



**LEARNING CONSORTIUM**  
FOR THE CREATIVE ECONOMY

presented by ScrumAlliance®

Design Thinking and the Creative Economy Webinar Q&A  
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## **A. Questions on education, development and assessment**

### **1. Do you have any thoughts on early education and how this should be changed to enable both intuitive and analytical thinking?**

It is critically important not to value quantitative answers to a greater extent than qualitative answers. If you say, “Yes that is right” to the former and, “Oh that is interesting” to the latter, the latter will be devalued. It is important to be as excited about and interested in a qualitative answer as a quantitative one. When a student makes a fine qualitative distinction between two poems, essays, or paintings, it is as exciting as getting a math problem right.

### **2. Roger, do you agree that trying to introduce this new way of thinking into businesses may be a little too late when we spend years of learning in schools a different way? Do you have any suggestions to bring this into our education system early?**

Yes. The answer is to bring design and integrative thinking into K-12 education. It is absolutely doable and we are most certainly doing it. The problem is that it will take at least 30 years to see widespread use. In education, diffusion is painfully slow.

### **3. What would you say the biggest challenge is: teach analytical skills to the creative or creativity to the analytical? Is it at all possible to teach creative thinking or would that be limited to creating a creative environment?**

I find it hard to argue that one is more difficult than the other. The absolute key is desire. Nobody, no matter how brilliant a teacher, can teach creativity to an analytical person who thinks creativity is for losers (or vice versa). Creative thinking is absolutely teachable. One reason that it is untaught is because of that question. Too many people think that it is not possible to teach creativity. They have no clue or idea why that might be, but they hold the view anyway.

### **4. Do you have specific ideas for how to incorporate humanities into scientific studies?**

Make scientists take philosophy and get them to ask more fundamental questions about how they know what they know. They will figure out that everything they think they know is in fact a set of qualitative inferences backed by some amount of data — but not data that is fully compelling.

### **5. As I understand it, design thinking will emerge once the people and organization start moving from analytical to intuitive, and vice versa in some cases. However, this is primarily**

**a mindset change. My question is, are there any specific tools, techniques, or methods available that can facilitate this transition?**

I would suggest reading my *The Design of Business*, Tim Brown's *Change by Design*, and Tom and David Kelley's *Creative Confidence*.

**6. It seems that analysis is good for identifying problems; intuitive thinking is better for formulating solutions — isn't that part of business school training?**

Intuitive thinking is not part of business education — or at least the vast majority of business education. Analysis is good for one thing and one thing only: testing propositions. Its use for anything else is value destroying.

**7. How would you explore “what you do not know” in the talent economy?**

Variety/diversity of thought. You can't help yourself. You need to realize that what you don't know is probably already in someone else's head. So ask a lot of questions of a lot of people and harvest the best they can provide of what you don't know you don't know.

**8. Question from the Canadian context: In the broader public sector — schools, hospitals, and universities — there is great deal of talent and passion among professionals. Yet the emergence of innovation and greater productivity is often constrained by process. Have you seen examples in this sector where leaders have been able to unleash greater potential from their teams? And how did they do it?**

Yup. We did it at the Rotman School — and it helped turn us from irrelevant to important. The key was to enthusiastically encourage and welcome innovation. There are always innovative people around. They will innovate for you if you don't squelch them.

**9. Would you change STEM to STEAM and add an A for art, to represent design thinking, or would you use another acronym?**

I love John Maeda and his STEAM acronym, so I would back it, not meddle with it. STEM makes me nervous for humanity; STEAM gets me pumped.

**10. Roger, what is your advice to leaders on developing these new skills in their existing workforce?**

I would read the three books mentioned above. And, as always: Be the change. Don't tell people to change. Be it yourself and others will follow.

**11. Can you give examples of valuable skills and/or how to go about improving those skills of design thinking?**

A design thinker has to get good at deep user understanding — in particular ethnographic ways of gaining deep insights — and at generating possibilities out of the understanding. And also at figuring out how to prototype those possibilities in ways that will provide insights for improvement. And the design thinker has to be able to convert that all into a winning strategy. The good news is that we have proven that we can teach it to 11–12 year olds!

**12. Do you have insights into the development of design thinking outside the U.S., like in Europe and Asia? Are there differences?**

My article about design thinking in Peru, as featured on the cover of the current issue of *Harvard Business Review*, shows that it can be done outside North America as readily as inside. My general observation is that people think that fundamental human thinking skills differ greatly by geography. That is not my experience. The way they are expressed differs greatly, but not the skill itself. The same *HBR* issue has an article about Samsung's initiative on design. That is a nice example of design in Asia.

**13. What are your thoughts about how personality traits fit into modern thinking? Do you think individuals can learn traits that aren't in their natural makeup?**

Yes. But again, things can only be learned by people who want to learn.

**14. How can you begin encouraging a dynamic Scrum team made up of both analytic thinkers and creative thinkers to move together toward a design-thinking mentality?**

I know too little about Scrum teams to answer the question.

**15. You had mentioned, in the first question, the importance of making changes in business schools. Do you see a similar opportunity with design schools that teach advertising/commercial design, industrial design, etc., that tend to not want to be hindered by analytics?**

Yes. I really believe that we have to train both the manipulation of quantities and the appreciation of qualities in all disciplines. A design school that doesn't believe in the importance of the manipulation of quantities isn't a very good one.

**16. What are some of the best ways for analytically oriented professionals to "retrofit" their skills and incorporate more design thinking?**

Read the books above and hang around designers. There is nothing as effective as learning by doing.

**17. Fascinating dichotomy! Can you assess "good" qualitative thinking without resorting to quantitative thinking — i.e., can you measure it?**

Yup. In fact, you can't measure qualitative thinking quantitatively. Qualitative thinking needs to be measured qualitatively, by people who have experience and mastery in the qualitative domain in question. And the measurement isn't one that would be recognizable by a quantitative thinker. It isn't an ordinal scale of bad, good, better. It is measured by the degree to which it helps flesh out and enhance the general qualitative appreciation of the subject matter.

## **B. Questions related to applying design thinking in various settings**

**18. How would someone new to a company try to express this as a need to a boss, and what/how would you have to do/ask an interviewee to find out if they fall into that middle area? Are there good questions to sort them out from the rest of the pool?**

A new person in a company would be insane to express this need to a boss. The boss probably should fire his/her ass. The job of a design-thinking new person is to do what design thinkers do, and that is to observe to gain deep understanding of the situation before deciding that they know the right answer. And that is a design challenge. Changing the habits of a non-designerly company to be more designerly is a design challenge. If you are any good at design, you will adopt that stance. And the whole September *HBR* article is about just this subject.

**19. How could one go about implementing/integrating this approach and way of thinking in an existing company that is heavily quantitative (e.g., a company of electrical engineers)?**

Treat it as a design challenge. Get deep, deep understanding of the way the company currently is and why it is that way. Understand what positive outcomes derive from that approach. And then, bearing in mind all of the things you just found out, design a tiny prototype to try on one project or one design. Try the prototype and get all sorts of feedback from the engineers about how it worked for them, and then redesign.

The bottom line: You can't bring about a design revolution by acting non-designerly.

**20. How do you identify a qualitative thinker for a specific type of company?**

The task would be to determine what qualitative appreciation is most needed in your type of company — if it is movie production company, it would be the ability to discern whether a given script is likely to be translatable into a great movie or not — and then seek out a candidate who has demonstrated that type of qualitative appreciation in the past. If they haven't, it is unlikely that they will start doing so anytime soon.

**21. Are there any frameworks to develop strategy in a way that it can lead to developing new markets and really inventing the future? There are the classic frameworks to develop strategy, but they are all data driven, as you said. Is there one that takes into account data and qualitative analysis?**

The framework I describe in *Playing to Win* is designed to do just that. It combines both the imagination of possibilities and the process for choosing the one for which the most compelling argument can be made. By the way, there is no such thing as qualitative analysis. There is qualitative appreciation.

**22. Can a business that is routine-in-local be moved in to one that is creative-in-local? Is it just getting the right people to reimagine what could be possible using new technologies coming online (3D printers, Kickstarter, etc.)?**

Businesses aren't routine-in-local or creative-in-local; jobs in businesses are. It is indeed possible to take a routine job (whether in a clustered or dispersed industry) and turn it into a creative job. That is, in fact, what I call for in my work. And I am going to work with Zeynep Ton of MIT, who does work on what she calls "good job strategy," in which companies prosper by turning routine jobs into creative jobs.

**23. Do you think it's more likely that the business world will become effective design thinkers or that the design world will become effective at quantitative business practice?**

It is a good question, and I could argue for both sides. When business decides something is valuable

(e.g., Six Sigma), it tends to embrace it massively — and that might happen with design thinking. But designers have the opportunity sitting right in their faces to become more valuable by adding quantitative capacity to their toolbox. So either could end up going farther.

#### **24. What will it take for the stock market to value intuitive thinking more?**

More super-success stories like Apple, Samsung, and Airbnb. Design is central to the success of each.

#### **25. Roles are often very segregated in modern business world — analysts vs. creative team members. Any recommended steps to encourage/move existing employees or teams toward this comprehensive way of thinking?**

Be like South Africa: End apartheid! Segregation helps maintain narrow specialization. I would for sure mix the teams and encourage them to learn from one another. I would also make it clear that to get to the top of the organization, you have to show that you have the ability to span those two genres.

#### **26. Is the approach of “design thinking” based on opportunities “outside” of the business world? For example, how, if there are any ways, would design thinking be “limited” in the political “world” . . . governments setting public policies for health care, environmental regulations, etc. How could this approach be useful for our government representatives?**

Design thinking is a way of being in the world that is not at all aimed at the business world. There is nothing about either it or the world that would suggest that it is better suited to the business world than the government world. Personally, I apply it equally to both, and the NGO world too.

#### **27. Can design thinking be used in change projects effectively? Or does this just generate options?**

This is precisely what my September *HBR* article is about: use of design thinking in change projects. It is the perfect tool for producing meaningful change.

#### **28. Do we need to continue to distinguish between the business/product role and the engineering role within an organization, with their specific areas of responsibility, or does design thinking mean there should really be one role designing and building a product?**

It has always been a stupid idea to distinguish between product and engineering roles. That is one reason why the tech world is awash with crappy products. The key to the creation and launch of a great product is an integrative mindset, not a silo-ized one. Design thinking done well is highly integrative.

#### **29. Do you have any ideas or tests for businesses on how to identify individuals who possess both types of thinking?**

There are a million tests of analytical thinking, so I would give the person one of the popular tests of this sort. Then I would ask the person to identify a qualitative domain in which he/she believes he/she has discernment and find an expert in that domain to interview the person to determine the level of qualitative appreciation the person can demonstrate. Together the two tests will tell you whether they are broad or narrow.

**30. Do you foresee design thinking organizational assessments (a la CMMI efforts, Agile assessments, etc.) becoming offered to help with this evolution? Do you see “assessment” services as being valuable in this evolution/journey, and are there cautionary tales (based on the vast knowledge of previous assessment efforts and their value-add) to keep in mind?**

I am afraid I don't know what a CMMI or Agile assessment is, so I don't know the answer. My inclination is to be cautious, however. Most assessments use quantitative techniques, and you can't use quantitative techniques to measure qualitative things.

**31. How do you convince senior managers who are strongly based on data analysis? Do you have data on the success achieved by companies that shifted their focus in the way you prescribe?**

I don't. I have long since given up on the notion that people who are “strongly based on data analysis” can be convinced by me to change. They will believe that their analysis is right/correct/true until such time as some animate object — a consumer, a competitor, an employee – does something contrary to what their analysis says is the only thing they will do.

Then, if they ask me, “Gee, how could I have been so terribly wrong?” I will give them a way of understanding why trying to get the qualitative world to behave by quantitative rules tends to end very badly. Some of this set of people will decide that they might want to broaden their view a bit.

But that is as far as I go in the direction of being evangelical.

**32. What trail of evidence do you imagine that the people you describe as “omnivorous” will leave in the day-to-day business world?**

My theory holds that they will be more conspicuously successful than their carnivorous and herbivorous colleagues.

## **C. Questions related connecting to other schools of thought**

**33. Reminds me of C.P. Snow's *The Two Cultures* — comment?**

There are certainly parallels. There are two worlds. My argument from the inception is that the best thing is an integration between the worlds. Snow's thought initially was that they are solitudes and later became that there is a “third way.” So I think it is fair to say that we observed a similar phenomenon and eventually came to similar conclusions.

**34. Is this is a misunderstanding of science? Science provides models that model what we see in order to make predictions about things we might be able to see in the future. Science is never about truth. Thoughts?**

Aristotle gave us the most important and profound definition of science. He said that the fundamental purpose of science is to demonstrate that things cannot be other than they are. So for science and scientific methods to be useful, we have to have a situation in which we have an expectation that things cannot be other than they are. For example, we have a reasonable expectation that the force

of gravity isn't going to change. And in fact, through science, we can figure out by running experiment after experiment that gravity is an unchanging part of the world.

The fundamental premise (typically unrealized) of the scientific method is that whatever we are studying will never change. That is why applying the scientific method to anything having to do with human behavior is supremely dangerous. Absolutely the only thing that science can do is predict a future that is fully defined by the past.

That is why if Steve Jobs had scientifically analyzed the size and growth of the MP3 player market, he would have never launched the iPod. He had to abandon everything scientific and make a logical leap of the mind in order to make that and most of his other successful decisions.

### **35. Analysis lets you make historic projections. Doesn't intuition let you test the projection into the future?**

Yes. Analysis will tell you that the future is a simple extrapolation of the past — which in much of business is dead wrong. Intuition enables you to imagine a future that is different than the past. Prototyping enables you to test the imagined future to see whether, by your actions, you can create a future that is something other than an extrapolation of the past.

### **36. Is there a connection here to the literature on the left side/right side of the brain?**

Yes: Analytic thinking is associated with the left side of the brain. Intuitive thinking is associated with the right side of the brain.

### **37. Do you think the Myers-Briggs tests could support the testing and identifying of individuals who possess both types of thinking or who are more inclined to naturally lean toward having both types of thinking?**

No. What people simply don't appreciate about the Myers-Briggs test is that it is exceedingly unstable. People think it tells you "how you are." It doesn't. It tells you how you are at a particular point in time in a particular context. If you take it again in a different context, it will likely say you are different. The best rule concerning Myers-Briggs is to not use it for anything at all.

### **38. Would you say that your concept of inductive thinking is the same as what Ackoff described as synthetic thinking? Both being in contrast to analytic thinking.**

It is one of the two basic forms of logical reasoning that is taught in every logic course in the world. It is one of the two major variants of analytical thinking, hence it is not "in contrast to analytic thinking." Induction is the process of observing many instances and inducing a pattern from them. Statistics uses induction to conclude that there is a very small probability that what we observe could have happened randomly; hence we induce that a phenomenon has occurred.

Ackoff was referring to something else entirely with synthetic thinking. This was his reaction to the modern tendency to break whole problems into little pieces, solve the little pieces and then assemble a whole answer. His view was that this approach was likely to be highly ineffective due to the interconnectedness of the various pieces of the problem. So he advocated an approach to problem solving that maintained a view of the whole problem while delving into its parts.

**39. This sounds like you are describing the modern, successful general manager of a baseball team. One difference is that the “old” way is scouting (judgment) and the “modern way” is analytics. How does that difference fit into your model?**

Not quite. You are referring to Billy Beane and the rise of analytics in baseball. The phenomenon here is different than what I discussed in the webinar.

In the webinar, I discussed the inability for analytics to create a future that is different than the past and the need for another kind of reasoning (abductive) to imagine a future that is different than the past.

The case of baseball analytics is one in which the problem was judgment unsupported by the past. So Oakland Athletics Manager Beane started analyzing the past to determine that the players that other managers selected and used would — if the future was a simple extrapolation of the past — perform worse than a set of players that he could choose based on their past performance.

Hence, this was a situation in which analysis of the past was superior to judgment based on the past — or what decision-making experts might call flawed heuristics.

**40. Quantitative knowledge domains = Communities of Practice?**

Generally speaking, be careful of doing this — i.e., isn't x the same as y?

The mark of intelligence of an individual is the ability to make fine and subtle distinctions between similar but not exactly the same phenomena. Whenever someone says  $x = y$ , they are indicating the inability or lack of interest in making subtle distinctions, and that makes them a less useful thinker. So my personal advice is: Don't do this. Ask the questions: In what ways is x similar to y and in what ways is x different from y? You will, by doing so, improve your appreciation of qualities and become a more useful person.

And the answer to your question is no, not even close. A quantitative knowledge domain can be one form of community of practice. But it doesn't define the term “community of practice.” There are all sorts of communities of practice. Sommeliers form a community of practice that has no quantitative domain aspect.

**41. Design thinking = Systems thinking?**

A design thinker takes a view of the world that embodies what a systems thinker is inclined to hold. But a systems thinker doesn't even contemplate many things that a design thinker does. They are just two different things; so much so that it is hard to imagine why someone would ask that question.