

Code Club Assessment Proposal

Malinda Matney and Pat Schloss met on 11 June 2020 to discuss the aims of the Code Club proposal he is making (an R25 proposal to the NIH). If funded, this project would take effect in Spring 2021 with an anticipated two years of deployment of the intervention, and a final year of assessment and study.

The Code Club proposal seeks to interrupt a pattern of students attending an intensive coding workshop after which they feel empowered to code, only to not exercise their knowledge immediately, resulting in lack of retention of the material. Within this proposal, short videos of 20-30 minutes will be crafted and accompanied by application exercises. (Any reference to videos below includes the application exercises.) This is intended to provide repeated practice with the material.

Three conditions may exist: Students may engage workshops only, workshops plus videos afterward, or the videos only.

The hallmark elements are:

- 1) Introductory language for the PI to use to distribute surveys.
- 2) An immediate post survey after the initial engagement with material.
- 3) A post-post survey two months after the initial engagement with material.
- 4) A final-post survey six months after the initial engagement with material.
- 5) Analysis and report.

Change being measured: Whether students retain more as a result of the different approach to delivering and applying the material.

Research question: In what ways do the interventions differ in student retention of coding knowledge?

- What conditions provide maximum mastery of material immediately after the intervention (workshop or video)?
- What conditions provide maximum mastery of material two months after the intervention (workshop or video)?
- What conditions provide maximum mastery of material six months after the intervention (workshop or video)?
- What differences might exist in this mastery for different demographic groups (particularly around gender and race)?

Code Club Assessment Plan: Budget

Component	Year 1	Year 2
Intro language and IRB consultation		
	\$0	\$0
Surveys immediately after intervention		
	\$500	\$500
Surveys at two month interval		
	\$500	\$500
Surveys at six month interval		
	\$500	\$500
Totals/Year	\$1,500	\$1,500
		\$3,000

MACRO Assessment Plan: Timeline

Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
2016 pre survey	2016 -symp survey	2016	2016	2017 develop interview protocol	2017	2017	2017	2017 -collect records data -focus group (1) - mentor focus group	2017 -focus groups -data analysis	2017 -data analysis	2017 -write report
2017 pre survey	2017 -symp survey	2017	2017	2018	2018	2018	2018 -post survey?	2018 -collect records data -focus groups (2) - mentor focus group	2018 -focus groups -data analysis	2018 -data analysis	2018 -write report
2018 pre survey	2018 -symp survey	2018	2018	2019	2019	2019	2019 -post survey?	2019 -collect records data -focus groups (3) - mentor focus group	2019 -interviews -data analysis	2019 -data analysis	2019 -write report