

Engaging the Online Learner in Academic Writing: The APA Format Interactive Tutorial

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Abstract: Facilitating growth for students in academic writing has challenged nursing faculty for decades. At Regis University, the Rueckert-Hartman School for Health Professions utilizes American Psychological Association (APA) format; we found our online students needed more personable assistance in writing appropriately formatted scholarly papers than what the APA manual or APA Web site currently provide. Learning APA format is often dry and unappealing. Our experience demonstrates that learning objects allow students to actively participate in learning in a non-threatening environment. In the Loretto Heights Department of Nursing, the approach consisted of an APA Pack in all online courses, which included the APA Format Interactive Tutorial, developed in Flash. Utilizing a carnival theme, the tutorial includes 28 custom-built drag-and-drop, sorting, and multiple-choice questions, along with resource material. Student evaluations of the tutorial as well as student papers demonstrate an overall positive result on student learning and performance.

Introduction

The Loretto Heights Department of Nursing (LHDON) in the Rueckert-Hartman School for Health Professions (RHSHP) at Regis University in Denver, Colorado, currently serves over 900 online nursing students. Our students are practicing nurses completing a Bachelor of Science in Nursing, or a Master of Science (Nursing), with a focus in Education or Management. Students are from all over the United States, and vary widely in age, culture, and work experience.

Writing has always been an essential element in an academic program, but the online environment brings its own set of challenges in helping students learn and apply APA format. Many students in our online program have been hesitant to learn and apply rules of APA format to their formal papers. There was confusion about the modified title page, use and style of headings, and general form for references and in-text citations. There was also confusion regarding other rules of APA style, such as spacing between characters, capitalization, and use of italics. Students often stated they found using the APA (2001) manual or Web site (APA Online, 2003) tedious, confusing, or difficult when trying to locate specific information. Our APA assignment had been a 3-page worksheet that students submitted to the instructor in the first course where APA format is a requirement in two formal papers. Our team contemplated how we might expand on this assignment to optimize student learning and motivation with a very different approach in learning APA format; from this, the APA Format Interactive Tutorial was born.

The Approach

Our online nursing courses were already utilizing Packs and Handbooks, where documents supporting the academic experience (such as the Student Handbook) or forms required for a particular course (such as the Practicums) are available to all students in all online courses at all times. Our approach centered around the creation of the APA Pack, which contains a Sample Paper written by one of our students, a QuickTips guide (with page numbers for often used sections in the APA manual, reference examples, and steps to setting up an APA style paper), and the APA Format Interactive Tutorial. Students in the first course of the RN to BSN program are required to complete the Tutorial, but all online students in the LHDON can now access and complete any part or the entire

Tutorial. For example, if the student has difficulties with reference citations, he or she can choose to only do that section.

In the required course, students begin the Tutorial in the first week, but only complete the introduction and first section related to construction of the title page. That week they also begin a draft of their first formal paper. Different sections of the Tutorial are then assigned as the weeks progress, so students are guided to apply what they learn in the tutorial each week to the draft of their paper, due the same week as proof of completion of the Tutorial. In this way, students are able to immediately apply their learning in a meaningful way.

To submit proof of completion of the Tutorial, the student takes a screenshot of their completed scorecard, and e-mails that as an attachment to the instructor. A threaded discussion related to academic writing also occurs the week the Tutorial is due. With this, students are able to reflect on their learning.

Applying Learning Objects: Design and Development

Our main objective was to present APA format, which can be a very dry subject, in the most appealing and engaging way possible. We decided to use a game-like format. The literature on games and the importance of play in the learning process is extensive. As Galarneau (2004) states, “. . . games can often provide the motivation to learn in cases where the learners have no motivation to engage with the materials” (Learning Games section, ¶ 1). Using a game-like approach also allows students to learn and practice at one’s own pace. The Tutorial allows students to practice and make mistakes on their own; they have plenty of time to master the Tutorial by the time proof of completion is due, and the opportunity to put into practice what they’ve learned in their first formal paper.

A game-based approach also allowed for easy repetition until students reached their desired score (and learning point), allowing time to reflect on, review, and reinforce essential information. The Tutorial can be accessed by students as many times as they wish; in addition, the Tutorial itself moves in Rounds, keeping track of what questions a user missed and presenting those questions again at the start of the next Round.

To develop the actual content, subject matter was divided into four different content sections of format, references, in-text citations, and quotes. The approach was to give explanations and examples of APA format style, then present students with interactive questions to demonstrate learning. The process of developing the content yielded 60 screens of content (including the introduction section that introduces the Tutorial and the rules of the game), 28 of which are drag-and-drop, sorting, and multiple-choice questions. At this point in the development process, some of the rules were also determined, such as the concept of Rounds (learners must *complete* all questions to finish Round 1 before being able to re-attempt questions missed in subsequent Rounds); and the decision that the learner would get “credit” for a question only if the *FIRST* answer was correct (learner still completes the question, but demonstrates learning by answering correctly in the next Round).

Knowing the requirements of the Tutorial, Macromedia Flash best allowed for the building of interactive practice questions, custom navigation, and tracking and display of students’ progress as they moved through the Tutorial. In addition, the near universal adoption of the Flash Player among Internet users was appealing; according to Macromedia (2005), 95% of Internet users had Version 6 of the Flash Player in December of 2004 (the Tutorial was released in October 2004), almost guaranteeing that all of our already-online audience would be able to access the Tutorial. Finally, Flash offers the opportunity to create a preloader, ensuring that users with slower Internet connections (not a significant, but present percentage of our student population) would be able to monitor the progress of the time needed to download the Tutorial.

The final hurdle in the conceptual design was to devise a theme for the Tutorial; the theme had to reflect our intention to make learning APA fun, reward learners for a successful attempt, and have a broad appeal for our diverse student population. Finding a theme that many people could relate to was at first a challenge; after going through metaphors ranging from collecting eggs from a golden goose to earning parts to build a house or a car, we chose a carnival theme. Our feeling was that most people, regardless of age or nationality, had likely been to an amusement park, fair, or carnival at least once, and could relate that to a fun experience.

The completed Tutorial launched with a Beta group of RN-BSN students at the start of our eight-week term in October 2004. The total file size is 509k; see Table 1 for download times for a range of Internet connection speeds.

Connection Speed	Time to preloader appearance	Total download time
28.8	12 seconds	3 min 35 seconds
56K	6 seconds	1 min 45 seconds
DSL	2 seconds	15.3 seconds
T1	1 second	3.6 seconds

Table 1: Download times for the APA Format Interactive Tutorial

Applying Learning Objects: Features and Content within the Tutorial

Our approach in the Tutorial content was to provide information before the student performed an activity related to the question, but we also wanted them to use other references in the future; therefore, we included the page numbers of the APA manual that related to each question, along with an online resource if available. We encourage students to have the APA manual, along with the Sample Paper and QuickTips from the APA Pack readily available while doing the Tutorial, as well as future papers.

After clicking the entrance sign on the first screen of the Tutorial, students view a welcome screen that begins to explain how to use the Tutorial. *Previous* and *Next* buttons allow users to move through the Tutorial in a sequential fashion (see Figure 1.). Alternatively, in the upper left hand corner of the Tutorial, a menu allows the student to go directly to a desired section. The section title and title of each screen is displayed at all times near the top of the screen; each section also has an image associated with it (e.g., a Ferris wheel in the Format section, or a roller coaster in the In-Text Citations section). Note also the *Related Pages* under the *Next* button, which list relevant pages in the APA manual. The learner accesses the bibliography citing further APA resources via the button in the upper right hand corner of the screen.

The screenshot displays the 'REFERENCES' section of the tutorial. At the top, a navigation menu on the left lists 'Introduction', 'Format', 'References', 'In-Text Citations', and 'Quotes'. The main header reads 'LEARNING TO WRITE WITH STYLE' and 'REFERENCES BOOK (NONPERIODICAL) FORM (PAGE 3 OF 23)'. In the top right corner, there are buttons for 'EXIT', 'BIBLIOGRAPHY', and 'PRIZE BAG/SCORECARD'. Below the header, there are 'PREVIOUS' and 'NEXT' navigation buttons. The main content area is titled 'BOOK (NONPERIODICAL) FORM' and includes 'Related Pages 223; 248-251'. The text provides a citation template: 'Author, A. A., & Author, B. (year). Title of book. Location: Publisher.' It also includes two notes: 'Note the construction order for a book.' and 'The location is the city of publication. If the city is well known (see page 217 in the APA manual), you need only include the city; otherwise also include the state abbreviation (see page 218).'. A final note states: 'The last position is known to be the publisher, so use as brief a form as possible to identify the company, deleting terms such as Publishers, Co., or Inc.'

Figure 1: Sample page of content description for construction order for a nonperiodical.

Learners move to the next page (see Figure 2) where they demonstrate learning from the previous page in a drag-and-drop activity.

Figure 2: Sample page of drag-and-drop activity for a nonperiodical.

Click here to participate in this nonperiodical form question of the Tutorial

http://support.regis.edu/shcp/shcp_forum/Interactions/APA_Tutorial/Conference/APA_Tutorial_Snippet.html

As users progress through the Tutorial, they are “awarded” with carnival-type prizes for correct answers (such as a beanie hat, stuffed toy, or item of food) that appear in a separate feedback box. If the answer to a question is not correct, the feedback box still appears (without the prize), but offers tips and resources to help determine the correct answer (e.g., previous page).

Finally on the sample screen, note the Prize bag/Scorecard button; this displays pictures of each prize won for correct first responses; it also lists questions the user needs to complete in a Round, as well as what questions still need to be correctly answered. For students taking the course where completion of the Tutorial is mandatory, students take a screenshot of their completed Scorecard to e-mail to their instructor as proof of completion.

Strengths and Limitations

Reusability has been one of the key strengths of the Tutorial, pre and post-production. During the Flash development, care was taken to build the navigation and scoring systems in such a way that they only had to be developed once, making addition or deletion of screens an easy task. A set of animation components by Robert Penner (<http://www.robertpenner.com>) were also utilized for the motion of the screens, which added slightly to the file size, but made animation a matter of adding a line of code. Shortly after completion of the Tutorial, another online course had need for a similar tutorial. We were able to re-use much of the APA Tutorial, which resulted in completion of that project in a fraction of the time it took to complete the APA Tutorial. While the Tutorial started out as a single assignment, it is now included in the APA Pack for all online students in the LHDON, and our school is considering making the Tutorial available to all students, regardless of department or modality (online versus traditional). Finally, the fact that the Tutorial and the APA Pack are always available online to students makes them invaluable reference and learning tools.

One of the biggest challenges in any custom-built project is the time required to build it; this was definitely a factor when creating the Tutorial. On the design side, developing the content itself was a tedious process; on the development side, the creation of each unique question, even though much code was copied or re-used, contributed

greatly to the time needed to complete the project. We estimate the total time for content and design from start to finish, including revisions, at about 240 hours.

Another technical challenge was trying to keep the total file size down, knowing that some of our learners would not have access to high-speed Internet from home; including imagery for all the prizes as well as audio was a challenge. One possible way to mitigate this would have been to have only a portion of the Tutorial load when a user first entered, and then load and unload each section as the user progressed, reducing the wait on the front end. We chose not to use this approach, thinking that it would be more frustrating to a modem user to have to be interrupted for a download every time they jumped to a different section of the Tutorial. This approach also seemed safer in the sense that if a modem user got disconnected midway through the Tutorial, they wouldn't be able to download the next portion, possibly forcing them to start over depending on what they do to get back online.

Other major questions included how to best have students submit proof of completion, and if functionality to allow the user to save their place should be built in. Both of these problems could have been easily solved with the availability of a database to track and save progress; however, at the time of the build, no database was available. After consultation with teaching faculty, providing detailed instructions to students as to how to take a screenshot of their completed Tutorial and send via e-mail to their instructor was determined a reasonable solution for the proof of completion problem. The problem of having a way to save one's place could have been solved through the use of Remote Objects in Flash, which operate in a manner similar to a cookie in that a small amount of information is placed on the user's computer and referenced the next time they visit the site that placed it there. However, we opted not to do this for two reasons: first, many of our students access their online coursework from more than one location. Remote Objects depend on the user always using the same computer. Second, using Remote Objects also depends on a user's computer settings; providing instructions to users whose default computer settings were not set up for Remote Objects seemed an unnecessary complication. Therefore the Tutorial clearly states in the Introduction that there is no way to save one's place, so advises users to prepare their time to work on it accordingly.

Another challenge, albeit a predictable one is that the Tutorial is based on the fifth edition of the APA manual, so time will need to be devoted to making adjustments when the sixth edition is published.

Evaluations. Students were asked to participate in a formative evaluation survey upon completion of the Tutorial; data was collected from the Tutorial's launch in October 2004 through May 2005, representing four complete eight-week terms. A total of 92 responses were collected over this period, and a summary of their perceptions of strengths and weaknesses are included here.

Student feedback in the Beta group alerted us to a few problems that we fixed immediately, including: (a) clarification of a sorting question, (b) relaxing the overall rigidity of the Tutorial (we first thought students should answer a question correctly before leaving it, but this prevented the student from going back in the Tutorial for reference), and (c) expanding the feedback for incorrect responses. Based on student feedback we also realized it was a great deal of information for students to absorb in one week; the assignment was then divided into practice sessions each week with assigned sections over the course of several weeks.

While 94% of students responded *Agree* or *Strongly Agree* to, *Content presented in an interesting and stimulating manner*, comments varied. One student described what she liked most was, "winning the prizes after answering the question correctly. I like the concept used. It made the Tutorial very fun." As two other students stated, "At first, I thought the virtual prizes were goofy, but then I got a kick out of them;" and "Although a little corny, the prizes broke up the monotony of the tutorial," though a minority of students continued to find the format and prizes annoying. A few students commented that they simply did not like the content, as APA format is difficult to learn.

Despite these few sticking points, student reaction to the Tutorial has been positive overall. While 72% of respondents indicated their experience with APA format prior to the Tutorial was *Limited or nil*, 90% of students responded with *Strongly Agree* or *Agree*, when asked if users felt they could construct references for an article, Web site, and a book. As one student stated, "It helped me figure out what's expected. I'll know what to double-check according to standard APA format and won't be tempted to 'punt' when writing my paper." When questioned if they felt they could cite references in-text, 92% responded with *Strongly Agree* or *Agree*. Tutorial length was rated *About Right* by 82% of the learners, with 75% reporting they were able to complete the Tutorial in 2 hours or less.

Recommendations

Even after revision of the Tutorial based on student feedback, there are still a few common problems; for instance, some students struggle with the structure of the Tutorial. They do not see the upper left hand navigation menu that allows the user to jump to a chosen section and instead page through, one at a time, to search for specific

information. Another common question relates to scoring and how to move from Round 1 to subsequent Rounds; students sometimes skip a question or give up halfway, which prevents them from finishing Round 1 (all questions must be completed in Round 1 before re-attempting incorrect responses on the first try). Students with this difficulty are often unaware of the Prize bag/Scorecard, which provides the learner with the question(s) needed to complete the Round before moving on. The lesson learned is that designers and developers must strive to make things as obvious as possible; even though questions such as these examples are addressed in the Introduction section of the Tutorial, students may not read them, or simply be too overwhelmed with trying to understand the content to devote adequate attention to the instructions. As Koeckeritz, Malkiewicz, and Henderson (2002) describe, “Active learning comes naturally for some students, but others require more external motivation and guidance from faculty” (Active Learning section, ¶ 8). Students also should be clear that a one-time run-through of the Tutorial does not make them a master of APA format, but is rather a jump-start to what must be on-going learning with each paper.

No matter how many ways one looks at a product, fresh eyes will always see something the creator did not. Taking the time to construct and run a formative evaluation can be an invaluable tool, helping to make the difference between a mediocre learning experience and a truly effective one by considering the perspective of the learner.

Instructors have a significant role in reinforcing the value of APA format by tracking changes on papers to edit APA errors, holding students to format guidelines, and referring them often to the APA Pack and Tutorial for reference and clarification.

Conclusions

Helping students move forward in academic writing requires unique approaches that engage the student in active learning, with the connection that this knowledge, pain, and toil will benefit them in future classes. Keeping information presentation simple, and breaking down large, complex, or unfamiliar topics into digestible portions sets learners up for success, and motivates them to excel. Teaching academic writing is a challenge, and no one teaching tool can provide the solution. Technology alone is not the answer if learning goals are not achieved. Increasing student resources, exposure, and varying methods of instruction has demonstrated a positive effect on student learning in our program.

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