



Building Teaching Skill: Lesson Study

Lesson Study: Curricular Components



- Part of “Lesson Study”
 - Lesson objectives
 - Content
 - Exercises

Know Who You Are Teaching



- Learner profiles
 - A person's background
 - A problem they face
 - How the course can help them

Exercise 1: Learner Profiles

- Read Software Carpentry's learner profiles and then write one that describes a fictional colleague of your own. Who are they, what problems do they face, and how will this training help them? Be as specific as possible.

Learning Objectives

- After you know your audience - design goals
- Learning objectives
 - Intended effect of lesson
 - Very specific

Exercise 2: Evaluate SWC/DC Learning Objectives

- Select one learning objective from one of SWC/DC lessons, then complete the following steps to evaluate it:
 - Identify the learning objective verb. How specifically does this verb describe the desired learner outcome?
 - In your opinion, does the lesson do an effective job of meeting the stated objective?
 - Does the lesson meet any objectives that are not stated in the objectives section?

Designing Good Challenges

- Regular + an extra set of challenges
- A goal of an exercise -> to provide useful feedback to instructor
- Adapting challenges while teaching

Challenge Example

Challenge 4

Given the following code:

```
m <- matrix(1:18, nrow=3, ncol=6)
m
```

```
1 4 7 10 13 16
2 5 8 11 14 17
3 6 9 12 15 18
```

1. Which of the following commands will extract the values 11 and 14?

- A. `m[2,4,2,5]`
- B. `m[2:5]`
- C. `m[4:5,2]`
- D. `m[2,c(4,5)]`

Exercise 3: Adapting Your Challenge

- Pair up with a partner that you wrote the MCQ or faded example yesterday with.

Evaluate what level of learner they target.

Write two variations of this question that target a) more advanced and b) more novice learners. Discuss your variations with a partner and write them here.

Summary

- Exercises are meant to provide useful guidance to instructors about next steps
- Adapting exercises ‘on your feet’ can be difficult, but can also be learned