TCO 341 COURSE RE-DESIGN: INSTRUCTIONAL DESIGN-POSTER 2.0, ANALYZING AUDIENCE AND PURPOSE LESSONS-FINAL REPORT

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Summary

This report provides a detailed analysis of the problem (needs assessment), learners, content, context, learning objectives for each lesson, an evaluation plan, and instructional materials. Please consider this analysis as supporting evidence for the design of these lessons.

Needs Assessment

Introduction to Request

The TechComm professors taught TCO 341: Introduction to TechComm to teach students the basics of Technical Communication. They used techniques from the School of Engineering to teach and prepare students who are interested in getting a BS or BSE at the end of their college career. The clients, Dr. Pam Estes Brewer and Dr. Bremen Vance, added on by Dr. Jennifer Goode, explained that the students enjoy accessing the content online and through the app.

Following this plan, TechComm professors used Canvas to store and organize content. This content included the syllabus, readings from the textbook, additional readings, and additional videos to help students understand the content. The plan was, according to Dr. Brewer, for the students "to read the textbook and use the material to help them understand the content".

Problem Statement

Professors have a difficult time getting the students' attention, keeping them engaged, and encouraging the students to read the textbook. The problem is that some students do little to no preparation before class, therefore, professors cannot assess whether or not the students understand the material. When students do not read the textbook, for example, Dr. Goode must give everyone an overview, even if some students have already read. She would like students to understand the content so that they can "apply it in class with real-world projects".

Desired and Current States

Students will use the new modules to apply the content from the reading to their current understanding of the concepts. The modules will cover, according to Dr. Brewer, "the basics and an overview of Technical Communication" to ensure that the students understand the material before coming to lecture. The desired state would be for the modules to help students grasp the material enough so that professors can focus on applying the concepts discussed in the textbook to real-world application in class. All of the content, from the notes, transcripts, additional readings, and audible lectures, should be provided through Canvas in a way that all students can access it.

Identify the Gaps

Gaps

Some of the students struggle with applying the material to everyday classes. Professors have less amount of time covering new material and application to students because they re-teach lessons covered by the readings. The gaps would be environmental, communication, and motivational.

Current State

Some students do not read the textbook before they come to class. As a result, the class activities are limited to strictly reviewing material and lack engagement between fellow students and professors. Professors must re-teach the material that students should have read in the textbook. This is not fair to the professors who wanted to teach hands-on activities and application to everyone. The result is an experience that lacks application and focuses strictly on reviewing material students should have read before class.

Evidence for the Gaps

Dr. Brewer discussed that students are lacking in understanding the material and thus the modules should have a "technical approach and operations approach". The common problem is that some students are not reading the textbook before they come to class, which impacts everyone's learning because the professor cannot discuss applications of the material. Rather, the professor spends the class time explaining the concepts from reading. This impacts students who have already read because more time is spent reviewing the material versus real-world application.

Solution Prescribed

The instructional training will be in the form of learning modules that will be online through Canvas. Specifically, I will be writing lessons on Analyzing Your Audience and Purpose and Poster 2.0.

Evidence to support decision

We suggest instructional training to assess the environmental gap, by providing extra resources to help students grasp the material and/or ask questions during class (Dirksen, 16-17), and the communication gap, so professors know what students need to work on and help students and professors have more applicable class lectures (Dirksen, 17, 20). Also, the questions/games would fix the motivational gap by providing students an exciting way to learn the material (Dirksen, 8-9).

Recommendation

Based on the interviews, analysis, and interpretation of the analysis, I propose online training modules in Canvas that discuss the overall themes of the Practical Strategies for Technical Communication, assess students' knowledge of the textbook through quizzes and/or games, and track the progress of students, so professors understand the students' knowledge of the materials. Students will go through interactive modules that will guide them through the main concepts of the book and help them learn the content.

The skills gained through the modules will be applicable through class lectures and projects. The reason this type of training is important is because students will assess their comprehension of the material and give before they apply the material in class.

Learner Analysis

Context Analysis

Students are taking TCO 341 for the following reasons:

- TCO 341 is a general degree requirement.

- TCO 341 helps them become a better writer for their Preliminal Design Review (PDR) and Critical Design Review (CDR).

- Apply technical writing principles to their internships.

Professors noticed the students would not engage in or read before class. Course evaluations and lack of student engagement affected the classroom experience. The students who prepared do not have an enriching experience because the professor re-teaches the material. The professors want to apply the material to the real world. Students will be motivated to apply the material to their future jobs and internships.

Instructional Context

Instructional Environment

The instructional environment would be students' dorms, library, etc. and the classroom. Students will access the material online through Canvas. They will use an Internet browser to connect to Canvas or use their phones to access the Canvas app. The content will be stored on the TCO 341: Introduction to Technical Communications Canvas page as modules and pages of content.

Available Tools

The TCO 141 course on Canvas will provide the resources through interactive modules. Students will use a charged computer or smartphone, reliable internet connection, an internet browser, and a charged laptop to complete the interactive modules. Student's abilities include:

- Logging into and navigating the Canvas platform.

- Enrolling into the TCO 141 course.

- Interacting with Canvas modules using the Canvas' tools and features.

Transfer Context

Application Environment

The application environment would be exams, internships, senior design classes, future jobs in the office. Students will apply the knowledge from TCO 141: Introduction to Technical Communications when preparing formal and informal professional writing. The application and instructional environments are similar. The instructional environment is where the lectures will be held versus the application environment is where students will apply their KSA's.

Resources and Available Tools

The resources are the learner's knowledge and textbook. The available tools are the company's computers, phones, websites, and general software.

Similarities and Justifications Among Contexts

The tools in the instructional and transfer contexts are similar. However, the instructional context's tools are used to grasp the material. The transfer context's tools vary according to the student's future employer/company's tools.

Content Analysis

Analyzing Audience and Purpose Module

A. Audience, Purpose, and Context
    a. Definition of Audience
    b. Definition of Purpose
    c. Definition of Context
    d. Definition of Modular
    e. Communicating Verbs
    f. Convincing Verbs
    g. Active Voice
    h. Passive Voice

B. How to write for different cultures

C. Cultural Variables

D. How to Research your Audience
    a. Determine known facts and unknown facts about your audience
    b. Talk to people who know your audience
    c. Use the Internet
    d. Look at target audience's past work

e. Study them on social media

E. How to Write a Purpose Statement

Poster 2.0 Module

A. Purpose of Poster 2.0

B. Ten Parts of Poster 2.0

C. Different Colors of the Poster 2.0 and Their Meanings

Learning Objectives

Analyzing Audience and Purpose Module

At the end of the Analyzing Your Audience module, students will be able to:

- Differentiate between audience, purpose, and contexts by scoring at least an 80% on the matching or multiple-choice quiz.
- Given a real-world scenario, analyze information about their audience and purpose to apply to the project/deliverable through a list of questions and tips in Articulate Rise 360 Timeline.
- Define the seven major categories of cultural variables without error through Articulate Rise's Matching Knowledge Check.
- Students will write a purpose statement for a current project they are working on using a word processor or a sheet of paper without referencing the Practical Strategies for Technical Communications textbook that includes the type of the document, a communicating or convincing verb, and the topic of the project or paper without error.

Poster 2.0 Module

At the end of the Poster 2.0 module, students will be able to:

- List the three goals accomplished through the Poster 2.0 layout by completing the fill-in-the-blank quiz in Articulate Rise and scoring at least an 80%.
- Recall the descriptions of each part of the Poster 2.0 through the Articulate Rise multiple choice knowledge check by scoring at least an 80% on the multiple-choice quiz.

- Apply the different color schemes outlined in Articulate Rise's knowledge check by scoring at least an 80% on the matching quiz.

- Create or re-design their own academic poster using the Poster 2.0 version by completing and presenting the re-designing activity at the end of the module and score at least an 80% when the professors grade their work at the end of their presentation.

Learning Strategies behind Canvas Modules

Please note that both of the modules will focus on the same three learning theories: cognitivism, constructivism, and connectivism. The following paragraph discusses how each learning theory will be applied to the two Canvas learning modules, Analyzing Your Audience and Purpose and Poster 2.0.

Primarily, the Canvas modules will use cognitivism by giving students a brief overview of what they will learn (the objectives), key terms, summary, some games, and a research activity. Also, each module will review what students already know through the reading and prior knowledge from TCO 141: Introduction to Technical Communications. Each module will guide the student through the knowledge and content through small chunks of information. The main concepts of each small chunk of information will be covered in the textbook. This will ensure that students can focus on the content they learned in the reading but breaking it down into concepts that will be applicable to them. Each game will focus on terms and main concepts and provide feedback on the students' answers. Cognitivism will show students why learning this material will be important in their jobs and other environments through real-world examples. Next, connectivism, cognitivism, and constructivism will be used through application questions. It will require students to research the important parts and/or examples of each lesson (connectivism) and apply knowledge from the readings and their experience through objectives, examples, and research (cognitivism). Application questions allow students to go to class and discuss their answers in groups and learn from each other (constructivism).

Delivery Strategy

Students will access the course learning modules on Canvas. These modules will cover an overview of the concepts from and support that night's reading. They will cover facts, concepts and assess skills and attitudes. The two strategies will be: online learning modules (through content and games) and application questions to help solidify the knowledge. The sequence of the instructional strategy begins with an overview of the chapter readings through a list of objectives, a 1-2 sentence summary, key terms, an example, and an application question(s) that students may discuss in class.

The list of objectives gives a high level of organization. This will give an outline to students on what they are about to learn in the module. The 1-2 sentence summary highlights the key concepts of the material and how to apply the material to the real-world context (i.e., internships and jobs). A list of key terms defines and focuses on important concepts. These terms are a link for students to understand the material. An example shows that part of the course material in action. Finally, application questions test students' understanding of the material. These questions will be answered before class and give students an opportunity to brainstorm answers for class discussion.

Students desire to understand and apply the material. Course content should show that learning the material is actually fun. The content must lead to a motivating experience by encouraging students that they can learn this material, while an active learning experience links knowledge to skills and help them apply the material through real-world examples. Games make learning fun and incorporate knowledge. The games would include scenarios and stories to help students apply the knowledge they learned to real-world problems. The following games will assess the students' knowledge of the material: matching games, fill-in-the-blank, true/false, label diagrams, and multiple choice. Games will have various formats in each module as students learn differently. They need more than one format so that the modules apply to more than one type of learner.

Importance of Learning Strategies and How They Apply to Modules

Learning strategies define how instructional designers present content to the learners. Learners are all different-not everyone learns the same way. So, instructional designers must relate content to learners in a way they can understand and apply the material in their future contexts-their classes, internships, and careers. Each of the Canvas modules will focus on cognitivism, constructivism, and connectivism to highlight the main concepts in the textbook. These concepts will be reiterated through games and application questions. The games make learning fun while assessing their knowledge of the material. The application questions test students understanding of the material. The application questions assess, 'Can the students associate what they learned from the readings and modules to real-world examples?' These application questions will give the learners (TCO 341 students) an opportunity to research real-world examples and come to class prepared to discuss the concepts from the readings.

Instructional Materials

Summary

The Analyzing Your Audience and Purpose and Poster 2.0 modules will use the following features from Articulate Rise 360: paragraphs with headings, labeled graphics with markers, scenarios, videos, two scenarios (one for each module), multiple-choice quizzes, matching games, and flashcards. The scenarios will give the TCO 341 students a hook and a real-world

example so they can apply the new knowledge and skillsets. The Poster 2.0 module will include and cite a video from Mike Morrison that explains the 'updated' Poster 2.0 design (https://www.youtube.com/watch?v=SYk29tnxASs) . The quizzes, games, flashcards, and diagrams will cover the main points in each module and reflect the course's learning objectives.

Type of Instruction

The learning modules will be through Articulate Rise. Articulate Rise lessons will be used to hold and explain the content. One lesson will cover one chapter. There will be a total of two modules (or two chapters of material). The modules' sections will use chunking, paragraph headings and subheadings, and dividers to break up content and group similar topics. Each module will start with a one-paragraph introduction explaining the content that module will cover and why it is important in the working world. All text parts will use the paragraph with heading feature. Next, a scenario, through Articulate Rise's interactive tab, will give the TCO 341 students a story to follow along. The scenario gives them an opportunity to relate the module's topic to a real-life event in the workplace. The scenario will be referenced throughout the module as students complete the activities. The activities include short answer questions by asking questions through subheading sections. The bolded text will be easy to read and give students an opportunity to brainstorm answers on their own and write notes on a sheet of paper.

Please note that this is the general outline of the two modules. The two modules will slightly differ based on content and order so that students will not get bored and 'zone out' of the modules, however, the foundation and layout of the content will be the same.

Analyzing Your Audience and Purpose Module

The lesson will start with a brief synopsis of what the module will cover (according to the objectives) and a brainstorming question. This question will ask students to write their own definition for 'analyzing an audience'. Next, students will see a section called Analyze Your Audience and Purpose where they will learn what it means to analyze an audience and other important terms from the textbook. The terms should come from the textbook to give the students an opportunity to review what they read, and the flashcard activity from the Block Library under the Knowledge Check section, supports the content from the textbook and resembles Quizlet, a popular studying tool. This connection will help students understand the material. After students study the flashcards, the next section will include a matching game from the Knowledge Check section that matches common terms from the reading and the notecards they studied. The game makes learning fun, prevents the module from being overwhelming, and acts as a virtual hands-on activity.

Poster 2.0 Module

The lesson will start with a brief summary that explains the content of the module and gives students the next steps. Next, a scenario will engage the students through a real-world experience in the workplace. The scenario will include an example of when the Poster 2.0

format might be used. After the scenario, a brainstorming question will prompt students to brainstorm a few design ideas for the poster (before they learn about Poster 2.0). The design for this question will use the subheading format. Students will scroll down to a YouTube video called How to create a better research poster in less time (#betterposter Generation 2) that explains what the Poster 2.0 is. This video is an update from Mike Morrison's original Poster 2.0 video.

After watching the video, a labeled chart, using the Labeled Graphic feature, of the Poster 2.0 will be shown. This chart will explain each part or the 'anatomy' of the Poster 2.0. As the student goes through the module, headings and subheadings will divide the content based on the lesson's objectives and the module's scenario. Paragraphs of text (through text blocks in Articulate Rise) will explain the content, and the text will support the objectives for the Poster 2.0 module. The text blocks will break up content into manageable chunks. These chunks will use dividers in Articulate Rise, so students differentiate between scenarios, charts, and discussion questions. Some of the discussion questions will be in the same paragraph as the content. This grouping depends on how much content is in each paragraph.

CONCLUSION

This section summarized the content and layout of the Analyzing Your Audience and Purpose and Poster 2.0 modules in Articulate Rise. It included a brief description of each section of the modules, their Articulate Rise features, and the evidence for each design and block choices.

Evaluation Plan

Importance of Evaluations in Instructional Initiatives

Importance of Evaluations

Instructional evaluations assess current instructional methods used in a course and propose new instructional methods that will fit the learners' needs.

Strategy Chosen for Instructional Evaluation

For this evaluation, I will use Kirkpatrick's model of evaluation. Furthermore, this memo will describe each level of the Kirkpatrick's model (reaction, comprehension, transfer, ROI), the data sources & metrics I will use to evaluate the instructional methods, and how the results for the evaluation will be used in the Analyze Your Audience & Purpose and the Poster 2.0 modules.

I will not shadow students because there are so many students that have different majors and not enough time nor physical resources to collect accurate data on how they will use the instructional materials.

Reaction

Definition of Reaction Level

The reaction level is where instructors give the learners a survey so the learners can tell the instructors their feedback about their experience.

Sources and Methods

The resource is the information from this survey. This gives instructional designers learners' feedback on the learning environment, professor, instructional content, and anything that would improve future class sessions. The learners submit the survey at the end of the class's session.

Comprehension

Introduction to Comprehension section

This section of the report will define what comprehension means according to Kirkpatrick's four levels of evaluation, where the sources come from and how those sources are obtained, and how I will apply the comprehension level to my two modules.

Definition of Comprehension Level

The comprehension level measures how much do the students understand the material. This tells the teachers or trainers whether or not the students learned anything. This can be achieved through a test, hands-on activity, or daily application of the skills they learned in their job.

Sources and Methods

There will be a pre-test question through a discussion question at the beginning of each module. Even though this question does not count towards their grade, it will help students brainstorm and introduce them to the material before they learn about it. The comprehension level will be tested in the TCO 341 modules through multiple-choice, matching, and labeling quizzes after each chunk of material. Also, an application question at the end of each module, which should be researched and answered before class, will demonstrate to the professors whether the students understood the material through discussion and hands-on activities in class. During students' engineering or technical communications internship, they will comprehend and apply the techniques they learned in class to projects at the internship. A source would be when the TechComm professors email their supervisors to ask how the interns applied their knowledge. Also, students can self-report through their internship logs.

Transfer

The transfer level happens when the learners apply the skills they learned from the training to their jobs. The transfer level will not be used. After the students learn from the TCO 341: Technical Communications modules, they will apply that knowledge to their future classes or

internships. We cannot physically follow every student to their internship or class and collect data on whether or not they are applying the information from their TCO 341 class.

ROI

ROI stands for "return on investment" and measures the value of the course. It figures out the cost of the training and what value the company received from the training, all measured in cost (either in dollars or the local currency). The ROI or return on investment level will not be used. There is a return on investment, but it is hard to track in this instance because we cannot physically measure the because there are no numerical measurements to track, even though this is the most important level in an industry's instructional design project. The students pay through college tuition and the time it takes to learn the material. The company students work at will gain through their experience and knowledge to improve the company's ROI. These modules will not include the ROI because the modules assess student's knowledge of the material.

How The Results Will Be Used in The Modules

Students will take a quiz-matching or multiple choice at the end of each learning module. Articulate Rise will grade the quiz, and the students will receive results automatically. These results will be forwarded to the professors, so the professors have an idea on what the students understand and do not understand regarding the material.

Professors will figure out what the overall class might need help on. The application questions will help students apply what they read in the textbook and learned in the modules to possible scenarios in the corporate world. Students will learn about what they read in the textbook applies to their internships and jobs through scenarios at the beginning of each lesson. These scenarios show, through one mini story per module broken up throughout the lesson, how the students will encounter the concepts in the real-world. Each Professors will answer questions in class on confusing topics based on their answers to the quiz and application questions but will focus on new material.

Conclusion and Recommendations

Recommendations

We recommend that the professors of TCO 341: Technical Communications assign these lessons and incorporate the content within these modules into daily class activities.

Conclusion

The enclosed product is in a team account on Articulate Rise through a collaborative account with Dr. Jennifer Goode. From Articulate Rise, you can import the lessons into Canvas. I believe

that these Canvas modules will increase students' engagement in class through interactivity, periodic knowledge checks, charts, and videos. I enjoyed this project because I earned a new respect for instructional designers and gained new skills in Articulate rise, which will be experience for my TechComm career.