The *Riffomonas* YouTube Channel: An Educational Resource to Foster Reproducible Research Practices

Running title: *Riffomonas* YouTube Channel

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Educational resource

Abstract

Limit the abstract to 50 words or fewer

Limit the paper to 500 words or fewer

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Need for all scientists to strengthen their data science skills * Focus on reproducible research methods * command line, R, Rmarkdown, version control, data visualization, project organization

Previously... * Developed Riffomonas reproducible research tutorial series * Developed other online tutorials teaching scientists to use in R with microbiome (minimalR) and more general (generalR) data

Current state of the art... * Workshop-based tutorials - intensive learning opportunities (minimalR/generalR and Carpentries) * Books - use toy datasets, highlight individual commands

The *Riffomonas* YouTube Channel... * Repository for Reproducible Research Tutorial series * Code Club series

Code Club * Born out of pandemic and need for community and desire to fill the hole in offerings for repeated practice, applying concepts in different contexts, and intgration of concepts in project-based approach * So far... - Live coded the process of developing, writing, and publishing a paper - Use “real” and not toy datasets - microbiome, weather, commodity prices, COVID-19 vaccine attitudes - to develop concepts * Posted 1-3 videos a week * Recently started a free weekly email newsletter with practice problems that parallel content in the videos

Availability of code through Jekyll powered blog and repositories within a GitHub-based project

Pedagogy... * Offering encouragement * Normalize failure * Repeated practice opportunities * Ability to apply concepts in different contexts * Integration of concepts in a project-based approach

Acknowledgements

References

1. **Schloss PD**. 2018. The Riffomonas reproducible research tutorial series. Journal of Open Source Education **1**:13. doi:10.21105/jose.00013.

2. **Schloss PD**. 2018. Identifying and overcoming threats to reproducibility, replicability, robustness, and generalizability in microbiome research. mBio **9**. doi:10.1128/mbio.00525-18.

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