David Kelley (DK): The word design has always been a funny word. Fashion designers say they design, and people who design airplanes say they design, but they are quite different people. One is really analytical and one is much more artistic. It depends on who you think came up with the term “design thinking”... it doesn’t matter to me.

In our minds, it’s a method for how to come up with ideas. These are not just ideas, but breakthrough ideas that are new to the world, especially with respect to complex projects, complex problems. That’s when you really need multidisciplinary teams … and you really need to build prototypes and try them out with users (see figure 2).

For us at the d.school, we think of ourselves as “ground zero” for design thinking. We started using the term in our world because our students were saying, “I’m not an expert in anything...” In this group, there were students who were experts in mechanical engineering, and others expert in computer science, and they were saying to me that they have trouble in the job market, trouble talking to their friends, because they are not experts at anything. I said, “Yes, you are expert at design methodology, at how you routinely come up with ideas.” I said that for many years … and then one year I started saying...
randomly, “No, you’re experts at a way of thinking, you’re experts at design thinking.” I said “a way of thinking,” and then they changed to say “design thinking” and that caught on for some reason.

All those years I said “You’re experts at design methodology,” nobody paid attention. They didn’t take it as a new idea or a novel idea. They didn’t believe it. For some reason, the words “design thinking” resonated with them.

Maria Camacho (MC): Why do you think that the term “design methodology” didn’t resonate?

DK: It sounded too much like other things. There’s scientific methodology … the word methodology has many other contexts. And the term design thinking, with the word “thinking,” was just novel enough to attract attention. To put the words “design” and “thinking” together made both ideas new.

Then it took off. Tim Brown wrote his book Change By Design1 after that, so now we have a period in which we are getting to the same point where we are with design. Everyone means something slightly different by the term. I guess this is OK. It doesn’t bother me, but I hear people using design thinking to mean something quite different from what I mean. There are many words in the English language that people use, and they all mean something different by the same words.

So your focus2 on integrating the different models of design thinking, I don’t know about integrating them, but I like your notion of trying to synthesize the terms to the point that we know … we can say what we’re talking about, right?

Larry Leifer talks about comprehensive design. For instance, take the d.school. The d.school is in the same building as 3103 …. I actually took ME310 in the late 70s, and it is an important class. However, today design thinking is referred to in 310 differently than at the d.school. Both are true, but come at design from different perspectives – 310 is made up of engineers, and the d.school draws from every discipline at Stanford. Therefore, it makes sense that a different approach is called for.

There’s design thinking in Hasso Plattner Institute in Potsdam, and it’s quite different as well. I read about design thinking everywhere, in different publications. I’m proud of the fact that the President of Stanford University talks about design thinking with other educators and leaders.

If you are on Mars and you are looking down at the Earth, everybody who’s using the term design thinking looks the same. They all look like people...
who are trying to come up with ideas.

So I don’t know whether it matters or not. There are people who consider themselves designers in the classical sense and don’t refer to design thinking. Design has an inherently individual bias, it’s like an individual sport; design thinking is definitely a team sport.

MC: Then you think designers have something to learn from design thinking?

DK: 100 percent.

MC: And multidisciplinary?

DK: 100 percent (figure 3).

MC: One group that is apparently confused about the term involves those who began to research design cognition in the 80s or 90s, like Nigel Cross and Klaus Krippendorf or others…. They use the term design thinking to talk about design cognition, and they published it in that context.

DK: … oh yes, long time ago.

MC: So there is a lot of conversation in discussion groups about the confusion surrounding what people are talking about when they talk about design thinking…. When you studied here at Stanford, I know that some people were an important influence on you, people like Bob McKim. McKim was working on the psychological side of designing.

DK: He’s my mentor; he’s exactly like us. He was an industrial designer from Pratt and an engineer from Stanford, and everything that he said became the foundation for what we’ve said. In my world, he was the one who came up with … I don’t know if he came up with the term, but he was the one who
championed “needfinding,” the idea that design thinking is human-centered, not technological or business-centered. That was Bob McKim, absolutely (see figure 4). So yes, people like that – psychological people – who are really important, so people like Albert Bandura, and Bandura’s self-efficacy, are very much related … so is Carol Dweck. We totally resonate with these people, with the growth mindset and self-efficacy.

**MC:** One of the conclusions I’m coming to is that those who think that design thinking involves research on the cognitive side of design, and those who think that design thinking is a method as you do, are referring to similar things, at least in the origins…. There is a connection…

**DK:** Yes, there is a connection. There are many lines – many kinds of families, of people talking about this. Stanford’s comes from a guy named John Arnold…

**MC:** And he hired Bob McKim, right?

**DK:** Right. And then there’s me. In some ways, John Arnold is my academic grandfather, and his work is about creativity plus design, and McKim is about needfinding plus design … Did you read his book *Experiences in Visual Thinking*? 4

**MC:** Yeah I’ve read it.

**DK:** He was working on his second book when he retired, and I was helping him. His second book was called *Needfinding*.

**MC:** What happened?

**DK:** He had a difficult time championing his ideas within the context of a university, and decided to leave and become a sculptor.

**MC:** So the book didn’t see the light?

**DK:** There is a draft of it somewhere, and I haven’t been able to find it.

**MC:** I think it was bold of John Arnold to hire Bob McKim. Bob was an industrial designer…

**DK:** He had two degrees, not simultaneous, but they were both bachelor’s degrees – one in industrial design from Pratt Institute in New York, and the other in engineering here at Stanford.

**MC:** But when Arnold hired McKim, he was hiring an industrial designer for an engineering faculty, right?

**DK:** The big break was here: Arnold was at MIT, and he was all about creativity. Everything Arnold did at MIT – he was a psychologist – was about different worlds. The way he made students think differently about how to design things was to assume that they were in a different world. He would say, “You are in this world and it’s underwater, and now design something that enables you to plant seeds underwater.” You had to come out of yourself and out of your habits, because you had to design for a world that there was no way to experience yourself. That was his way of doing what we do now – which is to get rid of your habits, and look with new eyes, with a child’s mind.

The big break in this line came from hiring Arnold despite how different he was from existing faculty. He was very famous. *Life* magazine did a big story on him because of his weird teaching practices and approach with students. He was also an MIT professor. Somehow, he decided that he wanted to move to the west coast, to Stanford. The university got the benefit of hiring this creative professor and they enjoyed recruiting him away from MIT.

So he got here. Then Arnold hired Bob McKim as a lecturer – not as a professor – and then Bob started teaching 101, 5 and then Arnold died very young in Europe, which left McKim here. McKim had a design practice on the side – just like me with IDEO. Bob was an independent guy, but decided to join Stanford full time when he wrote a book and received tenure. So in 1973, *Experiences in Visual Thinking* was published. 

McKim didn’t have a PhD, but he got tenure atStanford.
Stanford. The same thing happened with me. I was hired as a lecturer, and then moved to tenure without finishing my PhD. Prior to that, it was an anomaly to find guys with tenure in a top research university without a PhD. You can’t find that, try to find that somewhere, it’s almost impossible. That anomaly allowed us to do the d.school, allowed us to have the Product Design Program, all that.

MC: So Bob set up the product design program, right? The thinking around it?
DK: I think so—you could ask Bernie Roth or someone who was there. Larry Leifer probably knows. But I give John Arnold credit in my mind for starting the design program at Stanford, the whole thing.

MC: So the first influence would be creativity?
DK: Yes. And I have the discussion of creativity somewhere in his things.

MC: And then, human-centered design came with Bob McKim?
DK: Yes.

MC: And now you are also looking into complex problems, right?

DK: These guys, all this time, all the way down to me, it’s been called “product design,” and so they were really…. McKim in particular was really thinking about products. He’s very entrepreneurial, and the thing he loved the most was when one of his students came up with a product, and went out into the world, becoming successful and getting the product sold. That was his total goal.

MC: He was influenced by his education at Pratt, I guess.
DK: Yes. And his own life here was also important. He became quite wealthy by being a consultant to two medical companies – Oxford Labs and Chemetrics Corporation. He designed their products, the industrial design. They were Silicon Valley start-ups. They became very successful, and he had ownership in them. So he was very much a product designer.

MC: But after them, let’s say it became a different era … you’ve transcended product design?
DK: We think we’ve moved from design to design thinking. Well, let’s say we moved from product design at Stanford to design thinking at Stanford (see figure 4). Forget the rest of the world. I mean, that’s complicated – understanding how much influence we
have in this world on product design. And there are really many changes, to a team sport from an individual sport. McKim was all individual.

**MC:** When did the team thing come in?

**DK:** The team thing came in when we started the d.school (figure 5). Here’s how it happened: I became restless teaching here. I have a lot of friends around the university, and I thought it would be more fun to teach with my friends around the university rather than staying home to teach the same thing all the time. So I taught with an art professor, I taught with a computer science professor, with a business professor, and I noticed that the students were really excited. When I taught with the computer science professor, he would bring his students to the class, because they had to follow him. They were his students, right? There were three, four or five students that would take anything the professor taught. That was Terry Winograd. I had a bunch of students who would follow me anywhere. And then you had a bunch of students that just liked the sound of the course.

The first course had three projects. One of them was to design a video game, and there were just people who wanted to do that. In teaching those classes, we saw how excited the students became doing the multidisciplinary thing, and how they liked having the other students. This was something new, compared to the normal fare of students only working with the same kind of students, all mechanical engineering students or all product design students. That’s how the idea for the d.school came about…. I saw how powerful it was to have multiple professors and students from different departments. So I started proposing to the university that we do that. It took many, many years (figure 6).

**MC:** Where would you put the industrial design programs that were going on in education in the same years?

**DK:** Well they were uni-disciplinary—they were all in art schools, Stanford was not … This program has always been in the engineering school. It had a joint relationship with the art department, but the center has always been in the engineering school, so it’s more about cleverness. Bob McKim was about cleverness. Aesthetics entered in the cleverness, but it was just one aspect of cleverness.

**MC:** In the meantime, do you think most design schools were centered on aesthetics?

**DK:** For sure. There’s no question that they would say that. And then – if you look – there’s a continuum today from design schools that are moving toward this design thinking, and those that have stayed focused on aesthetics, but they are all in aesthetics first.

**MC:** You mentioned how you made the connection between Stanford and IDEO. Do you think IDEO has benefited from the research that Stanford has done, and vice versa?

**DK:** The university moves at a very slow pace compared to industry. IDEO has about 700 people and so there is lots of learning there. The big difference is that money is changing hands, so IDEO has to continuously come up with new ways of doing things, new ways of presenting, new ways of prototyping … in
order to have the client pay you and be happy (figure 7).

If the projects that come out at Stanford don’t turn out to be world changing, there’s no consequence. All we’re trying to do is teach the students to master the process. They’re not being paid for working. So the fact that IDEO is in the industry makes a difference…. It’s just a bigger forcing function to make it excellent.

So I’ve always thought that the quid-pro-quo was that, is that … there’re maybe ten or twelve people at IDEO who teach classes here, maybe more. At one time, there were eighteen. There’re all these people at the d.school and in product design, there are even some in mechanical engineering, but the transfer of that immediately new knowledge, that recent knowledge comes from IDEO to Stanford.

What goes back? Well, the very first thing is the whole company wouldn’t exist without the Stanford philosophy. The value system for IDEO came from Stanford. It had its foundation in the way that Bob McKim and John Arnold thought. So in some ways, especially in the early days, the company was in complete debt to Stanford.

Now, having said that, since founding the d.school, there’s a whole bunch of things in the d. school where the d.school is learning new things and the way that things are done gets transferred to IDEO as well. In my opinion, you can just see that the imperative for advancing the state of knowledge at IDEO is much greater than at Stanford. Stanford’s goal is teaching the methodology to students, getting them to master design thinking. That’s my goal. I want them to be masters of design thinking.

MC: Do you have some process in place at IDEO to evolve the knowledge that you are creating there?

DK: We have tons of things in place for that. All the sharing that happens – we have IDEO U now (figure 8), we’re actually doing classes – but the cultural sharing at IDEO is pretty amazing. There is this thing called “IDEO Stories” where people tell the stories of what they’ve learned. There’s “Monday Morning Meetings” (figure 9). Today we had one, and people stood up and talked about the projects they’re working on, and what they’ve learned, and they shared…. There’s a thing called “IDEO Wow” which comes out every month, and it talks about the projects and each of the things around the world.

One of the things that helps with that is we have to win the work. We have to write a proposal that explains how powerful design thinking is, and how it will help your company, so somebody has to get really good at doing that. That’s more centered in IDEO.

The people writing the proposals talk to each other. If you learn some new thing about how this part of design thinking resonates with corporations, then every proposal that goes out after that has that in it. And then it’s a self-fulfilling prophecy – once I write a proposal to a company that says we’re going to do this, we do it (figure 10).

MC: Could you say that you don’t do scientific research at IDEO, but you do some kind of practice-based research?

DK: Every project has some kind of practice-based research. We don’t do what is conventionally referred to as scientific research that I can think of. We have people with PhDs that know how to do it, but most of our research is all in the trying to … We talk to eight people, not to 100,000. We don’t send out surveys or whatever. Our research is design research in that self-reported kind of inquiry – “What do you think of this?”

MC: What do you think of the research that the...
Figure 9  The Monday Morning Meeting at IDEO is unique to each of the locations. Some do breakfast, others host a happy hour. Photo courtesy of IDEO.

Figure 10  An IDEO team facilitates a brainstorm session with clients. Photo courtesy of IDEO.
Center for Design Research does here at Stanford?

**DK:** I don’t work closely with them. I really like a lot of people there, and they seem to be doing very interesting things. Recently I’ve hired two new faculty into product design, and they both have PhDs. They are both doing research, and I expect their research to be very compatible with our point of view. One is Erin McDonald. She came from the University of Michigan. The other is Sean Follmer, who came from MIT.

They are young faculty. The university came to me and said, “You’re getting old here. Hire some new people.” So in this track, the next person in line had to have a PhD … and so that’s Erin and Sean.

**MC:** So you have creativity as an umbrella. In your latest book you talk about how creativity is at the center of what you do.

**DK:** Yes. It goes this way—design thinking is the methodology that we teach, that’s the secret sauce, that’s the thing that is surprisingly effective when we want to come up with ideas, and we built everything on that. The result of that is if you take students, or companies, or anybody, and you get them to use design thinking as a tool, my belief is that builds their creative confidence (figure 11).

Before you had design thinking and somebody gave you a big problem, a very difficult problem, you’d say, “I have no idea how I’m going to do that, I’m going to have to hope that I have a big idea.”

I remember those days. You’d say, “I’m smart, I hope I have a big idea.” You’d think of it as a personal goal. Once you have design thinking in your life, you get to the point when somebody gives you a big problem, you have creative confidence. You say, “I’ve solved difficult problems before. I know how to do this. I’ll put a team together. I’ll build prototypes. I’ll understand the users to get the ideas for what is really meaningful to the people that I’m designing for. I’ll bet you that I’d come up with something, with intention, something that’s successful.” That’s confidence (figure 12).

The way we get people from the notion of design thinking to creative confidence we call “Guided Mastery.” Guided Mastery is a series of successes at this. That’s why we have all these projects (figure 13). My product design students take eight classes, and each class has three projects…. They’ll have twenty projects where they’ve experienced this before they graduate from school.

**MC:** So the business of solving a complex problem, understanding the problem and redefining it, that part of design thinking, where do you put it in the formula? Is it also part of the umbrella?

**DK:** No, that’s in the specifics of the methodology. You just said something really important…. I am in my 40th year at Stanford. One of the things that I have studied all these years is the design methods of different people. If I were to synthesize all the methods of all the different people I met prior to our design thinking point of view, it was something like this:

I took 310, this is what 310 would’ve looked like in 1976—you’re given a problem; you analyze it, break it down into its parts, you do some iteration, and then you synthesize a new possible solution given what you learned by taking it apart and studying the parts. You put the parts back together in a new way. Then, depending on how much time you have, you start again.

Now you have a new prototype or whatever, a new view…. And then, when you’re done, you implement. Usually time runs out, it’s not that you’ve actually had a satisfying conclusion. That’s the normal process. The main thing is that the problem is there, at the beginning of the process.
Where we are now, the thing about design thinking that is really powerful, is that we put the definition of the problem in the middle of the loop. This allows you to change what you are working on. We call this “the reframe,” and it turns out to be the place where we usually come up with the big idea. We’re given the kind of area called “how might we”—how might we solve this problem, how might we improve this area of life.

As you go through the process, you see something new through reframing. You realize that right next to the original thing you thought you were working on is something that’s much more important to the people that you are trying to help (figure 14). I have hundreds of examples. Take our students who took the course called Liberation Technology.

They go to Africa, where they’ve been hired to look at fire prevention. They look at the problem and they use our method. They go into the village, they interview the people, and they try to understand what’s meaningful to them. They get to know them, and what they find out in the village is that what people are really afraid of is losing their documents, having their documents destroyed or losing them. A fire that burns their documents is really scary because the documents allow them to be in this country, to be in this building, to get food, whatever. The documents are important.

So when the students get there, they realize that they’ve changed the problem from fire prevention to document preservation. Based on this realization, they develop their solution to the problem. They start a company with a pick-up truck and a scanner in the back of the truck. They go around scanning everybody’s documents and they put them up in the cloud. The innovation came from reframing the problem. We are full of stories like that…. We look at lunch in high schools. We reframe it in the context of a new realization—“People don’t care about lunch. They care about the socialization of being with their friends.” So we design a fantastic socialization experience at lunch, and then we slide a little food in. The problem started as “lunch,” but that’s not what was really needed.

**MC:** Could you say that these reframing activities are a tool that enables designers to be creative?

**DK:** It’s a consequence of the human-centered approach. It’s a consequence of the fact that somebody came up with a problem, but when you go in to understand the problem by understanding human factors, talking with the people, the problems are messy. Designers that use our method don’t just roll over and say, “Oh yeah … that’s the problem.” They almost always reframe it (figure 15).
Figure 14  A student’s work in progress at the d.school. Re-framing the problem at the Design for Extreme Affordability course. Photo by Maria Camacho.

Figure 15  Designers at IDEO work on an early phase prototype. Photo courtesy of IDEO.
Sometimes you hear that design thinking, the tools, come from some tools used by designers.

**DK:** Yes, they do.

**MC:** So when you say “designers,” are you talking about those who were trained as industrial product designers?

**DK:** Any kind of designers. I’m talking about those who were trained as fashion designers, airplane designers, any designers in the sense that they do everything with intention. To me, the definition of a designer is they do everything with intention. So designers are perfectly suited to teach design thinking because that is what they do.

**MC:** I was trained as an industrial designer, and I personally do see a difference. Sometimes another designer will ask you, “What would you teach about design thinking to another designer, if it’s the tools of a designer?” And I still feel there are many differences.

**DK:** When you put together a group to do design thinking, there are all these different people in there. There’s a businessperson, a technical person ... well one of these people is an industrial designer, and you don’t expect them to be like this, but you expect all these people to buy into design thinking.

If you look at IDEO, there’s a profession called industrial design, and industrial designers are super important. They do the magical part in some ways, they do the artistic part, but that doesn’t make them more central than the person who has to figure out what it costs.

**MC:** Any of those could be the leader of a project?

**DK:** Any could be. Many times, it’s an industrial designer. We are doing those schools in Peru, the Innova project.

For the first time I can remember, the businesspeople ran it, because what they determined was the school would be totally unsuccessful if it cost more than US$100 per month. An industrial designer would think, “I’ll build the most beautiful school that we can possibly build.” It would be gorgeous, and make everything else look like a prison. This school would be beautiful and function well. But if it costs US$125 it would be a complete waste of time.

In that particular project, you want the businessperson to take lead. That’s because they can say, “No, you can’t do that.” Or they can say, “You have to be more clever about how you use the teachers. We have to move them around, because we can’t afford more teachers. That’s because we have to make our $100 budget.” It’s just like this here. I’m in charge of the product design program here at the d.school. In a d.school project, there are product designers that go to the d.school and take its classes, and they play one of these roles.

**MC:** And then they’re learning specific things that they don’t learn in their own design.

**DK:** They’re learning about this team dynamic, about how you work on projects in a team.... They might never have worked on a project that involved service design or experience design, because they’ve been making bicycles the whole time. Here, they’ve been given the experience of taking the train to San Francisco. They’ve got to learn different things, but they have something to offer. They are very good at designing the seats, or at designing the experience of buying the ticket, but everybody becomes responsible for the whole thing. It’s just that you bring a certain muscle with you (figure 16).

**MC:** What do you know about ME310? Why do you think it’s so different to d.school?

**DK:** I don’t know much about 310. I took it in 1976, but that’s got nothing to do with 310 today. I just know there’s no overlap between the d.school and ME310.

**MC:** Are you sure about that?

**DK:** Well I’m sure there’s no faculty overlap.

**MC:** Conceptually, in the things that are taught?

**DK:** Whatever is taught in 310 about design thinking is a version that the faculty there have developed from their years of teaching the class, and their version of human-centered design. This is true for faculty throughout the country as they update their view of design and design thinking. When we first started the
d.school, 310 continued to be the way it always was. It was team-based, but the difference was the problem statement was given from the client. There was no needfinding or very little needfinding. There was no focus on multidisciplinary people. Everybody in the room was a mechanical engineer.

MC: Nowadays, ME310 has managed to get around that by bringing in other global schools with students from other disciplines (figure 17).

DK: Yeah, but if I go upstairs, everybody in those teams are 310. If you go into a d.school thing, there are five students; everyone is from a different school in the university. So there are differences. 8

MC: This is a more personal question. Why has IDEO become so involved in social problems?

DK: For the same reason the d.school has. I’m not a “do-gooder.” This has nothing do to with me. I’m not the one who’s interested in social good. I mean, I’m interested in social good as a person, but not as an educator. The reason for working on social problems is that if I want to teach students about design thinking as methodology, the best way to teach them is to give them a problem that they care about.

MC: So this is for motivational purposes?

DK: Yes, it’s for motivation. For many years, students didn’t care about social innovation, so I gave them design problems about bicycles and cars. Now, this generation, if you interview them, they care a lot about social innovation. They also care a lot about sports. In my last class, students had to redesign the experience of going to a San Jose hockey game. They were excited about that.

We also gave them problems involving social good. In my opinion, the social good part comes from what students want to work on. If I ask them to design a McDonald’s, nobody is interested. If I have them design a solar car or a way to recycle garbage, they are totally excited.

MC: That’s funny. Sometimes it’s different in Colombia. I guess that’s the case because it’s a developing country, and the context is what it is. In Colombia, many students would be more motivated by working on a McDonald’s project.

DK: That used to be the case here, but it’s not that way now. I look at my teenage daughter—she would be offended if the project didn’t have some social responsibility.

MC: You’re referring to it as social innovation. That’s another term that’s becoming famous.

DK: The most popular classes at the d.school are all that way.

MC: It’s very interesting, along with the work that you are doing with IDEO.org.

DK: We were doing those kinds of projects inside IDEO. Then not-for-profit funders like The Gates Foundation came to us and said, “Look, if you were not-for-profit, we’d give you a lot more projects.” We said, “We want more projects,” so we changed the company. It’s an independent organization. You have to quit IDEO to work for IDEO.org. IDEO.org mostly hires its own people, but it’s a separate company.

2 Here, David Kelley refers to Maria Camacho’s research on models of design thinking.
3 ME310, or simply 310, is an iconic engineering master level course that has been running at Stanford from the 60s to this day. Students take on real design innovation challenges from corporate sponsors and produce functional results in one academic year. From the mid 2000s, the course is run in conjunction with global academic partners, adding a level of diversity to the student teams. For more information see: http://Me310.stanford.edu.
5 ME101, or simply 101, is another iconic and historic Stanford course, which has been run jointly for over 40 years by the departments of Mechanical Engineering and Art. McKim called it “visual thinking” after his book, and it is an introduction to design and creativity.
6 Here, David Kelley describes the PhD degree as a common standard for hiring, tenure, and promotion at North American research universities. Hiring and tenure practices differ in other nations. In some nations, general labor laws make academic positions permanent based on responsible performance for a designated time. In these nations, labor law treats academic workers in much the same way as factory workers or government administrators, and it serves as the equivalent of tenure. The PhD degree may be a condition for appointment to some academic positions without being a condition for permanent employment.
At some research universities, significant achievements, research, or publications are a sufficient basis for promotion to full professor with or without the PhD. In some universities outside North America, promotion to full professor is also treated as an administrative promotion for heads of school or deans, without respect to academic achievement or research. This in turn creates confusion when deans without a PhD set standards for staff within their faculties. While Kelley’s comments are valid for North American research universities in most disciplines, differences on this issue make it difficult to compare the situation of design academics at Stanford with design academics at universities in other nations. In most North American research universities, the MFA is considered the terminal degree in art and design, and the equivalent of a PhD for the purposes of hiring and promotion. The PhD remains the standard degree in engineering disciplines.

7 The Program on Liberation Technology is a course that “seeks to understand how information technology can be used to improve governance, empower the poor, defend human rights, promote economic development, and pursue a variety of other social goods.” See http://cddrl.fsi.stanford.edu/libtech/ for more information.

8 Nowadays, ME310 clients present more open briefs; re-defining the problem and needfinding are crucial elements of the design process. Moreover, there is a high level of diversity, with students working in multidisciplinary and distributed teams from several universities and countries.