

Synthesis Statement

Professional Skills and Knowledge Overview

At George Mason University (GMU), in the Instructional Design program, I gained professional skills as well as Instructional Design content skills in planning, design, evaluation and management (IBSTPI Instructional Designer Standards, 2012). These skills will enable me to develop better learning solutions to instructional problems as an instructional designer. Professionally, I improved my communication skills, improved my knowledge of instructional design, and learned to use data collection and analysis in project planning. Within the realm of planning and analysis, I learned how to plan instructional projects effectively using needs assessments and analysis techniques to make instructional design decisions. At GMU, I was taught about the importance of planning for instructional interventions through the use of learning assessments in the design and development phases. I also learned to evaluate those interventions to make data-driven decisions about instructional and non-instructional solutions. Finally, I was exposed to the field of project management including how budget and time affect decisions. All of these skills were covered in the courses I took at GMU (IBSTPI Instructional Designer Standards, 2012).

Professional Foundations

A major area of growth for me throughout these three years of study has been the understanding that data analysis is essential at all steps of the instructional design process. Rather than simply go on the feeling that a pedagogical method is working well, instructional system designers (ISDs) collect data at every phase of development in order to ensure that their product is effective. Prior to developing instructional tools, ISDs identify the needs of the client and the audience. During development, ISDs use iterative processes to ensure that errors are caught and the best solution is developed. In my Instructional Design Foundations class, EDIT 705, we learned how to use the ADDIE model to design an entire Instructional Design Document and collaborated in groups to complete the project. The opportunity to collaborate with other professionals was a major source of growth for me professionally. I learned so much from my peers, many of whom are currently actively working in instructional design positions. The resulting Instructional Design Document proposed training for police officers on the topic of DUI investigations. My team worked together to identify the learning need, target audience and project scope. In this class, I learned about the importance of data analysis as we developed plans for a summative evaluation and a confirmative evaluation of our pilot program.

In my Educational Research in Technology Course, EDIT 590, I learned to question the bias of researchers when describing the results of research. According to my meta-analysis research, education studies rarely indicate a strong effect of the applied variable (often an instructional strategy). While researchers may still make claims about the validity and power of their findings,

it is up to the reader to determine whether the claims match the data. Our final project was a research proposal that included a literature review, a proposed study design and proposed data analysis methods. This new skepticism about data proved useful to me when learning about non-instructional interventions in the Business of Learning Design course, EDIT 706. At first it seemed strange to me that an instructional designer might not recommend an instructional solution to a problem, but as we investigated the cases given to us, it became clear that it is important to really look at the data to be sure that an instructional solution is warranted. Sometimes the solution could be a job aid, a motivational tool, an ergonomic solution, or something else. In the business class, I took a close look at the IBM corporation and proposed an Agile Leadership Cohort to help address the decline in revenue worldwide.

In addition to learning about the importance of data analysis, I developed my professional skills in the area of communication and on emerging technologies. In my Adobe Photoshop and Captivate class, EDIT 575, I learned how to combine imagery and text for the purpose of communicating information to learners. We learned visual design principles such as proximity, alignment, repetition and contrast, the use of font to communicate your message and how to maintain a color scheme. The final product was an e-learning tutorial designed in Captivate. This e-learning development tool was fun to use. I could see the potential of the program to develop interactive and engaging e-learning products.

Planning and Analysis

In every course I took during this program, the skill of planning was present in some form or another. Almost every course touched on the importance of identifying the instructional need through a needs assessment or other form of assessment or evaluation. In the Analysis and Design of Technology Based Learning Environments course, EDIT 732, our team identified a target population, conducted an evaluation through a survey we developed and then analyzed our data by developing a WAAD, or Work Activity Affinity Diagram. This process enabled us to see exactly what our potential users thought about the topics we investigated. We were able to identify trends and then put together a plan for a product that would appeal to the target customer. One team member and myself conducted a competitive analysis of applications such as DuoLingo and Khan Academy to identify the features of these innovative e-learning tools. We used several ideas from this research in our prototype.

Design and Development

As a teacher, I have had experience developing learning materials and designing instructional interventions and assessments. This program in instructional design, took those skills and added another layer to them in the form of technology. My courses on Adobe Photoshop and Adobe Captivate were very helpful because they gave me insight into the potential ways that learning can occur online. I enjoyed using Captivate as it is an all-inclusive, user-friendly eLearning application. Within the program are built-in interactive tools such as quizzes and widgets, which makes it simple to create engaging e-learning content. In the Captivate class, EDIT 575, we imported a PowerPoint project into Captivate as the base of our e-learning product and then modified the slides and added interactive slides. I used the “Engaging the Audience” presentation and created a widget, a menu with branching and several different types of quiz questions.

Unfortunately, Adobe only allows users to share their work if they pay for the subscription and I used the trial version. For this reason, the final Captivate project is not available in my artifacts.

In the advanced instructional design course, EDIT 730, we learned about various learning environments and compared the constructivist and objectivist learning environments. I collaborated with a teammate to evaluate Coursera, an online MOOC in a more traditional instructional model, and eCYBERMISSION, an online constructivist and collaborative learning environment that guides teams of students in a science competition. What we found is that constructivism is extremely difficult to design online, whereas objectivist learning environments are easier to design because the knowledge is pre-determined and the methods are simple. With this thought in mind, I undertook to develop an online constructivist learning environment in the model that I thought would be the most conducive to this type of learning, the community of practice. The result was a Homeschooling Community of Practice website, designed to foster collaboration between parents who homeschool their children.

Evaluation and Implementation

In this current semester, EDIT 752, we are continuing to investigate and evaluate our prototype using various methods. This semester, my team used an heuristic evaluation method by having our team take a first look at the prototype using a set of topics developed by Jakob Nielsen (Nielsen, 1995). A teammate and I developed the survey tool using Google forms, which made it simple to collect the data to analyze. After we each conducted the heuristic evaluation, our team got back together to make decisions about the prototype based on trends we saw in the data. We added an additional layer to this by conducting a critical incident report for any errors we found. This helped us pinpoint exactly where we needed to fix things in our prototype. We went through several rounds of changes to the prototype in preparation for the final phase of testing, which will be conducted with potential users. I feel that my coursework fully prepared me for evaluation of instruction, but I am not as confident that I learned about the implementation and dissemination phase. Depending on the type of work I end up doing in the field of instructional design, this may or may not be a concern.

Management

Several of my courses at GMU touched on the importance of managing partnerships with stakeholders and collaborative relationships with team members who can provide valuable input into projects. In the business class, EDIT 706, I learned that stakeholders and others who help make decisions must be consulted and included in every phase of the project in order to ensure buy-in. A big take-away for me on the topic of management is that framing solutions in a positive way, or using “positive psychology,” is very important to success. In business, instructional design solutions, which I’ve previously understood to be solutions to “problems,” have to demonstrate added value for the company and should be marketed as a positive way forward. Managing expectations of stakeholders is part of the role of an instructional designer. In EDIT 732 and 752, I worked with a team to design a functioning prototype of a mobile application to learn coding skills in the functional programming language of Scala. Often our expectations for what we could achieve with the prototype far exceeded what we were actually

able to produce and we had to scale back, refocus on what was essential, and return to our data to help us make strategic decisions.

Conclusion

A major theme throughout my studies in the instructional design program at GMU has been the importance of making data-driven decisions when determining whether an instructional solution is needed and what kind of solution would best fit the identified problem. In reality, many instructional decisions are made based on tradition (we've always done training this way) or availability of resources (this is what we could afford) rather than based on identified needs. Going into the field with this awareness will help me make better decisions when it comes to designing instruction. I hope that my employers will provide me the opportunity to engage in the phase of analysis before jumping into design.

Resources

IBSTPI Instructional Designer Standards (2012). Retrieved from <http://ibstpi.org/introducing-the-2012-instructional-design-competencies/>

Nielsen, Norman (1995). *10 Usability Heuristics for User Interface Design*. Nielsen Norman Group. Retrieved from <https://www.nngroup.com/articles/ten-usability-heuristics/>