DESIGN THINKING
FOR THE INSTRUCTIONAL DESIGNER

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allen
interactions
LEARNING. FOR A CHANGE.

What is Design Thinking?

"Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success."

 - Tim Brown, author Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation and CEO of IDEO

"Design Thinking is the confidence that new, better things are possible and that you can make them happen." **- Design Thinking for Educators Toolkit, 2012 IDEO**

In Design Thinking You…

- Involve a hybrid team
- Overcome functional fixedness
- Suspend concerns of what is possible
- Believe in the power of empathetic design rules
- Recognize that failure is GREAT!

What is an Instructional Product?

Moving beyond a delivery mechanism for transferring content from subject matter experts to employees, an instructional product has a goal of teaching a specific behavior.

"...instruction isn't primarily about presenting information. And learning isn't primarily about knowing things. The goal is always about performance. What can people do with their new knowledge? What skills are necessary for success? One never succeeds without doing something."

Leaving ADDIE for SAM

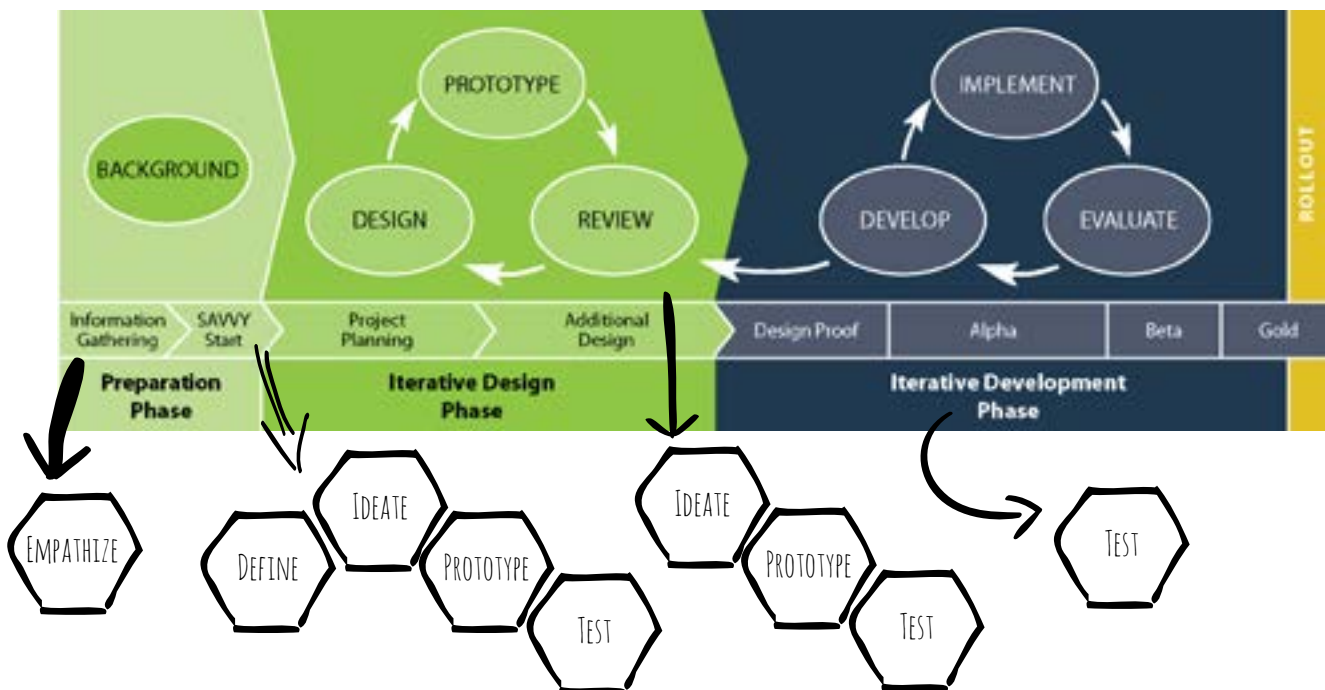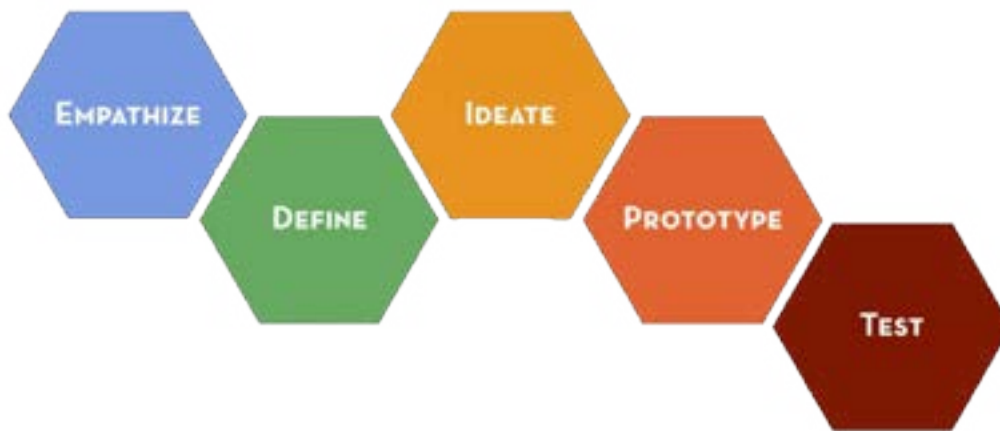## Allen Interactions believes that learning should be...

- **Meaningful**: ensures learners can connect the new content to their current knowledge and skills
- **Memorable**: provides learners the ability to perform effectively at the time of most value
- **Motivational**: builds on existing learner motivation and works to push it higher

In order to create instructional products that are meaningful, memorable and motivational, we recommend using the CCAF model.

THE RELEVANT SITUATION AND CONDITIONS A LEARNER MUST TAKE INTO ACCOUNT WHEN PERFORMING A TASK

A STIMULUS FOR THE LEARNER TO ACT

CONTEXT CHALLENGE

FEEDBACK ACTIVITY

AUTHENTIC RESPONSES TO CHALLENGES

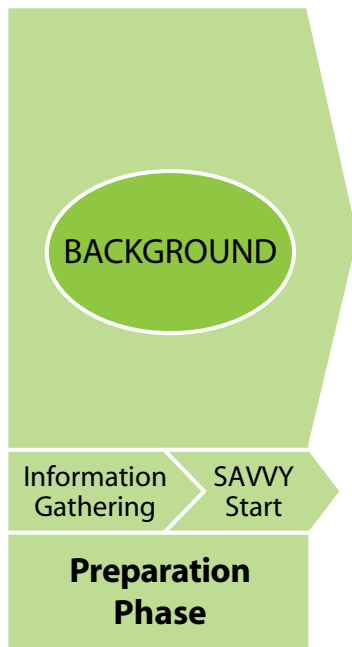CONSEQUENCES AND JUDGMENTS BASED ON LEARNER ACTION (OR INACTION)

A Match Made in Heaven: Design Thinking ♥'s SAM

Because both Design Thinking and good Instructional Design focus on the end user (the learner in our case), the process defined by Stanford mirrors many of the events of the Successive Approximation Model (SAM).
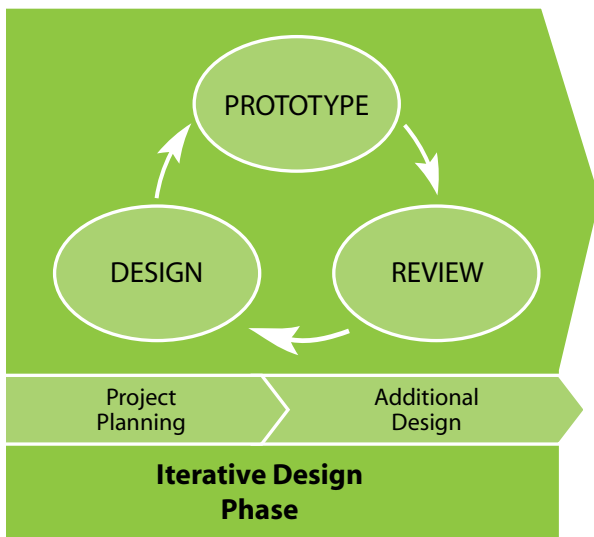
BACKGROUND

| Information Gathering | SAVVY Start |

Preparation Phase

Preparation Phase

During Information Gathering, we being to empathize with the learner audience, gathering details about previous performance improvement efforts (if any) and their outcomes, programs currently in use, and current performance challenges.

Then, we conduct a Savvy Start. "The Savvy Start is a solutions brainstorming event in which the design team and key stakeholders review collected background information and generate initial design solutions." During the Savvy Start, we will work to Define, Ideate, Prototype and Test initial design sessions.

PROTOTYPE

DESIGN

REVIEW

| Project Planning | Additional Design |

Iterative Design Phase

Iterative Design Phase

In Iterative Design, we work to further the ideas and prototypes that came from the Savvy Start. If there are behavioral and performance objectives that were not addressed during the Savvy Start, we will need to schedule subsequent design sessions to cover these topics. For each prototype, we will evaluate the design with a group of representative learners. We determine what should be improved, revised or removed. We ask the learners for input (ideate) on alternate ideas that may work better, then prototype and evaluate that design.

The important thing to recognize, however, is that at some point we must stop iterating design and move to development. Too many great ideas are abandoned at the prototype stage because time, money, or both, runs out! We can prevent this from happening by refining our design, not recreating it, with each evaluation. We take deliberate steps to improve the design – we do not start over unless absolutely necessary. After all, there was merit in the design that got us this far! Maybe a few tweaks is all it takes to get to something that really works.

Iterative Development Phase

Though Design Thinking is focused on the design of the product, Instructional Design must take development into account—after all, we have a course to produce.
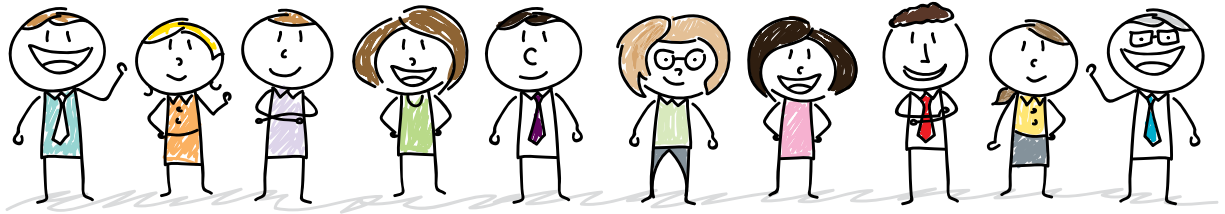
Keep the tenet of empathy close to your heart. Don't walk away from your learners now! Have them help you create words that sound authentic, use images that are representative of their world, and sounds that create a realistic context.

NOTE:

Life in Beta: In the software world, it's common practice to push a beta product live. The development team understands the product isn't perfect, but is instead a minimum viable product. With money and time left on the project, there is room for continual improvement based on real user input. If this is a possibility in your organization, pushing out a beta version of your course could garner the richest user feedback. By adopting a philosophy of continual improvement of your instructional products, you also reduce the risk of courses feeling outdated and sitting on the shelves of the Learning Management System.

"The right people are not necessarily the ones who understand the content, but are people who can provide ideas, support, information, direction, creativity, and possibly inspiration." – **Leaving ADDIE for SAM**

Sometimes you just can't see the forest for the trees. Involving a multi-disciplinary team in your design provides you the opportunity to gather new insights from a diverse group of people with varied backgrounds, experiences and points-of-view. This team works collectively from the first meeting to the launch of the course, which helps build a sense of ownership and pride in the final product. Since there are business drivers, and this is an organizational product, you'll want to select the right team to produce a successful learning experience. This can include:

Budget Maker	Performance Problem Owner	Supervisor/Leader of Performer	Recent Learners
Helps maintain scope	Communicates the organization's definition of successful performance	Closest to the real performance issues. Is great at offering examples of challenges and success	Offers the perspective of the unknown

Representative Learner	Project Manager	Instructional Designer	Prototyper	Subject Matter Expert
Knows what it is like in the trenches. Understands the performance and context of work environment	Keeps everyone on track and ensures resources are allocated	Makes recommendations of instructional treatments, and potentially builds and writes the program	Builds functional prototoypes to provide an opportunity to visualize the ideas sketched	Knows the content… sometimes too well!

Functional fixedness is a "mental block against using an object in a new way that is required to solve a problem."

- Dunker 1945

Instructional programs are often victims of functional fixedness—e-learning courses use the same template, using the same formula repeatedly. Instructor led training programs also become formulaic—there is a PowerPoint® presentation, a facilitator guide, a participant guide and some snacks. In Design Thinking, we need to challenge our teams to break away from what has been done in the past. We must push ourselves to create a product designed with the intent of solving a specific performance challenge.

A great technique for accomplishing this and kicking off your meeting, is to ask each team member to think about the hardest thing they ever had to learn. Go around the room sharing stories of what you had to learn and how you learned it. Very rarely will you hear a response indicating that someone learned how to do something simply by reading about the topic. They will explain they learned by doing! This drives the conversation to the importance of creating a course in which learners perform the task, or a representation of that task, rather than simply providing content.

Another way to expand the mind and open it to creativity is to flex the creative muscle! If you find your team stuck in the rut known as functional fixedness, try these two exercises on thinking of common objects in new ways.

Two Tools for Overcoming Functional Fixedness

Alternative Uses: Developed by J.P. Guilford in 1967, the Alternative Uses Test helps team members expand their creative thought process by thinking of new ways to use existing objects. Give the team two minutes to write down as many uses as they can think of for a traditional object. Common objects to use for this test are a brick, a paperclip, a coffee mug, or a water bottle.
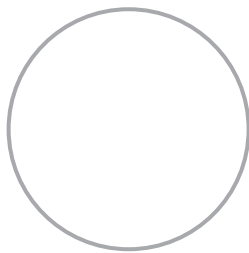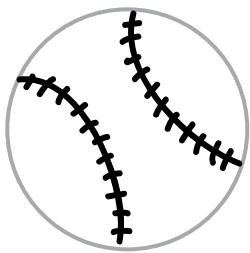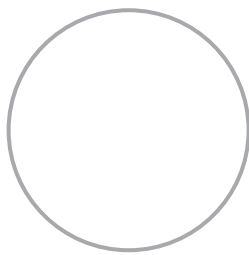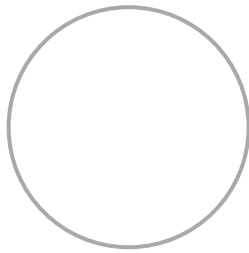
After two minutes, have the team stop. Then, without having them share their list, have them perform a mundane task—sorting toy bricks or M&Ms (for Meaningful, Memorable, Motivational) or sorting a deck of cards into suits in numerical order. They perform this mundane task for a few minutes (but no more than 10).

Then, have the team repeat the original task, using the same object. You'll find their answers on the second list are more creative than the first.

Use the concept of mundane task breaks to allow for creative processing during your brainstorming and sketching sessions. When you come up with an idea, sketch it down. Then spend a few minutes doing a mundane task – have the team sort the bricks or the cards, take a break, then revisit the performance challenge for which you were sketching. Did you come up with new ideas during that break?

Note, distance from the creative process is another reason why the Savvy Starts stretch over multiple days. Often, the best ideas (those ah-ha! moments) occur when time elapses and the brain rests. If you are hosting a Savvy Start over the period of a few days, tell your team to sleep with a notebook and pen next to them. You'd be surprised at the number of "oh, this would be the perfect interaction! moments" that occur during the middle of the night after the first day of the Savvy Start.

Circle Test - Included in the famous Torrance Tests of Creative Thinking is one that Tim Brown gave the audience during his Ted Talk on creativity. For your team, prepare in advance a sheet of paper (one per person) with 30 blank circles on it. Ask the team to spend 60 seconds drawing all the potential things they can think of inside the circle. Perhaps they will make the circles into faces, a peace sign, the earth, etc. The more creative the better.

Warn the team that after 5-7 ideas, they will likely feel stuck. That is normal. Tell them to push through, to feel uncomfortable and stuck, and (most importantly) to work through it. In a wave, a breakthrough will hit and new inspiration will occur. If the brain was scanned at this moment it would light up like fireworks. This is breaking the blocks and moving beyond functional fixedness.

Then, have the team get together and compare what they have created. After all, inspiration and creativity are contagious!
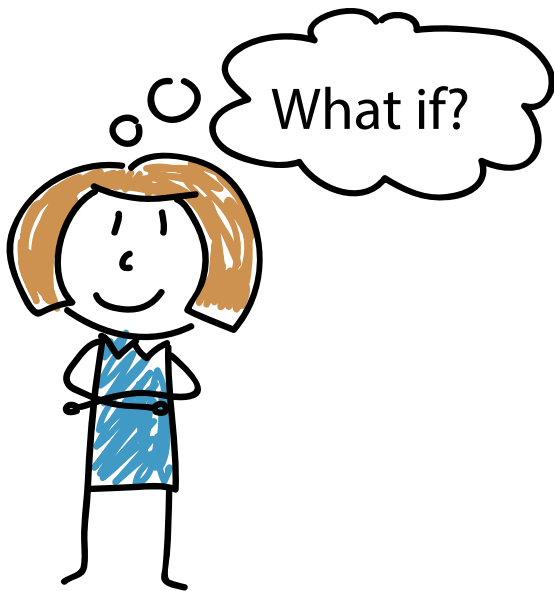
PRO TIP

Prior to the beginning of the Savvy Start (or design session), you'll want to ensure the team invited knows what to expect. Starting with a creative invitation might give a clue of what is to come. Instead of, or in addition to, the standard meeting invitation, here are some creative alternates:

- send each team member a set of markers and colorful sticky notes

- create an infographic of the proposed agenda – there are a number of infographic creation tools available online

- sketch a mind map that includes the topics you will cover in the meeting, who is involved, and the details (location, time, invitees) of the meeting

- create and distribute a scavenger hunt to complete prior to the meeting start. For example, if you are meeting to design customer service training, ask the team members to visit a number of local stores (find someone who provides you excellent service and describe what was so good, count the number of times your table was visited at lunch, etc.)

What if?

Once the team has come together in the Savvy Start, there will likely be some concerns of what is possible based on limiting factors like budget and the timeline. While these are certainly vital conversations, they sure do put a damper on the creative, brainstorming process!

Ask your team to, for a moment, suspend the idea that anything is too highly technical, not feasible, or too far-fetched. Instead, go for the WHAT IF? What if you could do anything? What would you do?

Success Story!

When asked, "What if you could do anything?" our client, Manhattan Associates said they would really like to have all their employees visit a distribution center. The reason they wanted their employees (who work in a traditional, corporate office buildings) to go to a distribution center was to build empathy for the people who work there. They wanted the learners to experience the work, to hear the sounds, to see the vast expanse of the center because then they could create better solutions for their clients (Manhattan Associates creates software to optimize distribution centers).

Obviously, not every Manhattan Associates employee can visit a distribution center. This would be extremely costly. Instead, what we did was create an online learning experience in which the learners toured, and worked virtually alongside the employees at the distribution center. They unloaded packages off trucks, they picked products ordered by the stores, they loaded them onto the shelf and they placed orders when inventory was running low. They did this through a series of interactions—not through visiting a real distribution center.

If we hadn't asked the question—What if you could do anything?—we would have never thought of a solution that offered them a great compromise, which happened to be an incredibly well received, engaging, award-winning course!

All too often, organizations fall into the trap of feeling that they know their learners and can design training that meets the wants and needs of their learner audience. They know how they feel, what they think, what they do, and understand the pressures of their day-to-day work environment.

"[Organizations] are so certain they know the learner needs and preferences that they adamantly refuse to involve learners in the process of designing learning solutions. The problem is they are rarely – very rarely – correct. It's a huge mistake not to involve the learners in the design of learning programs. Huge." – **Leaving ADDIE for SAM**

To create a product for an audience, designers must do more than simply think about their intended audience—they must understand them, know them, and most importantly involve them.

On the next few pages are several tools for creating an empathetic design, but please do not skip having the learner in the room and along for the ride through all the phases of the design and development process.

ACTIVITY

THE 3-YEAR OLD

Children around the age of three are famous for asking questions. They want to know about everything. Eternally curious. For your given subject, brainstorm as many questions as you can that a member of the target learning audience might ask.

Time: 10 minutes + discussion time

Option 1 - As a group activity, Savvy Start participants rapid fire the questions and a talented facilitator captures these questions on a flip chart or white board.

Option 2 - Provide each team member with Post-it® notes, ideally each member will have a different color or design. Have each person write individual questions on notes and stick them to a wall, whiteboard, or flipchart. To encourage participation in this activity, offer a prize for the person with the most questions asked. (If you don't color code your Post-it® notes, then assign each person a number and have them write their number on their notes.)

When the group can no longer think of any more questions, you can consolidate, clarify and categorize the notes.

From the list of questions, you can evaluate which questions relate to a specific performance moment addressed in this course and which are potentially out of scope for this training.

Example: You are providing customer service training for retail associates. What questions might the associate have?

- How do I greet the customer?
- What is our return policy?
- What if we are out of stock of an item?
- What happens if the phone rings when I'm dealing with a customer in front of me?
- How do I address customer complaints?

ACTIVITY

Who Am I?

We must remember that we are building our courses for real people. The key to integrating Design Thinking into your Instructional Design is the concept of empathetic design. In order to help your Savvy Start team members move to an empathetic design, get them in touch with representative audience members. While having an actual person in the room is one key way to do this, we recognize that not all representatives of all target audiences will be able to attend the Savvy Start.

On a several flip charts throughout the room, draw an outline of a body (sure, you might have to practice this a few times). Assign a few team members per flip chart. Then, tell the groups who their representative target audience member is – for example, a new hire, a seasoned employee, a manager, an executive, etc.

Part One: For a given topic, each group creates the profile of their audience – Nancy New Hire, Seasoned Employee Sam, Emily the Executive, etc. Have the teams spend five minutes generating a name for the character, creating an expression, hairstyle, clothing, accessories (laptops, smartphones), favorite expression, food preferences, etc. These moments loosen inhibitions and push neurological processes into a creative space.

Part Two: What motivates this learner? Now that you know your character, think of the things that will motivate them for this training. Emily Executive is motivated by success on her Key Performance Indicators – and she's very competitive and wants her group to outperform others. Nancy New Hire is motivated to fit in with her.

Have the groups introduce their character to the Savvy Start team. Then, ask the groups to identify what their audience member needs to know and do on the given topic. Have them think of, and write down on Post-it® notes all the questions their character would have.

ACTIVITY

Who am I? (cont.)

For example, look at how the needs regarding training on a new product offering may differ for these target audience members:

Emily the Executive, "What strategic support is coming from marketing in order to help our sales force target the right customers for this product?"

Nancy New Hire, "What current product is this new product replacing and why is it being replaced?"

Seasoned Employee Sam, "How am I supposed to explain to the customers why we are cutting off service on their existing product?"

Have the groups affix their questions to the flip chart. Then, have the groups rotate flip charts. See if you can come up with new questions for the other target audience members.

*Small Savvy Start Team: If you are in a smaller group and don't have the ability to assign multiple people to each character, have each individual Savvy Start member create a character. As a group, collectively come up with questions for each character.

PRO TIP

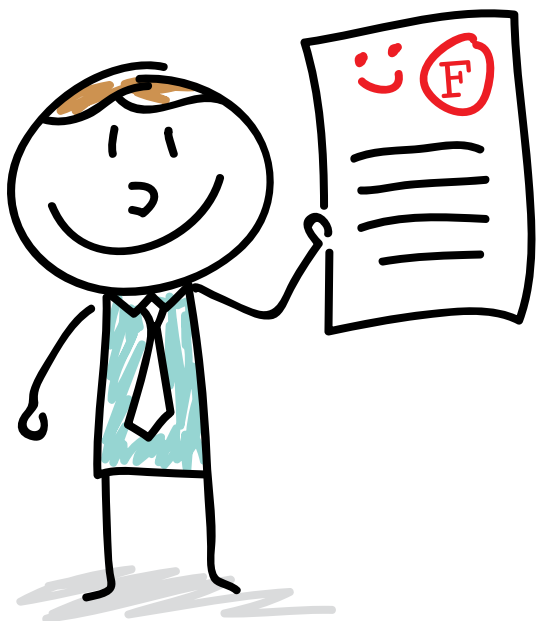**Define the problem you are solving.**

The team may have come together under the assumption of a performance challenge. However, it is your job to challenge everything in the Savvy Start, and this includes why you are all together in the room in the first place.

Prior to the meeting, ask each member, to prepare a statement of what he/she believes is the performance challenge you are trying to solve with the training program. Prompt the team member to complete the sentence, "We are creating a training program to _____." The vital word is <u>to</u>—instead of the typical "on." We are not creating a training program on the negotiation process; we are creating a training program to increase the close rate of our sales team.

When the group comes together in the Savvy Start, create a flipchart and jot down all the reasons provided by the team. See where you agree, and where there are disparate thoughts on why training is needed. Then, work to clearly define the problem together as a team.

Failure is great! Failure is great! Failure is great!
Repeat this to yourself and the team throughout your entire Savvy Start. Failing early and often is one of the best ways to get to a successful final product. Too often we proceed down a path and don't see that we failed to meet the performance need until the course launches. Then, the training fails to make the change we intended, gets negative reviews, or is poorly attended.

Failing in the Savvy Start and in the early phases of design (based on feedback from the learners) is a lot cheaper and less damaging then spending months on a product that fails on execution.

Design Thinking and SAM ask us to challenge design ideas by asking the question, "Why would this NOT be the best solution?" For each sketch or design idea that your team comes up with, ask that question.

Resouces & Links

Websites:
- IDEO
- Stanford d School
- SAP Design Thinking Guild
- Pretotyping
- Better Brainstorm

Books:
- Creative Confidence: Unleashing the Creative Potential Within Us All, Tom and David Kelley
- Creative Block: Get Unstuck, Discover New Ideas, Danielle Krysa
- Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation, Tim Brown
- Gamestorming: A Playbook of Innvators, Rulebreakers, and Changemakers, Dave Gray, Sunni Brown, James Macanufo
- Influencer: The New Science of Leading Change , Joseph Grenny, Kerry Patterson, David Maxfield, Ron McMillan, Al Switzler
- Sketching User Experiences and the Sketching User Experiences Workbook, Bill Buxton
- Michael Allen's Guide to eLearning, Michael Allen
- Leaving ADDIE for SAM, Michael Allen with Richard Sites
- Leaving ADDIE for SAM Field Guide, Richard Sites and Angel Green

TED Talks:
- Andrew McAfee, Are Droids Taking our Jobs
- David Kelley, How to build your creative confidence

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Angel Green is the senior instructional strategist for Allen Interactions' Tampa studio, where she is responsible for providing consultation and instructional design expertise to clients, partnering to build engaging, interactive learning experiences. With nearly 15 years of experience, Angel has worked for organizations such as IBM, MetLife, and PricewaterhouseCoopers, and holds both MS and BS degrees from Florida State University. An accomplished speaker, Angel has held positions as an adjunct instructor of public speaking and is past president of a Toastmasters International chapter. She also frequently blogs on Allen Interactions' e-Learning Leadership Blog.

References

Allen, M. W. & Sites, R. H. (2012). *Leaving ADDIE for SAM*. East Peoria, IL: ASTD Press.

Duncker, K. (1945). *On problem-solving. Psychological Monographs*. 58 (5, Whole No. 270)

Guilford, J. P. (1967). *The nature of human intelligence.* New York: McGraw-Hill.

Torrance, E. P.   (1966). *The Torrance Tests of Creative Thinking-Norms-Technical Manual Research Edition-Verbal Tests, Forms A and B-Figural Tests, Forms A and B.* Princeton, NJ: Personnel Press

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