

# Assignment 2

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## Track Selection

I'd like to focus on a research track for this course. This was a rather straight forward decision for me, as in the past I've worked on both materials and development of educational tech: I did this as part of my job to help onboard new team members. In my undergraduate studies, I worked in a biology research lab helping with bioinformatics. I did not have the chance to participate in any of the writing; given the opportunity today, I'd like to do that.

## Theories and Techniques on Informal Learning

Informal learning is "relevant to practices in many cultures and contexts" and "[takes] place wherever people have need, motivation, and opportunity for learning" (Marsick and Watkins 2001). It exists as "the most pervasive form" (Marsick and Watkins 2001) of adult learning today. It is unconscious, routine, unstructured, and triggered (Marsick and Volpe 1999). Simply put, it is the opposite of university based higher education.

Noe, Clarke, and Klein (2014) proposed "What are the antecedents and consequences of informal learning?" as a future issue to be researched. This issue poses an extremely large scope, however it raises an interesting point. The way in which learning takes place currently is well researched at its delivery, but there is not much understanding of what leads to learning or what unencumbered learners choose to use. Of what exists today in this area, most research focuses on the different places that informal learning occurs. Some

examples include peer interaction, hackathons, and even microblogs.

Peer interaction is one way that informal learning occurs. In professional relationships, people who work together learn from each-other due to their different experiences and backgrounds. The discovery of new tools and approaches naturally occurs, yet is spontaneous (Murphy-Hill and Murphy 2011). In Murphy-Hill and Murphy (2011)'s research, a development team was monitored and surveyed in their day-to-day. While troubleshooting problems together, developers discover new tools and ways to solve problems. In this work, Murphy-Hill demonstrates a concrete example of informal learning for developers. In the situations the authors discuss, peer discovery is the best means for tools discovery.

Hackathons are day or two long events in which people come together to collaboratively work on problems. Sometimes these events are independently organized, but they may also be sponsored by universities or corporations. While they do have themes, generally attendees come with specific areas of personal interest in which they'd like to work. This leads to participants researching new topics, learning from each other, and gaining experience working with new technology. Nandi and Mandernach (2016) found that participants viewed the event as an opportunity for informal learning.

Microblogs are tools like Twitter that provide extremely short means to communicate. They were studied for use in informal learning and found to be effective communication tools to facilitate group discussion (Ebner et al. 2010). These discussions served as another way to discover new technologies while also learn new skills from peers. Ebner et al. (2010)

researched their use in a university environment, and microblogs were seen as a way to introduce informal learning concepts to higher education courses.

Most of these studies heavily rely on surveys and quantitative analysis of participant data. For example, Ebner et al. (2010) uses a quantitative technique measuring frequency, categories, and learner-type of the microblog posts, plus a survey of the learners impressions. Some qualitative data is collected to supplement.

## The Problem to Study

I volunteer as a community team member on the React Native project. Within this community, an often-cited issues is that it is fast moving but has few learning resources (Peal 2018). I see day to day that learning these rapidly-changing frameworks poses a problem, and it is a problem that is not understood. Based on the future areas identified by Noe, Clarke, and Klein (2014), I believe there is more to do around understanding how informal learning occurs. I plan to research the following:

**How do developers learn rapidly-changing frameworks?**

## References

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