

Supplemental Material: Observational Protocol and Fidelity-of-Implementation Checklist

Instructions: This form is used to collect evidence relevant to the fidelity of implementing the I-Corps@NCATS short course. The information in Part One will be completed live by an observer who is a member of the evaluation team.

Goals of the fidelity assessment include addressing the following cross-site evaluation questions/ Metrics

1. Is the same information (pertaining to core concepts) being presented in the same way (e.g., with slides)?
2. How much time is spent on each topic? How variable is this across sites?
3. Are there common themes in terms of the questions that teams ask or specific aspects of content that participants seem to be more challenged by?
4. Are all intended topics covered consistently across sites?
5. Characteristics of instructional teams
6. Size of cohorts (how many teams, how many participants per team)
7. What are the ways in which the training is experiential? List key examples observed.

BACKGROUND INFORMATION

1. Obtain a copy of the course syllabus and related material (e.g., pre-course reading, roster of instructors, teams).
2. How many teams participated in the kickoff?
3. On average, how many participants were on each team?
4. Did teams complete an intake survey? If yes, obtain a copy of the intake survey.
5. How many instructors participated in the kickoff?
 - a. How many instructors were national-level trainers?
 - b. How many instructors were local/regional trainers?
6. Describe relevant information about the classroom and facilities.

Note:

- How much time is devoted to the topic? Did the time go over, under?
- Who taught each component (e.g., local or national trainer)?
- How was the information delivered (e.g., slides, discussion)?
- How many and what questions are asked by participants?

TIME	TOPIC	OBSERVATIONS
		[This was a table used to document free-flowing notes throughout Kick-Offs.]

Part One: Delivery of the Core Concepts of the I-Corps Training at Kickoff. Indicate below whether there is evidence of the core concept being delivered and your reasons for your answer.

Core Concepts	Operationalization/Emphasis	No evidence	Evidence	Observations
I-Corps Approach and Basic Theory	Value proposition overview -- Identify and address the social and emotional benefits, as well as the functional	<input type="checkbox"/>	<input type="checkbox"/>	
	Product-market-fit	<input type="checkbox"/>	<input type="checkbox"/>	
	Other theories addressed (e.g., Diffusion of Innovations), specify	<input type="checkbox"/>	<input type="checkbox"/>	
	Adaptation of the concept: The instructor describes how this concept has been adapted for a biomedical researcher.	<input type="checkbox"/>	<input type="checkbox"/>	
Business Model Canvas Overview	Teams used and seemed to understand the Business Model Canvas as a tool	<input type="checkbox"/>	<input type="checkbox"/>	
Defining and Finding Customers	This activity is a rigorous, structured, repeatable process Key messages ("listen fors"): <ul style="list-style-type: none"> • Hypothesis driven 	<input type="checkbox"/>	<input type="checkbox"/>	

Core Concepts	Operationalization/Emphasis	No evidence	Evidence	Observations
	<ul style="list-style-type: none"> Interview techniques (open ended questions, not talking about technology) helps avoid confirmation bias Once you know how to do this, can apply this to other things 			
	Talk to more than just colleagues and not just other academics. "Get out of the building."	<input type="checkbox"/>	<input type="checkbox"/>	
	Interviewees should not just include those with the propensity to agree or like the innovation; interview those you don't already know, who might be skeptical, who represent the competition	<input type="checkbox"/>	<input type="checkbox"/>	
	Data collection and analysis is iterative -- what is learned from initial interviews, informs new questions that are explored in subsequent interviews (akin to grounded theory approach in qualitative research)	<input type="checkbox"/>	<input type="checkbox"/>	
	Identification of target customer; focus is on the decision-maker or key influencer	<input type="checkbox"/>	<input type="checkbox"/>	
	Interviews explicitly inform completion of business model canvas and development of value proposition	<input type="checkbox"/>	<input type="checkbox"/>	
	Expectations stated re ~ 40 interviews are completed over about 4 weeks (intentionally intensive)	<input type="checkbox"/>	<input type="checkbox"/>	
	The pivot -- customer discovery process often leads to changes in direction, value-proposition hypotheses and this is valuable	<input type="checkbox"/>	<input type="checkbox"/>	
Customer Jobs and	Pains, gains, jobs to be done (Concepts that emphasize the importance of	<input type="checkbox"/>	<input type="checkbox"/>	

Core Concepts	Operationalization/Emphasis	No evidence	Evidence	Observations
Desired Outcomes	understanding customers' day-to-day roles/jobs that they are fulfilling; their facilitators and barriers to fulfilling those roles)			
	Design the value proposition with the end-user in mind (emphasis is on being customer focused rather than feature focused)	<input type="checkbox"/>	<input type="checkbox"/>	
Customer Discovery & Interviews	Use the Scientific Method – ok to revise the hypothesis based on evidence	<input type="checkbox"/>	<input type="checkbox"/>	
	Methodology: key informant interviews rather than surveys	<input type="checkbox"/>	<input type="checkbox"/>	
	Goal of the interview is to discover the customers “top of mind” need	<input type="checkbox"/>	<input type="checkbox"/>	
	Focus on end user	<input type="checkbox"/>	<input type="checkbox"/>	
	Be sure to identify who is the decision maker in the organization	<input type="checkbox"/>	<input type="checkbox"/>	
	No matter how good your idea or technology is, the ultimate test is – will people buy it?	<input type="checkbox"/>	<input type="checkbox"/>	
	Specifics about the interviews were described such as generating leads (esp. using linked in, which will also help you build your network). In some cases, trade shows and conferences might be a good place to find interviewees	<input type="checkbox"/>	<input type="checkbox"/>	
Coaching/ Office Hours /Individual	Timely, constructive, actionable feedback is provided during the kickoff	<input type="checkbox"/>	<input type="checkbox"/>	
	Kickoff discussion features generative questions	<input type="checkbox"/>	<input type="checkbox"/>	

Core Concepts	Operationalization/Emphasis	No evidence	Evidence	Observations
Team Meetings	Consistency of feedback/information provided from one instructor/coach to another	<input type="checkbox"/>	<input type="checkbox"/>	
	Instructors use affirming/supportive language	<input type="checkbox"/>	<input type="checkbox"/>	
Experiential aspects	Role playing (e.g., conducting customer interviews) took place during kickoff	<input type="checkbox"/>	<input type="checkbox"/>	
	Other exercises	<input type="checkbox"/>	<input type="checkbox"/>	
Other aspects	Instructors keep training on topic/focused and on schedule	<input type="checkbox"/>	<input type="checkbox"/>	
	Unstructured time (e.g., during lunch) used for networking and seeking more information (peer to peer, participants with instructors, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	
	Participants attended full day of kickoff, stay engaged	<input type="checkbox"/>	<input type="checkbox"/>	

COMPLETE THIS AFTER THE FINALE

Part Two: Structure/Organization

Key Feature	Operationalization/Emphasis	No evidence	Evidence	Observations (notes)
Team Composition	Senior faculty member	<input type="checkbox"/>	<input type="checkbox"/>	
	Junior faculty member or fellow/trainee/student	<input type="checkbox"/>	<input type="checkbox"/>	
	Latter takes the lead	<input type="checkbox"/>	<input type="checkbox"/>	
Pre-Course Preparation	Book study component	<input type="checkbox"/>	<input type="checkbox"/>	
	Value Proposition Design is a book resource used	<input type="checkbox"/>	<input type="checkbox"/>	
	Business Model Generation is a book resource used	<input type="checkbox"/>	<input type="checkbox"/>	
	Webinar is provided for general orientation	<input type="checkbox"/>	<input type="checkbox"/>	

	Other resource materials used, specify and obtain copies if feasible	<input type="checkbox"/>	<input type="checkbox"/>	
Training Structure	Two days total	<input type="checkbox"/>	<input type="checkbox"/>	
	Kick-off addresses all core components	<input type="checkbox"/>	<input type="checkbox"/>	
	Kick-off includes team presentations that provide an overview of innovation and initial hypotheses re: value proposition	<input type="checkbox"/>	<input type="checkbox"/>	
	Kick-off includes office hours (at the end of the day)	<input type="checkbox"/>	<input type="checkbox"/>	
	Finale focuses on team presentations, which summarize learning from customer discovery process, value proposition and forces driving any pivots	<input type="checkbox"/>	<input type="checkbox"/>	
	Coaching (frequency, how integrated into training sequence, in-person versus web-based and how time was used -- i.e., who is doing most of the talking)	<input type="checkbox"/>	<input type="checkbox"/>	
Other aspects	Instructors keep training on topic/focused and on schedule	<input type="checkbox"/>	<input type="checkbox"/>	
	Forces driving major pivot(s) for the team.	<input type="checkbox"/>	<input type="checkbox"/>	
	Spin-off of NSF I-Corps program; explicit mention of the ways that the I-Corps@NCATS program has been adapted for biomedical researchers	<input type="checkbox"/>	<input type="checkbox"/>	

Part Three: Artifacts to collect for further analyses comparing sites and outcomes

Artifact	Obtained	Archived	Notes (e.g., with whom to follow-up)
Intake survey information, if available	<input type="checkbox"/>	<input type="checkbox"/>	
Copy of slides used for training	<input type="checkbox"/>	<input type="checkbox"/>	
Agenda for webinar and each day of training (working agenda with more detail would be best)	<input type="checkbox"/>	<input type="checkbox"/>	
Instructional team (number, composition and bios)	<input type="checkbox"/>	<input type="checkbox"/>	
Roster/Applications of teams	<input type="checkbox"/>	<input type="checkbox"/>	

<ul style="list-style-type: none"> Team members and role(s) on team 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> Product Descriptions (Drug, device, technology, etc.) 	<input type="checkbox"/>	<input type="checkbox"/>	
<ul style="list-style-type: none"> Stage of the translational spectrum (T1, T2, T3, T4) 	<input type="checkbox"/>	<input type="checkbox"/>	
Standardized slide deck/ template for teams to use to develop presentations for Kick-Off day	<input type="checkbox"/>	<input type="checkbox"/>	
Standardized slide deck/ template for teams to use to develop presentations for the Finale	<input type="checkbox"/>	<input type="checkbox"/>	
Content from web pages advertising each regional training (agenda, syllabus, who should attend, links to further reading/resources, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	