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## Studying the other 95 %: free-choice learning evaluation for Physics.

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For tens, if not hundreds of thousands of years, learning was widely understood to be an everyday occurrence, something people did to support their needs and interests. In this world, most people, most of the time, controlled their own learning. Learning was active, supported by observing others, doing and practicing. Learning happened in pairs or in small groups typically supported by peers and skilled practitioners. Importantly, evidence of “successful learning” was not something judged by others but something demonstrated through competent actions and deeds in real life. This natural, choice-driven form of learning is what is called free-choice learning.

Then, roughly 150 years ago everything changed. Learning became increasingly thought of as something that only happened in schools. Learning came to be seen as an institutionalized and “professionalized” process, initiated and directed by experts. To say the word learning to someone conjured up ideas of a passive and mass-produced kind of activity where information was transmitted to large groups of “students” through lectures and textbooks, where the goal was passing tests rather than having the knowledge, skills and habits of mind necessary for solving real life problems.

Over the next 50 years we will be going back to the future! As the public’s need to learn expands, so too will the public’s perceptions of what it means to learn. Freed from the tyranny of equating learning with schooling, the public will find themselves engaged in an ever increasing array of free-choice learning experiences across an ever-wider array of platforms. Already, most people learn most of what they need and want to know through free-choice learning. Every year, schools and universities provide a smaller and smaller fraction of the public’s true education.

Only 5% of our lifetime learning takes place inside the classroom, lecture hall or laboratory. For over three decades the Institute for Learning Innovation (ILI) has studied the other 95 %:- investigating learning, learners and their various motivations. Dr John Falk has led this free-choice learning research in the ILI and worldwide for over 50 years. Dr Derek Fish is currently spending a year working with Dr Falk and the ILI on a Fulbright Scholarship.

The “Physics Education” track has changed over the years and now covers “Physics for Development, Education and Outreach.” While the traditional tools of Physics Education Research (PER) are well known to this group, development and outreach take place outside the classroom and cannot be evaluated in the same way. Dr Falk and Dr Fish will share the tools and practices of evaluating free-choice learning activities which will assist participants in this Track in broadening their horizons from Physics for Education only to Physics for Development, Education and Outreach.

### Apply to be considered for a student ; award (Yes / No)?

No

### Level for award;(Hons, MSc, PhD, N/A)?

N/A

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