to be aware of the Library and University resources (books, EndNote, Turnitin) available to them to help them avoid plagiarizing and achieve academic integrity.

The student population is very diverse, with students coming from different countries, bringing with them different levels of exposure to academic writing and the concept of plagiarism. For many, English is not their first language.

In examining the learning environment and constraints, one of the considerations was with originality and branding. We wanted to create our own content which would be specific to our unique and diverse student population. At the same time, we were mindful of not re-inventing the wheel, especially since there is a lot of good content created by other libraries and institutions which could be re-used. For the hosting of the online tutorial, Blackboard, the existing Learning Management System (LMS) of the university, was chosen. It is a platform which most students are already familiar with, so the hassle of getting students to learn to navigate a new system or create and manage another new account is removed. Blackboard also allows us to embed quizzes (an important aspect of the course), as well as give out outline badges and certificates, something which the Library has started doing for our face-to-face workshops. Finally, the tracking features in Blackboard allows us to track when students log into the course and what pages they have viewed, information which would be useful when reviewing the tutorial for future revisions.

Design

The second phase is design, where the instructional strategies are outlined and learning outcomes and assessment instruments are decided on (Davis, 2013).

Learning outcomes were drafted, by rephrasing instructional goals into what the students should be able to do after completing the tutorial. This helps to guide the development of the content and the assessment instruments. Some of the outcomes for the plagiarism tutorial included being able to

1) Identify acts that constitute plagiarism
2) Distinguish the difference between plagiarism and copyright infringement
3) Analyze passages for correct/incorrect use of paraphrasing, quotation and citation
4) Upload documents to Turnitin and interpret the related Originality Report
Two instruments were used for assessment. The first was a 10-item quiz testing areas covered in the learning outcomes. The other was a feedback form which included some self-reflection questions.

For instructional strategy, two areas were considered: content presentation and user participation. For content presentation, a combination of videos and textual information was utilized. Videos were selected because Gen Y students are used to multimedia presentations. In addition, there is video content created by other libraries or institutions which could be re-used for our purpose. These were used in combination with textual content and PowerPoint presentation slide shows, ensuring that students with different learning styles are engaged.

**Develop**

Next is develop. Typically at this phase, courseware designers and developers create the learning content, assignments and assessments following the blueprint from the design phase. It also includes designing of storyboards and graphics, as well as integration of any eLearning technologies (Davis, 2013). Being a small library without an instructional designer on staff, this was done by the author.

For the 10-minute video that was created with Camtasia, mini-quiz questions were embedded throughout at strategic points. They break up the video into smaller sections and afford some interactivity and participation from the student. Existing videos created by other libraries or writing centers, touching on the more technical aspects of writing, summarizing, paraphrasing, and how to do citation, were compiled into playlists and included into the course.

For assessment, the 10-item summative quiz was created in Blackboard, which allowed us to specify how many attempts a student can take (three attempts) to get a passing grade of 100%. The feedback form was created in Google Forms and embedded in Blackboard. While there is also an option to create surveys in Blackboard, Google Forms was used instead as it was considered more flexible.

One of the features in Blackboard which was useful when developing the tutorial was **Adaptive release** – a feature which allows you to hide certain content, to be released or revealed when students have completed certain tasks. As a self-paced tutorial, students could skip sections that they are already familiar with, or spend more time on sections which they feel they needed more help in. So technically speaking, students could skip all the content and go straight to the quiz to complete the tutorial. However, in order for the quiz to be available or released, they would need to view each individual page first. The feedback form would only be made available after they have completed the quiz.
**Implement**
At the implementation stage, the plan is put into action, that is, the instructional lesson is conducted, the elearning module is rolled out. Some designers consider beta tests and pilots part of the Development phase, others as part of the Implement phase. In any case, the point is to offer the instruction and obtain feedback to make improvements (Summey & Valenti, 2013).

The initial run of the pilot was with Library staff and some students whom the author had personal contact with, to gather feedback and to check on the technical aspects of the course. Once that pilot was completed and modifications were made, it was ready to be rolled out. However, before that could happen, it had to be approved by the VP of Academic Affairs, whom the Library reports to. On the recommendation of the VP of Academic Affairs, a second pilot was conducted with feedback collected from the Office of the Dean of Graduate Affairs, the Director of Research Operations, ESL Instructors and the Manager of Research Publication Services.

Based on the positive feedback from the reviewers from the different university departments, and with the endorsement of the President and Deans of the different Academic Divisions, it was decided that instead of an optional course which students can sign up for, the online Plagiarism tutorial would be a mandatory course for all current and new students. In addition, it was also decided that the course would be mandatory for all postdoctoral fellows and research scientists as well. Implementation will take place from the Fall 2017 semester.

**Evaluate**
At the evaluation phase, the impact and effectiveness of your training is assessed. This phase consists of the formative evaluation, measuring the learning outcomes during the instruction process, and summative evaluation which takes place after the instruction (Davis, 2013).

For the Plagiarism tutorial, formative evaluation takes the form of mini-quizzes in the 10-minute video which was created. For the summative evaluation, this is in the form of the 10-item quiz and feedback form. The quiz will provide data on the students’ content mastery, and the feedback form will gather feedback from the students on the tutorial, as well as their self-reflection on the tutorial. Following the implementation in the Fall 2017 semester, data from these will be analyzed to inform future updates or modification of the tutorial.

**Challenges**
One of the major challenges faced was expertise, or the lack of, including content area, design and technical expertise. These can be overcome by extensive reading and attending courses to help build up competency and mastery.
For an online tutorial created by an academic library, creating awareness and interest for it among the students, and getting faculty buy-in can be challenging. The good news for us is that the university leadership has already bought in to the course, and has mandated it as a compulsory course for all students and researchers. The challenge now is working with the Academic Divisions and other departments on implementing the tutorial and monitoring compliance, as well as ensuring that the content stays up-to-date and relevant.

Conclusion

The success of getting this online tutorial approved and mandated as a compulsory tutorial, not just for all students but also all postdoctoral fellows and researchers, shows the value the university leadership places on the instructional services the University Library provides to support the teaching, learning, and research needs of the faculty, research staff and students. This has given the Library a “template” or “roadmap” to follow for the other planned courses on Library and Information Research Skills.

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