Community building

HSF WLCG Workshop, November 19, 2020

HSF Training WG with Kilian Lieret[1,2], Sudhir Malik[3], Samuel Meehan[4]

[1] Ludwig Maximilian University of Munich   [3] University of Puerto Rico Mayaguez
[2] Excellence Cluster Universe   [4] CERN

Community building

Engagement =

Intrinsic Motivation 💖 +

Extrinsic Motivation 🥕 +

Support ⛑ − Obstacles 🚧

Pocelli, 2013

Engagement =

Intrinsic Motivation 💖 +

Extrinsic Motivation 🥕 +

Support ⛑️ − Obstacles 🚧 +

Advertisement 📡

Inspired by Pocelli, 2013

Engagement = max(0,

Intrinsic Motivation 💖 +

Extrinsic Motivation 🥕 +

Support ⛑️ − Obstacles 🚧 +

Advertisement 📡)

Inspired by Pocelli, 2013

💘 Intrinsic Motivation

- You want to have a **high impact** and **advance HEP**?
  Training might be your most effective choice!

- Example: Writing a lesson on X (pyROOT, your framework, numpy, …)
  - Your time investment (3h lesson, ready for event): **30h**
  - Learning time student: **6h** (no lesson) →**3h** (your lesson)
  - 100 students (= 2 events) per year ⇒ **300h saved to the HEP community!**
  - **Payback = 10x investment per year!**

- Even better ramification:
  - Instilling **best practices**
    - *Encouraging* students to use **unit testing**: fast
    - Can make the difference between *working* or *failing* experiment, *retracted* or *successful* paper
  - Explaining badly documented/difficult topics

Intrinsic motivation

You want to have a **high impact** and **advance HEP**?

Training might be your most effective choice!

🥕 Extrinsic Motivation

- *"If you can't explain something to a freshman, you haven't understood it yourself"* – Misattributed to many famous people
⇒ Use training to **deepen your own understanding**

- Or ***force yourself to learn*** something new and useful!

- Practice git, github & **collaborative workflow** (& learn about Jekyll and static websites if you want)

- Cross-experiment **networking**: Join a vibrant **community**

🥕 Extrinsic Motivation: Community

- Anyone who contributes can add their **profile** to the HSF page

Our community

https://hepsoftwarefoundation.org/training/community.html

🥕 Extrinsic Motivation: Recognition

- **Community profiles** can be personalized and linked to in applications

- Working on further **crediting the content contributors** of each training module
  - Using the `allcontributor` **github bot**
  - Mostly used to update readmes on github, but can configure it to update any markdown file
  - Allows to add avatars and names to our module websites without maintenance issues
  - https://allcontributors.org/
  - Great thing for any open source project!

🥕 Extrinsic Motivation: Recognition

klieret commented 15 days ago

@all-contributors please add @meevans1 for code

allcontributors (bot) mentioned this issue
15 days ago

docs: add meevans1 as a contributor
#8

Merged

allcontributors (bot) commented
15 days ago

@klieret

I've put up a pull request to add @meevans1! 🎉

Authors

Samuel Meehan

Meirin Oan Evans

Schedule

	Setup	Download files required for the lesson
00:00	1. Introduction	Key question (FIXME)
00:00	Finish	

🥕 Extrinsic Motivation: Supervision

- You might already **have to** teach and train new students
- Polemic comparison:

Do it yourself:
- Give same instructions to every student every time
- Use slides that only work if you explain them verbally
- Answer the same questions over and over
- Have your material age and become deprecated because you're the only overworked maintainer

HSF Training module
- **Self-contained** and **self-study centric**
- Yet **easy to roll out events** with our **support**
- Everyone with a github account can help to **improve** & **maintain** material
- We find a **big audience** that keeps the material alife

11

🥕 Extrinsic Motivation: Money

- Can we **repurpose travel funds** as an enticement to create training material & teach?

- E.g. **2000$ fellowship** for a 3-4h training module
  - 1000$ at the beginning
  - 1000$ successful delivery (judged by HSF Training and IRISH HEP/fund provider)

- Discussions ongoing

- Long term goal: Creating a **career path** (as was done for RSEs)

Pay to Teach and Learn

A proposal to making "research-teaching" *more* worth it

Description/Motivation

One of the key components involved in the HSF-Training mission plan is the creation of an "Essential HEP Core Curriculum" for computing. The creation of a full training involves both the development of a lesson webpage (e.g. CI/CD) as well as a set of standalone training videos (e.g. CI/CD videos). Over the past year, a number of tutorials have been developed by members of the community and they are at various stages of completion from being merely ideas, to being fully supported trainings (e.g. CI/CD above). This has happened on a *volunteer* basis and while this has been encouraging, it is not sustainable to solely rely on the good intentions of the community to drive progress. Moreover, the creation of a training amounts to a considerable time investment on the part of the instructors. It requires approximately 50 hours to create a lesson and between 20-30 hours to record the standalone videos. This amounts to a considerable time investment at the expense of taking time from their ongoing research activities.

On the other hand, teaching requires that there be an engaged audience who is invested in learning. Though at face value, it is commonly believed that providing educational resources for researchers is enough, the erroneous need to multi-task has been impressed by our community on our community, thereby creating educational audiences who try to check emails or perform analysis tasks during in person workshops and who, during virtual workshops, de-prioritize the work of learning. "It can always be done later," is a common mentality for learning. In reality, by internalizing new skills, a student or researcher will become better equipped to be more efficient in the future. The challenge for educators lies in providing the appropriate motivation to engage and have the individual *commit* to learning in a focused way.

This is a proposal to IRIS-HEP to augment this model and offer *financial* rewards for the development of training content as well as their learning. We argue that this provides a more sustainable training model as it would create high-quality and distributable content that can be implemented in virtual training environments. This would also mitigate the issue of audience engagement, thereby making each training event more effective. Both of these features will lead to considerable financial savings by saving on travel expenses for instructors or participants of similar trainings and creating a more effective research workforce.

⛑ Support - Obstacles

- **Technical** aspects: Our trainings are websites (deployed with Jekyll as gh-pages)
  - … but you only need to write in **Markdown**
  - We help to set up the framework (and everything else you need to get started)
  - We can provide **tech support**
- **Organizational** aspects:
  - **Howtos** on our webpage ("how to organize a training event", …)
  - We help you find **mentors** to help in the event
  - We find you a big **audience**
- **Inertia** & lack of **confidence**: Friendly and open weekly round tables (you are not alone)
- We are there to discuss on **mattermost** (=slack)
- It's hard to find time for training → **hackathon**

Engagement = max(0,

Intrinsic Motivation 💖 +

Extrinsic Motivation 🥕 +

Support ⛑️ − Obstacles 🚧 +

Advertisement 📡)

Engagement = max(0,
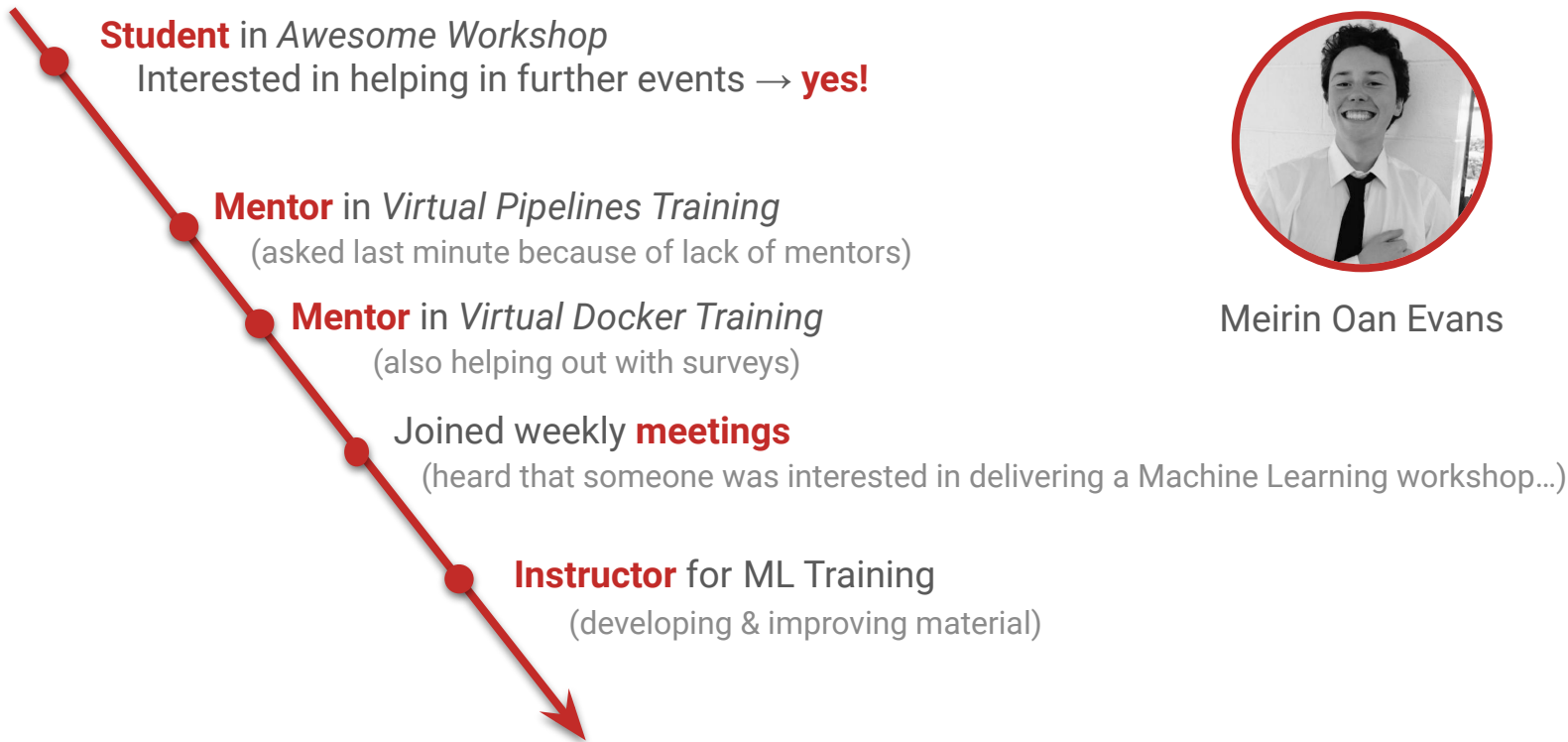
Intrinsic Motivation 💖

− Obstacles 🚧)

📡 Advertisement & Recruitment

- In order for this to work, we need **YOU** to **spread the word** about HSF training
  - To training WGs of your experiment
  - To colleagues who might have an interest
  - To students you supervise
- Start on a **low commitment-base**
  - "They teach you how to use Docker. It's free!"
  - "I heard you're still looking for tutors for your event. These people might help you."
- During each event: **Advertise** our mission (links to the webpage, sharing personal experiences in mentoring sessions, …)
- After each event: **Survey** collects emails of participants who are interested in contributing → **Follow up**!
- **Journey** starts there!
  - Students become mentors
  - Mentors become instructors and facilitators

📡 HSF Training Journey Case Study

Student in *Awesome Workshop*
 Interested in helping in further events → **yes!**

Mentor in *Virtual Pipelines Training*
 (asked last minute because of lack of mentors)

Mentor in *Virtual Docker Training*
 (also helping out with surveys)

Joined weekly **meetings**
 (heard that someone was interested in delivering a Machine Learning workshop…)

Instructor for ML Training
 (developing & improving material)

Meirin Oan Evans

17

🔥 Hackathon

- Ever wanted to "properly **teach *this one thing***" or "make sure everyone does *this* right"? We got something for you!

- Excuse to block **3 days**, work with us and **make it happen**!

- **16-18 December**

- https://indico.cern.ch/e/hacktraining

18

Summary

You want to have a **high impact** and **advance HEP**?

Training might be your most effective choice!

Engagement = max(0,

Intrinsic Motivation 💖 +

Extrinsic Motivation 🥕 +

Support ⛑️ – Obstacles 🚧 +

Advertisement 📡)