INSTRUCTIONAL DESIGN BEST PRACTICES GUIDE

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DL5703

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October 9, 2022

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Introduction

Instructional design is a system where instructional materials and resources are created to help people or companies learn new information or skills in an effective and appealing manner. Instructional design puts together education, psychology, and communications to make the best effective learning plans for a group of people (Purdue Online, 2022) This is extremely vital because when leaners or students receive content in a way that is effective and meaningful to them, then it helps them retain the information, and they are more successful with understanding the content. Instructional designers utilize their knowledge of effective and best practices in instruction to develop content for any group of learners across various platforms.

The purpose of this instructional design guide is to highlight best practices and strategies within instructional design. It is designed for or focuses on designers who desire to create effective learning content for adults in higher education settings. According to Ritzhaupt, Kumar, & Martin, 2021, "Instructional designers in higher education provide both professional services and products to their stakeholders in the form of course design, development, and evaluation; professional development opportunities; and technical and pedagogical support for faculty, staff, and students." The instructional designer must be able to design courses for various settings and various learners. The characteristics needed for instructional designers in higher education settings may include: strong communication skills, knowledge of learning theories, innovative thinking, student and goal centered, and creativity.

Instructional Design Models and Frameworks

Dick and Carey Model

The Dick and Carey Model is a systems approach to design instruction. It designs course content with a series of nine steps that work together toward a defined instructional guide (D'Angelo, Bunch, & Thoron, 2018). It is an iterative process that focuses on design and continuous revisions of instruction. The steps for this model are: 1. Identify instructional objectives and goals, 2. Complete an instructional analysis, 3. Determine the learners' characteristics and behaviors to help design your course effectively, 4. Write performance tasks and objectives, 5. Develop and write assessments that are criterion based, 6. Develop and determine instructional strategies, 7. Choose appropriate instructional materials and activities, 8. Implement formative evaluations, and 9. Implement a summative evaluation (Pappas, 2015).

ASSURE Model of Learning

The ASSURE Model is a systemic approach to planning and delivering instruction that integrates technology and media into the teaching process (Williams, n.d.). The ASSURE Model stands for: analyze learners, state standards/objectives, select strategies, media, and materials, utilize technology, media, and materials, require learner participation, and evaluate and revise (Kurt, 2015). The ASSURE model is a model that is best for instructors who need to integrate technology into their instruction. It helps them understand how to use technology in the best possible way to enhance the learning experience, and it also helps instructors to understand which technology is the best for a given context.

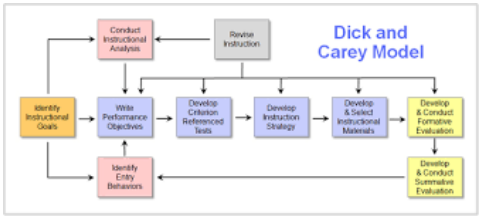
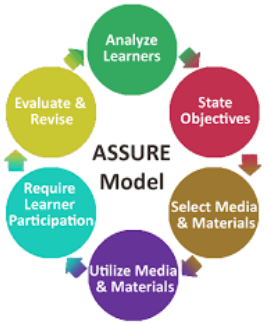
Kemp Model of Design

The Kemp Model is a circular model rather than a linear model that encourages working on the components as needed, which gives the designer flexibility in designing with this model. It is a continuous cycle. This model is helpful in developing blended instructional programs that include technology, content, and pedagogy to deliver reliable, effective, and efficient instruction (Instructional Design Models, 2022). It has nine different components of instructional design. These components are: 1. Decide and define the specific goals or instructional problems, 2. Recognize and examine learner characteristics that can include: learning needs, learning styles, background knowledge, and age, 3. Identify the course content and the overall task elements for the module or unit, 4. Define instructional objectives and learning outcomes, 5. Sequence course content to ensure that learning is presented in a logical way, 6. Design instructional strategies that will be effective in learners mastering the objectives, 7. Plan the instructional message and how it will delivered to the learners, 8. Develop evaluation tools to measure and assess the course objectives, and 9. Select the appropriate resources that will support both teaching and learning activities (Kurt, 2016).

Chart Comparison of Instructional Design Models

Model:	**Dick and Carey Model**	**ASSURE Model of Learning**	**Kemp Model of Design**
Description:	A systems approach that is iterative and works toward a defined instructional goal.	Model that is a systemic approach to creating instruction and delivering that combines technology and media into the learning process.	Circular model that highlights evaluation and gives flexibility to the designer to work on components as needed

Summary:	**Steps:** 1. Identify instructional objectives and goals 2. Complete an instructional analysis 3. Determine the learners' characteristics and behaviors to help design your course effectively 4. Write performance tasks and objectives 5. Develop and write assessments that are criterion based 6. Develop and determine instructional strategies 7. Choose appropriate instructional materials and activities, 8. Implement formative evaluations 9. Implement a summative evaluation.	**Steps:** **A**nalyze learners **S**tate standards and objectives **S**elect strategies, media, and materials **U**tilize technology, media, and materials **R**equire learner participation **E**valuate and revise	**Steps:** 1. Decide and define the specific goals or instructional problems. 2. Recognize and examine learner characteristics that can include: learning needs, learning styles, background knowledge, and age. 3. Identify the course content and the overall task elements for the module or unit. 4. Define instructional objectives and learning outcomes. 5. Sequence course content to ensure that learning is presented in a logical way. 6. Design instructional strategies that will be effective in learners mastering the objectives. 7. Plan the instructional message and how it will delivered to the learners. 8. Develop evaluation tools to measure and

			assess the course objectives. 9. Select the appropriate resources that will support both teaching and learning activities.
Advantages:	Great for beginner instructional designers, gives a foundational methodology, and emphasizes performance improvement and target skills	Easy to follow, learner centered, and utilizes technology.	Not confined to step by step model, takes learner into consideration, flexible
Disadvantages:	Often thought of as not being a flexible model	The use of technology may not be needed for every lesson. Heavily focused on academic setting, so it does not often lend itself to a workplace setting if that is needed.	May be time consuming
Visual Model:	**Figure 1** 	**Figure 2** 	**Figure 3** 

Instructional Designers

An instructional designer provides learning experiences to the corporation or educational institute that they service as. Instructional designers can be employed in various settings that include: higher education institutes, government entities, business sectors, and K-12 educational institutes as the primary person to design or redesign courses and create learning materials for different learners. The role of an instructional designer can involve collaboration, designing and developing learning content, evaluate new eLearning technologies and learning management systems, create visual job aids and graphics, evaluate and analyze learning materials, conduct research of learners and content, train colleagues how creating presentations or presenting content effectively, etc.

There are many necessary technology skills that an instructional designer needs to employ. The ability to learn various technology tools quickly and independently is one. An instructional designer has many different tools that can be used to help them in creating courses. Different tools are needed for different objectives. No tool is a one size fits all for every scenario, so an instructional designer has to be able to learn new technology and how to use it effectively. Technology is every changing, so an instructional designer has to always stay up to date on the resources. Another skill needed is to the ability to build courses in various platforms such as Articulate or Adobe Captivate. Many institutes and corporations require their eLearning courses to be built in a platform of their choosing, and the instructional designer needs the necessary skills to build these courses. Other technology skills needed can include: graphic design, video editing, web design, proficiency in Microsoft Office Suite or Google Suite, and audio editing.

Blueprint Template Using the Kemp Model

Title of Course	Discipline	Description of Course
Creating an Interactive Guide in OneNote	Technology Integration	This course is for educators in higher education settings to create an interactive guide using Microsoft OneNote. Educators will be able to create notebooks that will help with organization and collaboration with students as well as colleagues.

Instructional Problem/Instructional Goal:

The instructional problem or goal addressed in this module is for educators to be able to use OneNote in an effective and efficient way to organize their course materials and to collaborate with students and colleagues.

Learner Characteristics:

Level: Educators in higher education settings
Prior Knowledge: Basic understanding of Microsoft Office Suite and/or OneNote is beneficial but not needed.

Course Content and Task Components:

Learning Outcomes:

1. By the end of the first module in the course, learners will be able to explain at least two benefits of the use of OneNote in their course.
2. By the end of the second module in the course, learners will identify three ways on how to effectively organize their OneNote notebook.
3. By the end of the course, learners will produce an interactive OneNote notebook that can be used in their course.

Instructional Objectives:

1. In this course, learners will learn how to navigate the OneNote interface.
2. In this course, learners will learn different ways to organize OneNote notebooks by categorizing and searching notebook content.
3. In this course, learners will learn how to create a OneNote notebook and adjust the settings to fit their needs.
4. In this course, learners will learn how to create and add pages and content within OneNote.
5. In this course, learners will learn how to distribute OneNote notebooks to colleagues and students.
6. In this course, learners will learn how to plan activities using
7. In this course, learners will learn how to add and format different elements such as: text, audio, images, links, and drawings in a OneNote notebook.
8. In this course, learners will learn how to embed files into a notebook.
9. In this course, learners will learn how to export OneNote content to create a backup.

Sequencing Content:

Instructional Strategies:
Instructional Message and Mode of Delivery:
Formative and Summative Evaluation Tools:
Resources:
Notes:

Project Management Strategies

Define

Project managers, like instructional designers, are essential in the development of eLearning content. The role of a project manager for the development of eLearning content is provide expertise and strategies into how to effectively manage instructional design projects (Allen & Gardner, 2021). Project managers will work to make sure that requirements and objectives are being met in the way that works for the project. They are essential in supervising the project, coordinating meetings, ensuring goals are on track to being met, as well as other duties that pertain to ensuring the project is completed effectively and efficiently.

The role of the project manager is closely related to the role of an instructional designer, but they are not the same. An instructional designer will sometimes take on the role of project manager with managing deadlines, communication, and goals. The project manager's goals are to manage the project, which may include looking at budgets, time constraints, expectations, etc., while an instructional designer's goals may be to author an eLearning course, scripting, and choosing content tools for their course.

Explain

Four strategies used by project managers during the development of eLearning content are: 1. Clear communication between project members, 2. Set clear and achievable expectations, 3. Documentation of progress and the process, and 4. Plan and prepare for challenges and risks.

A project manager is effective in managing communication between project members. Allen and Gardner (2021) stated, “It is conceivable that effective communication is critical to managing instructional design projects because multiple components and levels of complexity must be understood and effectively communicated to ensure the purpose and activities necessary for properly accomplishing the projects' goals are met.” Project managers will need to make sure that all stakeholders are on the same page and understand the scopes of the project. This is done through effective communication. To effectively communicate, project managers will need to make sure that a clear communication tool is set and understood by all members involved.

A project manager will also need to set clear and achievable expectations and goals. Communication has to be managed at all stages of a project because it is easy for misunderstandings to occur (Pasian & Woodill, 2006). Setting clear expectations and goals will help in reducing potential problems and will help with productivity as each stakeholder will all be in understanding of what is needed and why it is needed.

The third strategy a project manager will use is documentation of the process and the progress. Documentation aids in providing stakeholders with a written guide of what the project will look like at each juncture and will aid in showing progress of the project. It also helps with future projects because it will show challenges faced and what worked well.

The fourth strategy is that a project manager will plan and prepare for challenges or risks that may occur within the project. As stated by Allen and Gardner (2021), “Organizations face many challenges; some of these challenges require them to quickly adapt and make difficult changes.” An effective project manager will adapt to challenges and will anticipate some of the challenges before they happen. Planning and preparing for challenges will help in ensuring that the project is completed as efficiently and effectively as possible.

Identify

One issue that could arise during eLearning development is having a course that isn't being designed in a logical sequential way that is effective for student learning. Sequencing instruction is done best by using a systematic approach and involves making key decisions at various stages in the development of eLearning courses (Sanga, 2019). Logical sequence in an eLearning course is important because it provides the learners with a clear path and patterns that will help learners understand and connect the content that is being taught. One way a project manager could overcome this is by setting the expectation that sequence is important and then providing a plan for scope and sequencing content. This could include a template that addresses how the content and shows how each topic connects from one part to the other.

Another issue that could arise is not creating effective content. When developing eLearning content, courses may will need to be redesigned so that the focus of instruction will contain more visual presentations that will be carefully timed and will engage learners (Sanga, 2019). This will aid in learners retaining the information and being engaged with the content. Often during eLearning content development, some stakeholders will not know the importance of interactive and visually appealing content for learners. The project manager can aid with this issue by making sure in the project plan there are concise expectations of making sure the content is interactive and effective for what is being taught.

A third issue that could arise in eLearning development is making sure the content provided is what the learner really needs to learn and know. A traditional class set up can sometimes have a lot of "fluff" material that isn't really needed. Moving to an eLearning platform can come with constraints on time, so the "fluff" would need to be eliminated. The content provided may be a lot and seem overwhelming, so the project manager can overcome

this by making sure that subject matter experts are on the project team. A subject matter expert will provide the expertise needed to make sure the needed information is provided in the course.

Code of Conduct

Introduction

The code of conduct for instructional designers is an important one to discuss. Instructional designers should not start designing instruction or learning courses without first thinking through the why the course is even necessary. Many time courses are designed without much of a thought process or without consideration for certain things. This could because of a request from a company or client, but it could also be because there are designers who just enjoy designing. The creation of the following code of conduct considers different things such as the why, the resources, copyright, and integrity of being an instructional designer.

Reflect

Instructional designers all have different ways and practices they use to design. There is no one size fits all formula for designing learning content. However, the role frameworks, theories, and principles play in the ethics of being an instructional designer is an important one. These things are just some of the competencies that a designer needs to be an effective, hirable designer. Without knowledge of these things and how they work, an instructional designer is not using best practices in designing learning content for the stakeholders they are working with.

Consider

Instructional designers have a duty to create effective learning content for the company or organization they are working for. It is a multifaceted field that needs to consider different theories, practices, technologies, and frameworks while creating materials. Instructional designers are expected and need to have different skills to complete their job as expected (Klein & Kelly, 2018). It is acceptable for instructional designers to be able to communicate effectively,

have research skills, and to know various learning technologies and frameworks, just to name a few. The things instructional designers that are not acceptable are to design without any knowledge of learning best practices and theories and not to effectively communicate with stakeholders. One example of this is pertaining to time constraints. Unrealistic deadlines can be an issue with producing best quality. This could lead to the designer not being upfront about what their capabilities are on a project and can result in them producing lesser than what they would consider quality work. Davies et al. stated that, "The more one ignores these fundamentally moral aims of one's work, the less effective will be the resulting product." The designer has to be completely honest with stakeholders about the design process and how long it could take despite unrealistic deadlines that may be put on them.

Describe

One moral dimensions of this professions is not only the ability to provide effective content, but to also make sure that the fair use policy is followed and that the content is accessible for all learners. When instructional designers are designing, they should try to be as original as possible. There are times when other resources are used, and this is fine as long as the fair use policy considerations are followed. The Copyright Act thoroughly explains the dimensions of the fair use policy and how using copyrighted works of others can be done in an ethical and legal manner. When using creative and original works that are not in the Creative Commons, the copyright status of, licenses, exemptions, and permissions then have to be considered (Seibert, Miles, & Geuther, 2019). This means that the instructional designer has to be mindful of the content they are using to create their learning content. If they are not, they can be violating legal policies, and they run the risk of losing their integrity as a designer.

Another dimension that should be considered is the accessibility of the content. The American with Disabilities Act (ADA) bans discrimination against people based on their disabilities in full and equal enjoyment of services, privileges, goods, and accommodations. This means that instructional designers have to take into consideration how their content can be reached and accessed by all learners. King and Piotrowski (2021) stated that, "Accessibility requirements have moved to the forefront of consideration in the development and continued use of online educational materials." Things that should be taken into consideration include: images, audio files, videos, fonts, time limits, colors, and a host of other things. For example, if a video is provided, the video should include closed caption and/or a transcript for learners who may be hard of hearing.

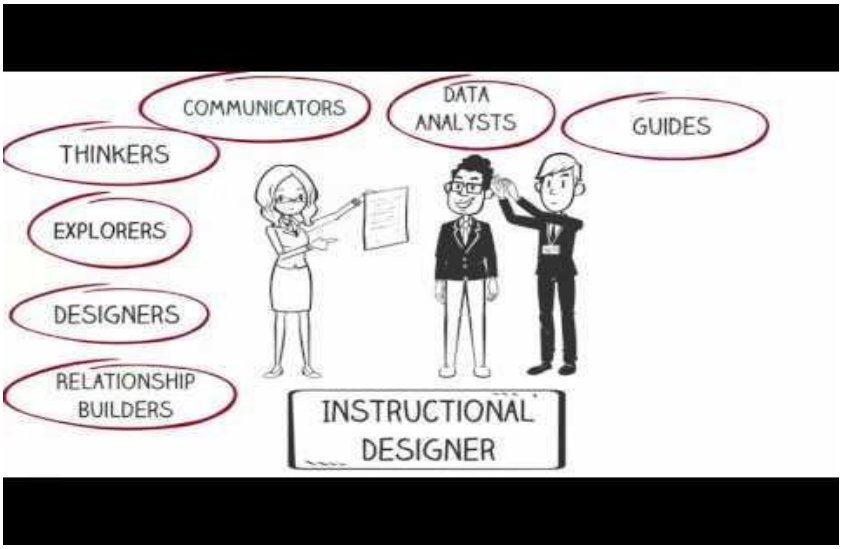
Develop

1. Be creative and original in course design and learning content materials. Keep in mind of the fair use policies in times where other content is used.
2. Design solutions and not just meaningless courses.
3. Know different theories, frameworks, and practices and how they can work together. Recognize nothing is one size fits all.
4. Abide by ADA requirements and consider the learning styles of all learners.
5. Always uphold a standard of privacy and confidentiality. The stakeholders have to be able to trust you with their information and their best interest.
6. Always provide clear, concise, and honest communication with the design team and stakeholders.
7. Research instructional design and learning trends. Know any updates in best practices and how to apply them.

8. Build and maintain positive and productive relationships with stakeholders through empathy, honesty, and consistency in giving quality work.
9. Keep up with technological advances as it pertains to learning management systems, learning tools, and other technology tools that are used in the design process.
10. Be teachable, open-minded, and patient.

Videos

The following video will highlight what an instructional designer does. It gives a very short, informative overview into what instructional design actually entails.



The following video discusses uses of other frameworks beyond ADDIE. ADDIE is a commonly used framework for most instructional designers. This video gives a great insight into other frameworks and how to apply them.


BEYOND
ADDIE
SAM?
DICK AND CAREY?
ACTION MAPPING?

Infographics

The following infographics give visual representations of mistakes to avoid as an instructional designer, the roles of an instructional designer, and skills and trends found withing instructional design.

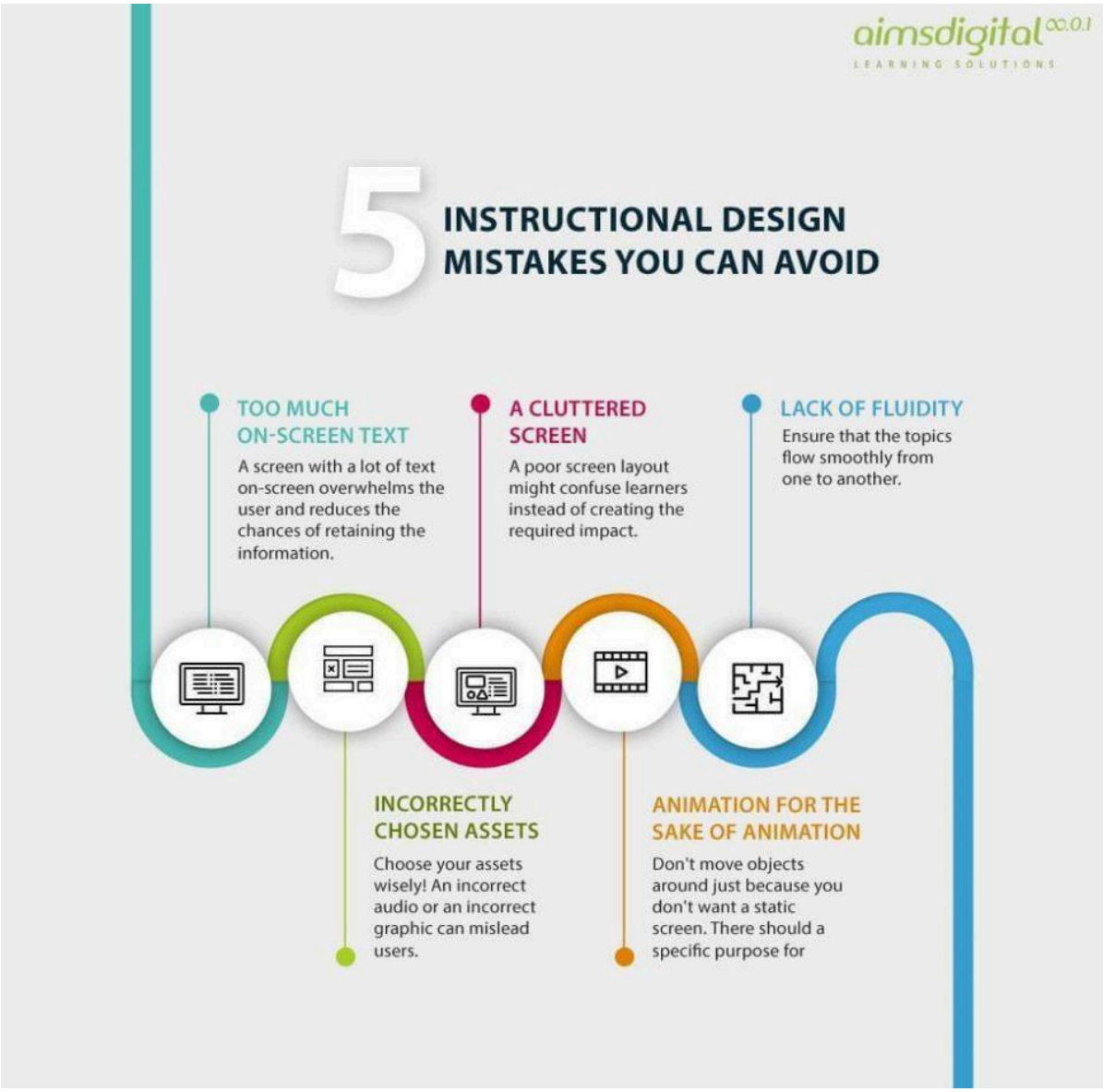


Figure 4

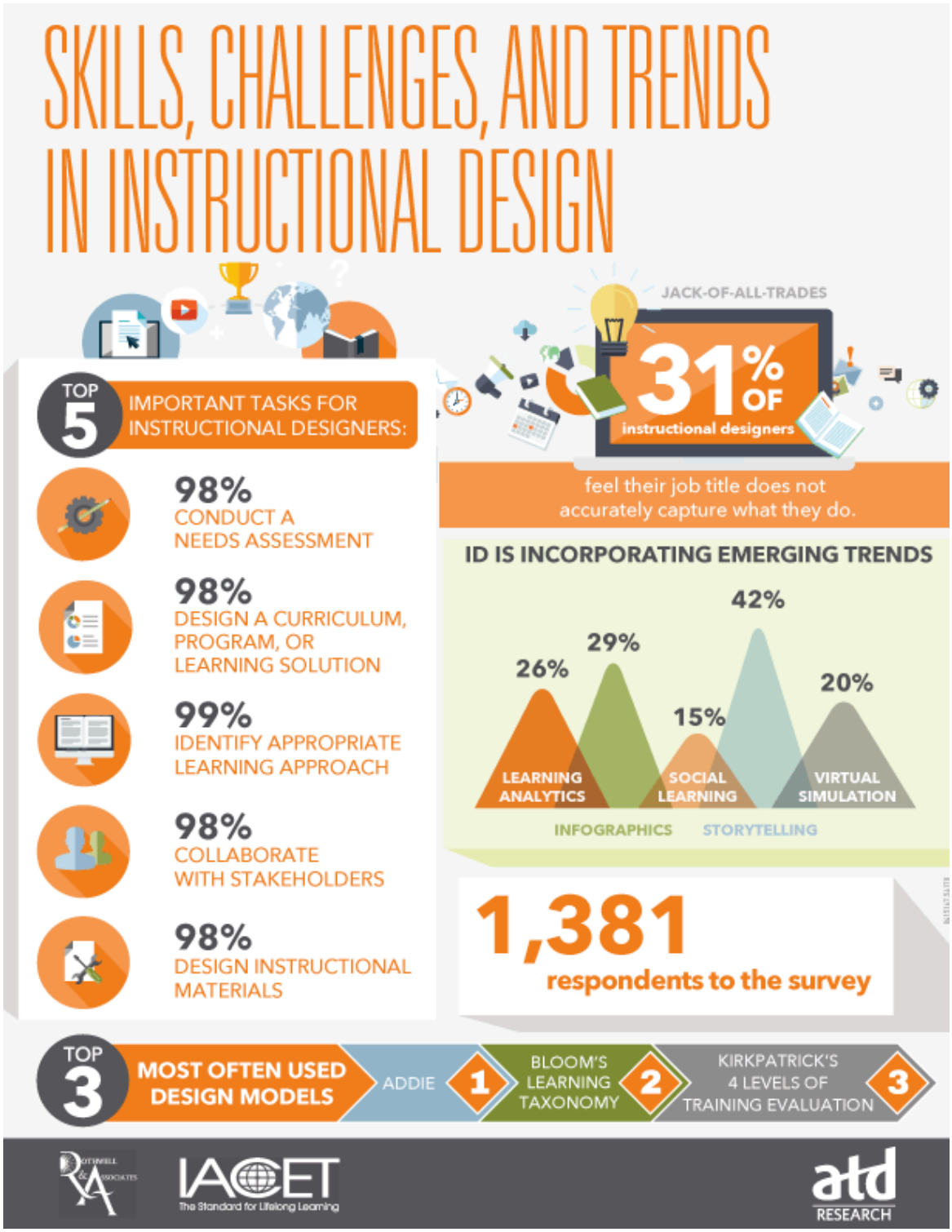
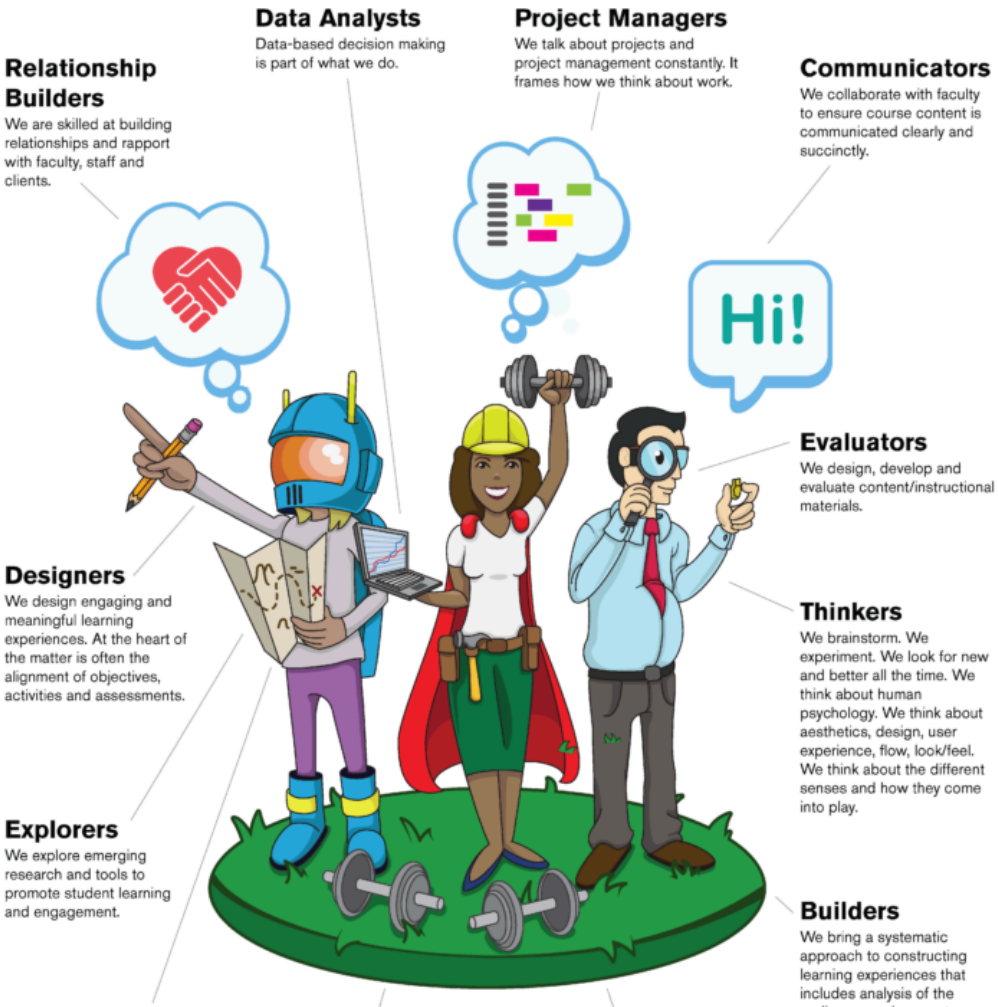

SKILLS, CHALLENGES, AND TRENDS IN INSTRUCTIONAL DESIGN
TOP 5 IMPORTANT TASKS FOR INSTRUCTIONAL DESIGNERS:
98% CONDUCT A NEEDS ASSESSMENT
98% DESIGN A CURRICULUM, PROGRAM, OR LEARNING SOLUTION
99% IDENTIFY APPROPRIATE LEARNING APPROACH
98% COLLABORATE WITH STAKEHOLDERS
98% DESIGN INSTRUCTIONAL MATERIALS
JACK-OF-ALL-TRADES
31% OF instructional designers
feel their job title does not accurately capture what they do.
ID IS INCORPORATING EMERGING TRENDS
26%
29%
15%
42%
20%
LEARNING ANALYTICS
SOCIAL LEARNING
VIRTUAL SIMULATION
INFOGRAPHICS
STORYTELLING
1,381 respondents to the survey
TOP 3 MOST OFTEN USED DESIGN MODELS
ADDIE 1
BLOOM'S LEARNING TAXONOMY 2
KIRKPATRICK'S 4 LEVELS OF TRAINING EVALUATION 3
IACET The Standard for Lifelong Learning
atd RESEARCH

Figure 5

The Many Roles of Instructional Designers



Data Analysts
Data-based decision making is part of what we do.

Project Managers
We talk about projects and project management constantly. It frames how we think about work.

Relationship Builders
We are skilled at building relationships and rapport with faculty, staff and clients.

Communicators
We collaborate with faculty to ensure course content is communicated clearly and succinctly.

Evaluators
We design, develop and evaluate content/instructional materials.

Designers
We design engaging and meaningful learning experiences. At the heart of the matter is often the alignment of objectives, activities and assessments.

Thinkers
We brainstorm. We experiment. We look for new and better all the time. We think about human psychology. We think about aesthetics, design, user experience, flow, look/feel. We think about the different senses and how they come into play.

Explorers
We explore emerging research and tools to promote student learning and engagement.

Builders
We bring a systematic approach to constructing learning experiences that includes analysis of the audience, environment, objectives, content, technologies, etc. Planning maps, guides, templates, process docs, outlines and storyboards are all part of the way we approach projects.

Consultants
We consult faculty on course mapping. We provide expert advice on pedagogy and instructional strategies.

Superheroes
Look! Up in the sky! It's a media producer! It's a collaboration expert! It's an ID! We do great things!

Trainers
We provide resources and training on course design, tools and technology.

ASU EdPlus
Arizona State University

BEST COLLEGES U.S.News MOST INNOVATIVE 2021

Figure 6

Conclusion

Instructional design is the planning and designing of learning content that will be used by different people to gain new knowledge or skills. The purpose of this guide is to give an overview of best practices and strategies that an instructional designer will need to know. This guide provides an overview of three frameworks (ASSURE, Kemp Model, and Dick and Carey), gives a code of conduct, and discusses project management strategies. The guide also provides videos and infographics that new instructional designers may find helpful. Instructional designers will need to utilize a variety of skills and knowledge to provide effective learning content. This guide strives to provide a good starting part or overview of what is needed to be a successful instructional designer.

Glossary

ASSURE Model of Learning- An instructional design model that is a systemic approach to planning and delivering instruction that integrates technology and media into the teaching process

Code of Conduct- the policy of a company that outlines the standards and principles of that company

Dick and Carey Model- A systems instructional design model that is iterative and works toward a defined instructional goal.

Kemp Model of Design- A circular instructional design model that highlights evaluation and gives flexibility to the designer to work on components as needed

Instructional Design- a system where instructional materials and resources are created to help people or companies learn new information or skills in an effective and appealing manner

Iterative- a process that can continuously be improved or an action that can be repeated

Project Management- the process of planning and executing a project

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