5 Steps for Effective Education at Hackathons

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I AM

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How should teaching be done?

Education matters.

EDUCATION MATTERS

- Welcome beginners

- Nurture technical growth and support structure of community

- More incentives to participate

WHY AT HACKATHONS?

- Tap the existing energy of the environment

- Immediate implementation and reward

- Abundance of resources

DEVFES✈

DEVFEST

Week of learning followed by hackathon

2015   1 lecture each night

Week of learning followed by hackathon

2015	1 lecture each night
2016	Self-paced online projects

DEVFEST

Week of learning followed by hackathon

2015	1 lecture each night
2016	Self-paced online projects
2017	???

Your hackathon is not DevFest.

YOUR HACKATHON IS NOT DEVFEST

DevFest
4 evenings for learning
Values dedicated to learning
Columbia audience

YOUR HACKATHON IS NOT DEVFEST

DevFest	Your Hackathon
4 evenings for learning	
Values dedicated to learning	
Columbia audience	

YOUR HACKATHON IS NOT DEVFEST

DevFest	Your Hackathon
4 evenings for learning	18 to 48 hours for everything
Values dedicated to learning	[your values]
Columbia audience	[your audience]

WHAT THIS MEANS

I can't tell you what is best for *your* hackathon.

It depends on your:
- values
- resources
- scale

2 Driving Points

Be thoughtful.

Be thoughtful.

and

Be intentional.

THE 5 STEPS

these should guide your educational model

THE 5 STEPS

THE 5 STEPS

1. <u>Identify Audience</u>

IDENTIFY AUDIENCE

Who is your hackathon targeted towards?

and

Who comes to your hackathon?

Which subset of that is your educational audience?

educational audience ⊆ total audience

IDENTIFY AUDIENCE

Identifying your educational audience should also be informed by your resources and scale.

THE 5 STEPS

1. Identify Audience

2. Scope Content

Now that you have identified your educational audience, what would be the most valuable thing for them to learn?

How do you scope content?

1. Audience fit
2. Practicality

1. Think about your audience.

1. Think about your audience.

What do they already know?

What do they want to learn?

What can you teach them?

Themed hackathon?

2. Practical first.

2. Practical first.

App Dev (APIs, libraries)

vs.

Computer Science (intro java, algorithms)

SCOPE CONTENT

For example, web development is practical, expansive, and flexible:

- Personal website

- Front-end

- Back-end

- APIs

THE 5 STEPS

1. Identify Audience

2. Scope Content

3. <u>Determine Format</u>

DETERMINE FORMAT

What educational format is best for the given audience and content scope?

e.g. lecture, self-paced, hybrid, reverse classroom

DETERMINE FORMAT

Lecture

+ familiar

+ scalable

- too slow/fast

- too easy/hard

DETERMINE FORMAT

Self-paced

+ solves slow/fast problem

+ solves easy/hard problem

- not engaging

- requires a lot of TA support

Hybrid

> microlectures interspersed with self-paced time

- space setup logistics?

Reverse Classroom

> self-paced study followed by discussions with leaders

- how to scale discussions?
- how does discussion pacing work?

THE 5 STEPS

1. Identify Audience

2. Scope Content

3. Determine Format

4. Create Curriculum

CREATE CURRICULUM

Write or curate high-quality curriculum.

Curriculum should be bug-free and unambiguous.

Case Study:

DEVFEST

http://learn.devfe.st

CREATE CURRICULUM

Resources

Online Interactive (e.g. Codecademy)

Official Tutorials (e.g. Flask Tutorial)

Community Tutorials (e.g. DevFest Tracks)

Books (e.g. Eloquent JavaScript)

THE 5 STEPS

1. Identify Audience

2. Scope Content

3. Determine Format

4. Create Curriculum

5. <u>Execute and Iterate</u>

Do it.

EXECUTE AND ITERATE

It won't be perfect the first time.

EXECUTE AND ITERATE

It won't be perfect the first time.

In fact, it will never be perfect.

EXECUTE AND ITERATE

Learn from what went well, what went wrong, and what could have been better.

EXECUTE AND ITERATE

Incorporate data from observations and surveys into your planning process for next year.

THE 5 STEPS

1. Identify Audience

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YOUR TURN

Take a few minutes to think about the 5 steps in the context of your hackathon. Write down your thoughts to build version 0 of your educational model.

THE 5 STEPS

1. Identify Audience

2. Scope Content

3. Determine Format

4. Create Curriculum

5. Execute and Iterate

PEER REVIEW

Turn to a neighbor and present your educational models to each other. Challenge and interrogate each assumption and point.

ITERATE

Make modifications to your educational models as necessary. Be able to justify each point. Iterate to version 1.

TAKEAWAYS

summary and closing remarks

Education matters.

Every hackathon is different.

THE 5 STEPS

1. Identify Audience

2. Scope Content

3. Determine Format

4. Create Curriculum

5. Execute and Iterate

Don't stop thoughtfully and intentionally iterating.

HREFS AND RESOURCES

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this()

raymondxu.io/hackcon16.pdf

Rethinking Education at DevFest

by Raymond Xu

Why We Do DevFest

by Matt Picollela

DevFest 2016 Curriculum

6 original, self-paced online tutorials built at Columbia

Thanks!

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