Introduction to Creating Data Visualization Taking Numbers & Creating Compelling Stories

Transcript

[music]

0:00:07.5 Alicia Quiroz: Okay. So today, what will you learn? Well, we are going to talk about understanding the power of data-informed decision making for continuous program improvement. Yes, you are going to start knowing the how on how to be able to make decisions based on the data that you see. We are going to practice selecting data visuals to answer your questions and to engage in data dialogue. You're also going to be able to reflect on bright spots and needs around data use and discuss data effective processes.

0:00:42.2 Alicia Quiroz: But before we begin, as we do with all BranchED events, we wanna connect with you. So let's go into our Connector. We know that data is anything and is everywhere. Sometimes we don't even know we're making a decision based on the data that we interact with every day. For example, those of us who fill up our cars every week or every 10 days, the ones that have a little bit more good mileage per tank, why do you go to that particular gas station? Maybe it's because the service you have received in the past. Maybe you go to that store because the gallon is cheaper by 10 cents. Maybe it's because of the geographical location where that store is at, or maybe it's a combination of all three things.

0:01:29.4 Alicia Quiroz: So we are going to send you out to breakout rooms where you are going to share one piece of data that you use or you interact with every single day. How do does this data inform your decisions? So, again, we will be sending you out to breakout rooms where you're gonna have time with your group to discuss and talk about what data you use every day and how does that inform your decision making. You will have five minutes to do that. And with that, Jennifer, can you send them out to their breakout rooms?

[pause]

0:02:15.5 Alicia Quiroz: All right, I think we're all back. We're all back, Jennifer? Yes?

0:02:22.9 Jennifer Reese: Yes. Yes, I think so.

0:02:25.0 Alicia Quiroz: Perfect. Okay. Who wants to share out on the data they use each and every day?

0:02:34.4 Malimi Kazi: Okay. I would like to go.

0:02:38.0 Alicia Quiroz: Perfect.

0:02:39.8 Malimi Kazi: Yeah. I normally use the weather data, checking how the weather will be, and that informs on what kind of clothes I'm going to put on. Yeah, if it is hot, then I put light clothes. If it is cold, I put maybe two layers. Yeah.

0:03:05.9 Alicia Quiroz: Excellent. Who else would like to share?

0:03:12.0 Jiyoon: Can I share what my group talked about? We were a group of professor, assessment director and grant writer. I forgot one person, or another persons. [laughter] But we talked about how we are using data. We're using the hallway conversations as a data source from the students, their experience. And then grant writer was saying that she would observe the grants that were funded to identify what are unique features of the grants that gets funded. And then I, of course, said classroom assessment, whatever, I design a course, I do pre and post. I try to do pre and post to figure out what are areas for more support for my students. And I'm sorry, I forgot the last or first one who spoke at the meeting. [laughter]

0:04:06.0 Alicia Quiroz: Great. Great. Thank you for sharing. One more. Who else wants to share?

0:04:14.4 Viveca Carter: Well, I was sharing in that previous group that we look at attendance thoroughly. We have predominantly adult learners, so we're talking 30 years old and up with full responsibilities of a family, career already. So we really take a deep dive into the why they are absent and what kind of things the university can do to support it. And one of the informed decisions was creating a care and learning center for the children when students are on campus and it's a hit. [laughter]

0:05:00.3 Alicia Quiroz: Love that. Love that. I love where everyone is going. I love that you're like, "Okay, let's talk about how we use data in our own institution." Let's continue the talk on this. And what is data empowerment? When you see these words, what does this mean? What does it mean when you say, to be data empowered? And do you have a... If you know what the meaning is or what this means, please feel free to put it on the chat.

[pause]

0:05:37.8 Alicia Quiroz: So, data empowerment. So, let's talk about defining these terms individually. Like we said in our Connector, data is all around us. It is everything and everywhere. It takes multiple forms. It could be qualitative. It could be quantitative. It could be simple or complex. It could be continuous and it could be grouped. And sometimes we forget that data is not just numbers, it's information. For example, when we operationalize

effectiveness, we're talking about how effective people are. So therefore, data is also people to people. Now, let's look at empowerment. What is empowerment? Empower by definition is the authority or power given or assumed by someone to do something.

0:06:24.2 Alicia Quiroz: So when we put those two words together, what does that mean? Well, it means that it is the process where people on their own or with a help of intermediates take control or gain control of their data to promote their and their society's wellbeing. That means, in teacher preparation, faculty and administrators take control of their data, assume the responsibility to take control for using that data to promote the wellbeing of their program, of their faculty, of their students, of their staff, of their stakeholders, and they hold themselves accountable for the outcomes of their actions. Now, this approaches data very, very differently than what we usually think of when we think about data in the educational world.

0:07:16.0 Alicia Quiroz: Now, when you are data empowered, you are an active member in making sense of the data. You are equipped to dig deeper into your data. This promotes a shift from a culture of compliance to a culture of inquiry. What does that mean? Well, in a culture of inquiry, you're moving away from just checking off the boxes to a space where you're digging deep into your data. You are not only counting how many students are enrolled in the program, you're not only counting how many students persisted into the next year, or how many students completed your program. Instead, you begin to ask the why. Why did so many people enroll in this program? Why did so many people persist to the following year? And why did so many or only a few graduate? You continue asking and reframing the why.

0:08:14.2 Alicia Quiroz: Collectively reframing the why of data collection and interpretation is crucial. It's a crucial first step for opening the door to asking meaningful questions regarding data practices. Now, when you have this data or this culture of inquiry, it allows every stakeholder to bring their unique lens and contextual knowledge to engage as co-creators of the transformational work. To be able to do this, though, we need to create a climate of trust and validation. People need to feel safe to voice their questions, to voice their assumptions, to voice their opinions. So, again, we need to create a culture of trust and validation in which the value of questions is understood and seeking answers is an adventure.

0:09:04.7 Alicia Quiroz: Now, this all sounds great, being data empowered, creating a culture of inquiry. But why is this important? Why should we talk about this? Why is BranchED creating a whole series of workshops around this? Well, that is because when we are data empowered, when we create a culture of inquiry in our institutions, we are encouraging data-informed decision making. So every instructional decision we make, every programmatical decision we make, every revision, every assignment created is based on data. We are not just going based on what we think or what we feel. We have to be data-based evidence in order to inform our decisions to ensure that our supports we enact and the decisions we make are based on the data from our students.

0:10:06.7 Alicia Quiroz: Now, because we know that whenever we are using data to make these decisions, we are being responsive to the unique strengths and the needs that are present in our community, hence, our data-informed decision making provides equitable supports for all of our students. So, but how do we do this? What is our secret sauce? What

is the magic that helps us create this culture that is data empowered, that pushes forward data-informed decisions? Does anybody know?

0:10:46.9 Amy Clifton: Alicia, I think if we all knew, we would bottle it and sell it. But that's what you guys, the experts are here for. No, honestly, I really think that just ourselves being humble and being open and being that model to look at the data together and not be defensive is a start.

0:11:09.0 Alicia Quiroz: Yes, you're right on it, Amy. Thank you. Thank you for responding. Yes, I mean, you're on it. First of all, we can't be data-informed in our decision making if we don't have the data. The very first step is making sure that the data is accessible to not only the one person who sits in their office with a spreadsheet. Alicia can't be the holder of the data. She can't have all the fun, doing all the reports and finding all the great things about your program and your completers and what makes them effective and et cetera. Don't give all the fun to the data people. They can't also just be with the top administrators. They can't just be with the deans and the chairs. This data needs needs to be shared. It needs to be available to all stakeholders, to anybody that touches these students. So the data must be accessible. The other thing is that the data needs to be disseminated in a way that prompts action. Data needs to be transformed in a way that could be easily consumed and digested by all. When we do these two things, we're able to build this culture of inquiry to be data empowered and ultimately to make informed decisions.

0:12:32.7 Alicia Quiroz: Now, what does this look like? How do we begin our action? How do we position ourselves to be effective data storytellers? Now, there are a couple of books out there on data storytelling. There really truly is just a handful. I feel that this is such a brand new topic, and it might not be, but it's just, I feel like it's just so new. So I cannot say I've read all the books that are out there on data storytelling. However, I did read this book, the one that's here on the screen by Brent Dykes, and it's titled "Effective Data Storytelling." One thing I loved about this book is that it's very organized in a way that you could just read one chapter and you could skip to chapter five and six and you could just go all around and about.

0:13:20.4 Alicia Quiroz: But the other thing is that it is all infused with research. So I love that it's not just a concept that is like, "Oh, I think this is a great idea." No, it's backed up by research. Now, specifically in chapter two, the author introduces this framework for harnessing the power of data storytelling, in which he says that it has to be this unique blend of the data, the narrative, and the visuals. So this is the secret sauce. These are the three ingredients. You need the data, and the data's gonna serve as the foundation for the narrative and for the visuals. You won't be able to run your story without the data.

0:14:02.0 Alicia Quiroz: The next thing is the narrative. Now, you need to add the narrative to the data, and this is gonna help explain to your audience what is happening and why you want to talk about this. It's gonna give them like a prompt, like this is important and this is why. And the visuals are going to apply to the data. It's gonna enlighten the audience to see something that they wouldn't have been able to see without the graphs and the charts. A picture can tell a thousand things, right? Now, when you combine all three of these things; the data, the narrative, the visuals, they're gonna engage your audience. They're gonna create a story to hold your attention or to hold your audience attention and transport them to a place or to a perspective.

0:14:50.0 Alicia Quiroz: Now, I heard this quote, that data won't get you a standing ovation, but stories will. You could present all the data in the world, but if you don't have the right voice to it, it's not gonna hold on its own. So today, before we go any further, we want you to pause and think about these components of data storytelling and how they relate to you and your role in data that you interact with. So what we're going to do next is we're gonna talk about your data. We're gonna go into breakout rooms, and I want you to take a few minutes to talk about data. In your group, I want you to share your role and your responsibilities around data. How do you touch data each and every day? Think about one or two data points that you interact regularly that you want to expand with, data, things that you want to be able to share with others, and use for continuous improvement in your own role. And then I want you to share a little bit about those data pieces with your small group.

0:16:08.1 Alicia Quiroz: Now, while you're doing this, I want you to reflect on the following things. If you can tell a compelling story about these data points, what would be the impact? Now I want you to think big, dream large, Texas large. Be bold. If you can create a compelling narrative around this piece of data, what could happen? How would your students, your courses, your program be impacted? Take a minute to think about that and talk about it in your breakout room. And we are going to have 10 minutes. When we come back, we're gonna do a quick share out. Are we ready? Let me see your thumbs up. Come on. Come on, it's football season. There should be more like cheering out there. Okay, Kim, Jennifer, are you ready to send them off?

0:17:09.8 Kim Igwe: Trickle back in. We're excited to hear from you. Make sure you've identified your reporter from your room. If you haven't, start messaging, start messaging each other. We have about 20 more seconds. We will be doing a Popcorn Share out with Kermit over here. So make sure you've identified your reporter from your room. You have a head start. Welcome back. Welcome back. And Alicia, all rooms should be closed now, so folks should be coming back right now.

0:17:47.8 Alicia Quiroz: Awesome. So we have everyone back. I know that everyone is on the edge of their seat ready to share. Remember, this is a BranchED event. We are going to prompt you to be engaged. So there is no hiding out here. There is no Zoom camera off. Everybody should be on, ready to go. So, from group one, what can you talk about? What was discussed in your group?

0:18:19.1 Jiyoon: Alicia, you have to point a person from group one. We don't know which group we were in.

0:18:24.0 Elizabeth Lisic: Group one with Amy Clifton, John Bishop, Michelle Steril. So does that... If you hear someone that was in your group, that means you were group one.

0:18:40.4 John Bishop: That's our group. And I'll start us off. And Amy, maybe you can help me out if I leave some things out. But we talked about a lot of different things related to really trying to tell different types of stories with data and, I'll sort of work in reverse, Amy, but the last topic that we talked about was really just trying to celebrate some of the highlights in the profession of education, using data to help uplift or share some positive impacts as opposed to just constantly disseminating a message of crisis in the profession.

0:19:43.0 Alicia Quiroz: Okay. Okay. We can't wait to hear more of it as we keep on talking about that data. Awesome. How about group number two. Elizabeth, point me to the right group.

0:19:55.4 Elizabeth Lisic: The room two, this was Mabel, Marcus, Patricia, Gwendolyn, and Ryan.

0:20:02.0 Alicia Quiroz: All of my favorite people.

0:20:06.7 Mabel Rivera: Okay. So we had different, of course different interests on the type of data that we're interested in comparing, we're able to share. Of course you can tell that those pass rates are really our minds, on a couple of us were interested in them. We had a person, Gwen who is the grant writer and she was interested in comparing the success of the different grant proposals and so forth. And then we started, we had a little bit of free time. So we talked about how we make data accessible to our faculty and shared a little bit about that.

0:21:06.1 Alicia Quiroz: Awesome, Mabel. And you brought up a great point. You just found your new best friend, right? You found someone in another area that writes grants that gave you some ideas. So awesome. Use these opportunities to meet other people. Make sure you get their email addresses. Make sure you take stay in touch because again, we all know that sometimes we need to know what's going out or what's happening in another place to know how we could change or pivot to do something different. So good job on that, group two. Elizabeth, group three.

0:21:39.0 Elizabeth Lisic: Group three is room three. And that was some of our friends like Martha, Michael, Sylvia, Nicholas, Malimi...

0:22:01.3 Sylvia Read: We talked about course level data and program level data. So Martha works with ESL program level data and shares that out with the faculty that she works with. Malimi teaches instructional technology classes and he uses the data from his students' work assignments to inform how he teaches. And, let's see. I lost him. Where'd he go? Josh. No, Nicholas. He's the data manager at his university. So works with all the federal reports and state reports and internal university reports that deal with data. And Michael and I are most are also heavily involved in using data for teacher preparation program reports and ways that we need to evaluate those programs for continuous improvement. I talked about using performance assessment data that's been useful for giving us actionable data to act upon that's redundant to make program improvements. And we talked about the dangers of high stakes testing.

0:23:40.2 Alicia Quiroz: Awesome. Awesome. Thank you for sharing. Group four.

0:23:45.4 Elizabeth Lisic: Group four, if you don't know who you are. And room four included, Sheila, Kimberly, Kathryn, Jiyoon, and Joey.

0:24:04.5 Jiyoon: We talked about different things, which I'm totally blanking on right now. We had a director, Kathryn. She was director of assessment and then was interested in the diversity, student diversity information. So she would use that information alongside the other course student experience survey information to kind of see if there's any difference

between the ethnic groups, I believe, I hope that was correct. I'm teaching students, so my data points were all related to student assessment in a course situation. Also program level assessment as well. We had other people who's taking on the responsibilities of many roles. She was doing many things. We shared our experiences on student data and then how to use it for assessment purposes. So, sorry. If there's anything more you wanna add from my group, please do. Bye.

0:25:25.7 Alicia Quiroz: Anyone else wants to share with from group four? It sounded like a lifeline. Like who else wants to share for our group? No?

0:25:35.6 Kathryn Kelly: I think you did a great job.

0:25:35.9 Alicia Quiroz: Thank you. Perfect.

[laughter]

0:25:40.0 Alicia Quiroz: Awesome. Group five.

0:25:47.6 Elizabeth Lisic: Group five was actually in room six. So if your group hasn't gone, you are group five in room six, so let's go.

0:25:58.1 Mel Spence: All right, I'll talk. 'Cause this is more awkward than a first date. Our group eventually settled on our frustrations with gathering alumni data and the low survey rates for that and just being able to actually get a hold of that data with partnering districts.

0:26:20.5 Patty Alvarez McHatton: I just have to say thank you so much for saying that, Mel. All I could think of was think of our students when we do this to them, right? So, here we go.

0:26:31.5 Alicia Quiroz: Awesome. Well, with that said, I'm gonna give you a five-minute break. That way we could go take our our Gatorade, our energizer drink, our third cup of coffee so we could get energized and get ready to come back and be fully engaged. So it is 12:57, I'm sorry, 1:57, right? Yep. So in five minutes we'll be back. What time would that be at, Kim?

0:27:01.7 Kim Igwe: I'm not gonna try to do everyone's time zone. I'm gonna say five minutes after the hour or something. I just put it in the chat. So don't go too far, but enjoy some water or walk around, maybe some jumping jacks to get that energy moving. We'll see everyone back at five minutes after the hour.

0:27:22.9 Alicia Quiroz: It's almost time. We're just gonna give it a couple, one more minute. This is where we need the alarm clock to go off. Let's get everybody back to class. Okay. I see everybody popping back up on their screens. Waiting for a couple of folks. Don't let me call your name. Okay guys, are you ready? Yes. Thumbs up. Thumbs up, thumbs up, thumbs up. A little bit... Come on, guys. Energy break. You guys went and got your coffee. You did some jumping jacks. You got to finish something really, really quick in five minutes that gave you a little bit of energy. Yep, I see the thumbs up out there. Awesome. Okay, so let's continue. So one of my favorite podcasters is Brené Brown. She is just absolutely wonderful. I love, love, love, love her stories and her research about

courage, vulnerability, shame, empathy. She's just does great, great work. For those of you that don't know Ms. Brown or Dr. Brown, she's a university professor, a researcher, and a New York's Times bestselling author. For the past two, a couple of years she's been described as one of the best data storytellers.

0:29:45.2 Alicia Quiroz: And this is because she explains how the data can help us lead better lives. Now, the title storyteller was not something that she wanted to be titled as. In fact, this was a promotional strategy that her event planner proposed to her. He was trying to find ways to promote her events, and he basically said, "I think if I marketed you as a researcher, we wouldn't get many people coming into your sessions." However, he did let her know, "I've heard you talk about your data. I've heard you tell incredible stories. So I want to promote you as a storyteller." Now, in the very beginning, Ms. Brown was very hesitant to adopt the title because she was a serious academic researcher. However, she eventually warmed to the idea and basically said, "I'm a storyteller.

0:30:40.7 Alicia Quiroz: I am a qualitative researcher. I collect stories, and that's what I do. And maybe stories are just data with a soul." So, as we go through this presentation, as the we go through the series, we will learn how to use data to tell our data story. Now, this does not undermine the importance of data. We know that the data has an important story to tell, but the data relies on you to give them a clear and convincing voice to inform, illuminate and inspire. So let's get this data party started. We want to begin jumping into these waters slowly. So we are going to take some time to talk about one of my favorite subjects, the Dallas Cowboys. I'm just kidding. We're gonna talk about office supplies. I got you there, right?

0:31:39.7 Alicia Quiroz: So I think we can all relate to the power of good pen, right? How many times have you had to sign a credit card receipt and the pen does not write, or even the opposite, the ink splashes everywhere? I know my worst situation with a bad pen experience is going to the nail salon, getting my polish on, thinking my manicure is just the absolute best. I'm there ready to sign the receipt, and then ink splashes all on my nail tips, complete waste of $60. So I need a good pen. I see the power in a good pen, and sometimes I need a bold one. So we're gonna look at this data. There is people out there that blog about many different things. This specific person talks about pens and he ranked his top five gel pens.

0:32:44.1 Alicia Quiroz: Isn't that a dream job? I know what I'm doing my next life. So here he is rating you know, his top bi pens in categories. One is poor, five is excellent, and he's rating 'em on like their cost, their size, how clean they write, the lifespan of the ink cartridge and so on and so on. So I want you to take a second and look at this data and tell me, what do you see? What does the data show you? Now, feel free to type it in the chat.

0:33:26.8 Alicia Quiroz: Okay, I see he's not asking what the environmental impact of each pen is. Noted. Yes. What else? What else do you see in this data? It seems like personal ratings levels one to five. I'm seeing that I could compare cost to score. The most expensive pen seems to have the highest rating. Okay. Yeah, sometimes good things cost a little bit more. Cheapest is the lowest. I can't decide which components are important to me. You might get what you paid for. Awesome, Amy. Okay, so I'm seeing your feedback. Okay, gotcha. Got it, got it. You guys might have a future of the next great pen bloggers, add that to your next life career. So if you would be the next pen blogger, what is the best way to

communicate the information you just told me to your readers? Now again, you want these readers to be engaged. You want them to cause an impact. You want them to go purchase that pen or even best, you want to get the attention of these pen suppliers and make you their advertising agent. So how would you communicate this information that you just told me to your audience? So type it in the chat, please.

0:35:06.4 Alicia Quiroz: Okay. Sharing personal reviews. I see one. Who else? Come on. Pictures. Awesome. Who is the audience? Okay. The general audience. Anyone who's going to be kind of Googling best pen out there. Graphics, videos. Awesome. The table works for me. Okay. Video demonstrations. Ooh, I love it. Yes, you guys, seriously, you guys need to start being bloggers. You're gonna have a great career in this. So all great ideas. I agree with all of them. I agree that visualization, some of you guys put pictures, videos, visualizations are great. They're a great idea to tell the beginning of this data story. So I'm gonna talk a little bit about a few ways I would use the data that you just saw and how I would use... What data visualizations I would use to help tell a story. So let's just say I want to focus on the frequency of these ratings per item.

0:36:17.8 Alicia Quiroz: Someone said, oh, I was able to compare which one cost the most or which one was the most cleanliness or which one had the overall rating. Now, you were able to do that quickly because I put them in order. I was able to, but sometimes data is messy. It's not necessarily in order. So you kind of want to see a distribution. And when you do a distribution, you're doing this because you want to see how the data spreads across, how it's spreads over an interval or is grouped. So if I was to create a visual for this data, I could use a bar graph or a column chart to talk about its distribution. Now, let's say I am still, I wanna focus on cost, and I wanna see how it relates to the longevity of the pen. I wanna make sure that, hey, if I'm paying almost $5 for this pen, it better last me five years, right?

0:37:17.5 Alicia Quiroz: Nobody smiled. Okay. We know those pens don't last that long. They last three months. But anyways, so if I would want to do that, I am looking at seeing if there's a relationship exists between the cost and the longevity of the pen. So when you do relationships, you wanna show a connection between the data or you wanna see a correlation between two or more variables. So you could use a line graph, a scatter plot, a dot graph, et cetera. Now, let's say you wanna really dive deep into the data, and you wanna start looking for patterns. You know, what can I use to kind of quickly tell me what is alike within all these things? How is it rate... What are the ratings or the similarities between these ratings?

0:38:11.2 Alicia Quiroz: A heat map would do just that. It will reveal some forms or patterns in the data to give it meaning. Now, one more thing. Let's just say I wanna make my final recommendation, and I think someone put it in the chat. It was like the overall score. And you put an icon. I wanna make that final recommendation. I wanna tell my audience this is the pen you do. You see it every single day on social media. You see it every day when you buy your stuff on Amazon. What do they put?

0:38:41.0 Alicia Quiroz: They put ratings, and they put it in a form, an icon, or a picture graph. So if I wanted to rate my top pen, I would do something like a four out of five, or four stars out of five. And that is to highlight a single measure. Now, we made all this information available to you in a handy cheat sheet. Kim and Jennifer, they're gonna be posting that on the chat. You have this information. You're gonna have these different categories on when

to use these visuals for what questions you might have. Be sure you grab it. Either way, if you miss it on the chat, they will also send it out with the email. But again, the work is done for you. Here is this information. That way, you're able to start selecting the right visualization for the type of question that you may have.

0:39:35.6 Alicia Quiroz: Now, that was the easy stuff. Now, let's play with some data that we came here to work with, educational data. So we are... I want you to take a second to read this data scenario. I'm gonna give you a minute just to read it on your own.

[pause]

0:40:25.1 Alicia Quiroz: So, this scenario reads, enrollment data has just become available. The data shows a drop in student enrollment from last year. You are hosting a data dialogue during the next faculty meeting to determine next steps. What do you want to learn? So if this was me, and I wanted to make sure that I had the right data to explore at this meeting, what would I do? Now, I want you to think about it as if you were this department chair. What is it that I would want to learn from this data? Now, for the sake of time, I went ahead and determined one of the questions that we could ask of the many questions from this scenario. So I'm gonna post the question that I have just by reading this data scenario.

0:41:23.2 Alicia Quiroz: So here, there is a particular group of students that is showing noticeable enrollment drops. Now, this is important for us as we disaggregate our data so we fully understand the data and guide our faculty discussion. So this is what we want to learn. What visual should I use to display this data? So hold your thoughts. We are going to a Zoom poll, where you could decide what you would, or you could select what visual you would choose. Now, go ahead and click on the one that jumps to you as the good answer choice. You should be seeing it on your screen right now. So I'm gonna give it a couple of sec just for all 26 to participate. So far, we have almost half participated.

[pause]

0:42:56.2 Elizabeth Lisic: Looks like everyone's responded, Alicia.

0:42:57.9 Alicia Quiroz: Perfect. Can everyone see the responses? Can we just go ahead and share the responses?

0:43:09.8 Jennifer Reese: One moment, I'm working on that.

0:43:11.2 Elizabeth Lisic: I just did it, Jennifer. Everyone should be able to see it now.

0:43:17.6 Alicia Quiroz: Perfect.

0:43:18.2 Elizabeth Lisic: All right, so we had 63% choose the bar graph. Alicia, what do you choose?

0:43:27.3 Alicia Quiroz: Okay. So I also chose the bar chart. So congratulations for all of you who chose that, but there is not one right answer because you can use multiple visuals to portray one particular question. And you'll see that in that cheat sheet that you're able to

use different visuals on the same question. So it's just about the placement of the data and how you want to place it. But for this particular data scenario, I did choose to do a bar chart. Now, remember, we wanted to know if a particular group of students showed noticeable enrollment drops. If this visual was part of my data story, what did we learn? Put it in the chat. How does this visual help us tell our stories? Or don't put it on the chat. Come off mute and share with us. How would you tell your story based on this visual? What would you say? What does the data show you?

0:44:41.5 Josh Flyman: Yeah, there was... I mean, really the Hispanic Latino students are the ones who went in the opposite direction from everyone else. There was a significant drop there.

0:44:49.6 Alicia Quiroz: Excellent. Awesome. Did this visual... Did the visual help you tell your story or show you what you wanted to know? Did it answer your question?

0:45:00.8 Josh Flyman: Yeah, I would suggest maybe different color choices. The gray is difficult to see, but overall, yeah, I think so.

0:45:10.0 Alicia Quiroz: Perfect. And how does this visual help us tell our story? How would you begin telling the story? Now, you have the data. You saw that there is this group of students that are not enrolling as most other students are, how would you begin telling that story?

[pause]

0:45:46.4 Amy Clifton: I would probably start with the growth across the board, just to see those celebrations to start and then maybe pose the question of why there was such a difference in some of our areas from one year to the next. Outline some of those maybe strategies that worked for specific groups, but not other groups.

0:46:06.1 Alicia Quiroz: Yeah, absolutely. Again, you show the data, you pinpoint something, and you start the conversation. Absolutely, 100%. Thank you so much, Amy and Josh, for participating. Let's try it again, okay? Let's do it one more time. Data scenario number two. Take a time to read this scenario.

[pause]

0:47:16.5 Alicia Quiroz: Okay, I'm gonna read the scenario. The EPP has just received the state content exam scores. This is the first year that students were provided additional math support. Students were required to attend one hour of tutoring per week. However, they were not restricted on how many hours they could visit with the tutor. Now, what would you like to learn? There is a lot of questions that we would like to learn from this scenario. For time, because of time, I chose your question. And this is what we would like to know. Did the number of tutoring sessions the students attended impact content exam scores? What visual would you use to display this data? Now, we're gonna do one more time. We're gonna do a poll.

0:48:13.7 Elizabeth Lisic: They're voting now, Alicia. They are voting as you speak.

0:48:19.9 Alicia Quiroz: Awesome.

0:48:21.2 Elizabeth Lisic: Are coming in. We'll take and add another 10 seconds for you to get your votes in, and we'll share out these results. We got a pretty interesting split. All right, I'm gonna share out and I'll just voice over really quick. 32% said a dot plot and 32% said a histogram. So those two tied for first followed closely by a bar chart. So what do you say, Alicia?

0:48:53.6 Alicia Quiroz: Well, you guys are on a roll. I also chose a scatter plot. I wanna see the relationship between the total hours of tutoring and the exam scores. Here we can see that students who attended more tutoring had greater exam scores. So, how does this visual help us tell the story? How would you start your story? Anyone.

0:49:31.0 Josh Flyman: I mean, the neutral answer is simply that there is a positive relationship between the amount of tutoring and their performance, but then I guess you could... And then if you're gonna ask yourself is there... Is it... Yeah, right. Like Sylvia is saying, you want to see if there's actually a statistical significance here, how many people you're dealing with. Then I guess, right, then try to suss out why it goes up with more tutoring. 'Cause you might also have the students who are already stronger 'cause I mean, there are so many questions I would have immediately, like even who's gonna the tutoring? You may have the stronger students... The ones who are struggling who knows why they're struggling, maybe they have a lot of other obligations, maybe they have... Maybe they're busy or something like that, they're not gonna be the ones who are able to get out to a number of tutoring sessions.

0:50:27.3 Josh Flyman: So the ones who are able to go might be the ones who have the time to do it anyway. So, yeah. So, yes, I'd say there's... I think this starts the conversation, but there's a lot to go from here.

0:50:41.4 Alicia Quiroz: Absolutely, it prompts you to start thinking of what to ask next. Love it, love it, love it. Yes, using the data to start those conversations. Absolutely, thank you so much, Josh.

0:50:50.5 Elizabeth Lisic: And I'll say, Alicia, with that in mind, there were some great... There were some things in the chat about knowing baseline scores or were there scores available from before for all students, I think that's fantastic. I also think that there could be some great conversations based on what Josh said about bringing in some qualitative data as well from these participants in the focus group to hear about their own experiences. What made them come? What didn't make them? What made them choose not to come to the tutoring sessions? Or were they not available? So I think they're, like you said, great starting point for our story. But there's still lots to learn.

0:51:29.0 Alicia Quiroz: A little bit more. Data scenario number three. You guys are on a roll, come on. Take a second to read this scenario.

[pause]

0:52:05.8 Alicia Quiroz: Okay, let's... So what do you want to learn? Let me put out our question out there. What domains are they doing well and where should my focus be

moving forward? What visual should I use to display this data? Let's put the poll.

[pause]

0:52:54.1 Elizabeth Lisic: Alicia, can you go back to the situation slide for a second? People are asking in chat.

0:53:00.0 Alicia Quiroz: Yes. There we go, so sorry about that.

[pause]

0:53:20.7 Alicia Quiroz: We're still waiting a couple of results.

0:53:24.6 Kim Igwe: And we need your results 'cause things are tied. That was...

[laughter]

0:53:30.4 Elizabeth Lisic: All right. We'll take about another five seconds, get those final votes in. I'm gonna share out these results. It is another close one. All right. We have in the lead 36% thought a bar chart would be good, but was followed very closely by a pie chart and a histogram, or possibly even some infographics or icons.

0:53:57.1 Alicia Quiroz: So I would use a... Sorry, a heat map. Okay? So the heat map will be, again, and I wanna know if I see patterns within the data. Again, all of these answers that you provided, you can possibly use these visuals. This is just what I would prefer to use it in this scenario. So can this visual help you tell your story? And if so, how would you tell your story? Can I have someone to respond? How would you use this visual to tell your story?

0:54:44.3 Sylvia Read: I would begin by explaining what the domains are and then talking about domain one where we have the fewest, I think answers correct if I'm reading that right.

0:55:01.9 Alicia Quiroz: Yep. Anyone else?

0:55:06.1 Speaker 16: I would want to evaluate my own instruction on domain one, because that seems to be such a large percentage of the class.

0:55:17.4 Alicia Quiroz: Awesome, awesome. Okay, and we have one more, one more data scenario for you to practice on. And I promise the answer will be on this one. I know the last one, it was a trick question. I was just making sure you guys were paying attention. Okay, last one. You know what, can someone read this for me? Who wants to be my storyteller?

0:55:47.0 Sylvia Read: I can read it.

0:55:47.6 Alicia Quiroz: Awesome.

0:55:48.8 Sylvia Read: To provide better support for students, the EPP created practice exams. These exams mirror the state exam for pedagogical knowledge. Besides looking at

exam scores, the EPP wants to ask their students for feedback. The questions were, one, were practice exams helpful? Two, how did practice exams help you prepare for the exam?

0:56:14.4 Alicia Quiroz: Now, there's a lot of things we want to learn about this data scenario. Again, here's my question. What themes emerge from the student responses? What visual would you use to display this data? Last poll. I'm gonna put that slide back so you guys could see that slide. What visual would you select to know those responses from students, student responses?

[pause]

0:57:18.0 Alicia Quiroz: We need a couple of more of you to respond, we're almost there. Come on. Click the button.

0:57:31.6 Elizabeth Lisic: All right, I'm gonna wrap it up and share out these results. We had 45% say infographics or icons followed by 30% of participants saying pie charts, so two very visual visuals. [chuckle]

0:57:47.3 Alicia Quiroz: You guys are reading my mind exactly. I would also use that, an icon or an icon array, a pictogram, an infographic, they're called different things. Definitely just to highlight that single measure, either just using bold fonts to show that percentage of students are saying how the survey helped them or using the proportion of how many students said what of the exam. So you guys did great. You guys are pros at this. I know that if I threw one more of these data scenarios, you'll be able to pinpoint what data visual you would use. But now we have this wonderful opportunity to think about your data. So we are going to go back into our original breakout groups and draw back to the conversation we had earlier today. Now, we just explored a lot of types of visuals. I want you to spend some time in your groups talking about the ideas that surfaced as we explore these visuals. When you thought about your own context and your own institution and the data you shared before, what types of thoughts did you have?

0:59:07.6 Alicia Quiroz: Second, I want you to think about the data points. Remember those one or two data points that you identified earlier? When you think about your questions and the story that you want to tell, remember that big Texas large impact story, what visuals would you use to help you better tell your story? As you're talking, I want you to jot down some notes, pick a reporter, make sure that you grab as many ideas you can from the group, in that way you could share with the larger group. Now, you're gonna have a lot of time to do this. We are giving you... How much time are we giving them, Kim?

0:59:52.6 Kim Igwe: Sorry, 15 minutes.

0:59:54.4 Alicia Quiroz: Awesome. So you're gonna have 15 minutes, you really have this conversation. You know the data that you're working around with, you know your questions, you know what you wanna do and how you wanna use it, especially for impact. How would you communicate that data, what vision would you use? Again, share with your group, talk with your group, ask your life lines, you're absolutely able to ask in that group what would you use, and be ready to do a share out. So, is everyone ready? Kim, Jeniffer, let's send them off.

1:00:30.8 Elizabeth Lisic: Do it.

[pause]

1:00:45.3 Kim Igwe: Welcome back. We'll wait for everyone to come back to us to start closing us out. I hope you all had a great conversation together and learned from each other, exchanged emails with each other and contact, 'cause you are your people now to go and ask questions and collaborate with. We have one group that's still in there, they're chatting away, so we're gonna wait till all rooms close down in about 10 seconds. Welcome back, welcome back. Some rooms are still in the heat of the conversation so we're just gonna wait till all the rooms close so we can close out together. Perfect. I think this is... Everyone is back.

1:01:34.8 Alicia Quiroz: Awesome. Well, welcome back everyone, and we're excited to hear what you guys were talking about in your groups. So is anyone willing to share a little bit about your data story and where you're going to be moving with the things that you learned today? Anyone.

1:01:58.9 Angelina Gonzales: I can share. I don't know that it's gonna be correct, but in our group we talked about various ways of showing impact because it seemed that everyone's data points that we would look at in some way, we wanted to show impact. Whether it was to show passing rate on test data to try to draw an increase in enrollment or we were trying to show a level of impact for extra personnel in certain classrooms. And so various types of graphs were thrown out. One is using a histogram to compare pass rates. And currently, one of our participants was using bar graphs and his was very interesting because he actually has 13 categories that he's looking at and each of the 13 categories is being measured through each...

1:03:00.0 Alicia Quiroz: You're on mute. I think you accidentally pushed your mute. Thank you.

1:03:04.6 Angelina Gonzales: Oh my goodness. How did I do that? Where was I? Oh my Lord! Did I even say anything?

1:03:09.7 S?: Yes.

1:03:10.1 Alicia Quiroz: No, no, no.

1:03:10.9 Elizabeth Lisic: Everything. Yes.

1:03:13.0 Angelina Gonzales: Okay. So the gentleman that had the 13 categories measured three times each, we found that that was just a large amount of data, and he's trying to work through what would be... What would show whether there was growth in each of the 13 areas. So as they're measured three times each. Currently using bar graphs, but not finding that very helpful. So some suggestions were made, and to maybe separate by category or separate the charts or clump them together, and I think that one is just a work in progress. I'm not sure what all y'all got, but a lot of ours was showing the level of impact, increasing enrolment. Gwendolyn actually had one that I think would benefit from sharing to a larger group if ever we had time because she's trying to come up with almost like a template style

of information to share with directors within her program. And so a suggestion was the logic model for this.

1:04:21.9 Angelina Gonzales: And I'm not familiar with the logic model so I couldn't speak on it, I just know that that was shared. However, Gwendolyn had just learned about that so that was perfect for her to maybe take off with. But we just have a lot of comparing information. Several graphs were thrown out. I don't know if y'all heard me with histograms, bar charts, and the infographic, which is public-facing. So some of ours is going to be shared with the public, some of our data is going to actually be shared internally. So hope that that helps.

1:04:57.3 Malimi Kazi: No. Awesome. Great work that you're doing. I love the logic model. That really helps when you're writing grants and when you're trying to evaluate your programs and stuff like that. Awesome, love, love, love these ideas.

1:05:15.0 Elizabeth Lisic: Yeah, I think... And that segue is just great 'cause we need to... We wanna tell you guys about what's coming up so that we can make sure we honor your time today. And so much of what you just shared, Angelina, really speaks to what's coming up in the next session. Alicia.

1:05:30.7 Alicia Quiroz: Yep. So next time we're gonna continue working on that data visualizations and how to build your story. We talked about selecting and using the right visual today. Next workshop, we're gonna start working on the nuts and bolts, so step-by-step, the anatomy of creating that data story. We're gonna really truly look at the narrative, creating your narrative, making sure it's paired with the right visual to be able to tell that story of impact. We also want you to start thinking about earning that digital badge. We want you to start thinking about the data that you want to use, the story that you want to start telling with that data. So while you're doing this, keep in mind this question. How can the story really drive change in your course, in your program, in your organization?

1:06:17.0 Alicia Quiroz: So bring your data, think about what you wanna do. You are gonna have a group of people here to help you and figure out how to create the most impactful, compelling story to truly impact your work. So we are so thankful that you took the time to be here with us today. We wanna make sure that we are responsive to your needs, desires, and the work that you are doing when we're creating these data series. So please go ahead and take time to take this survey, it only takes two to three minutes.

1:06:53.0 Alicia Quiroz: Again, I do wanna go back to some of you wanted to learn how to create the data visualizations. We have a model and a toolkit available for you. Kim and Jennifer are posting that in the chat. They will also be sending an email with this information. That way if you want to learn how to create data visitations using Excel pivot tables, that will be at your disposal. Again, thank you so much for taking the time to being here with us today, I'm gonna give you some time to take that survey. In a little bit, Kim will come back and she will share some last few things. Thank you, everyone.

1:07:34.1 Kim Igwe: Don't jump off just yet, I have some stuff to share and they're great gems, but your gem to me will be to give us feedback. As Patty said, we do see it as a gift, so please do share your feedback, there's a link in the chat, you can do it right on your phone, it will take two minutes. And as you're doing that, I just wanna share a couple of our

upcoming events. So we have lots going on, so just listen to me as you're completing the survey. We have Nuts & Bolts webinars, they're the first Wednesday of every month, we'd love to see you at one of those if possible. We have other virtual workshops. There's resources on our portal. As Alicia just mentioned, we have a mini module that was created based on this work and a lot of the resources that folks have said, "We really want this," and we also have the data empowerment toolkit, which you just saw the link for there. So there's plenty of resources on our portal.

1:08:33.6 Kim Igwe: You can see the QR code on the screen. I will send that information in follow-up. And we just really appreciate your feedback. I know you're popping into another meeting probably, or you have to be some place, but if you can please complete that feedback, it will help us to plan for the next part in this series. So we would really love your feedback. And thank you so much for your time. Alicia, thank you for sharing and engaging us with this content. I said at the beginning, and I'll say it again, you make data so it's not scary and it's actually quite fun. So thank you all for engaging today, we can't wait to see you for the next workshop. Take the survey. Take the survey, we appreciate it. Thank you.

[music]