

General Education Course Registrations^{*}

An Overview of Registration Patterns for Fall 2017

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Abstract

“Assessment is not a spreadsheet; it’s a conversation.” — Irmeli Halinen

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Introduction

Standardized scoring

VALUE rubrics for individuals

Need thresholds for courses

Methods

Data provenance

Data provenance refers to a system that permits tracking of the origin, movement, modification, and utilization of data sets (Buneman et al., 2001). The provenance of General Education data will be explicitly declared to facilitate the reproducibility and extensibility of these studies.

Location of public website files

All files related to this report can be found online at the Open Science Framework (Nosek, 2012). This site contains all of the files needed to reproduce this report from the de-identified data set. The site's url is <https://osf.io/t6u8m/>.

Session information

This report was written using RStudio (RStudio Team, 2015) and the R statistical programming language (R Core Team, 2013). These products are free to download for PC, Macintosh, and Linux operating systems. The following information pertains to the session parameters used to generate this report. If you have trouble reproducing this report, it may be due to different session parameters. You may contact Dr. Franklund if you need assistance.

R version 3.4.1 (2017-06-30)

****Platform:**** x86_64-apple-darwin15.6.0 (64-bit)

locale: en_US.UTF-8|en_US.UTF-8|en_US.UTF-8|C|en_US.UTF-8|en_US.UTF-8

attached base packages: stats, graphics, grDevices, utils, datasets, methods and base

other attached packages: pander(v.0.6.1), googlesheets(v.0.2.2), dplyr(v.0.7.2), purrr(v.0.2.3), readr(v.1.1.1), tidyr(v.0.7.0), tibble(v.1.3.4), ggplot2(v.2.2.1) and tidyverse(v.1.1.1)

loaded via a namespace (and not attached): Rcpp(v.0.12.12), cellranger(v.1.1.0), compiler(v.3.4.1), plyr(v.1.8.4), bindr(v.0.1), forcats(v.0.2.0), tools(v.3.4.1), digest(v.0.6.12), lubridate(v.1.6.0), jsonlite(v.1.5), evaluate(v.0.10.1), nlme(v.3.1-131), gtable(v.0.2.0), lattice(v.0.20-35), pkgconfig(v.2.0.1), rlang(v.0.1.2), psych(v.1.7.5), rstudioapi(v.0.7), yaml(v.2.1.14), parallel(v.3.4.1), haven(v.1.1.0), bindrcpp(v.0.2), xml2(v.1.1.1), httr(v.1.3.1), stringr(v.1.2.0), knitr(v.1.17), hms(v.0.3), rprojroot(v.1.2), grid(v.3.4.1), glue(v.1.1.1), R6(v.2.2.2), readxl(v.1.0.0), foreign(v.0.8-69), rmarkdown(v.1.6), bookdown(v.0.5), modelr(v.0.1.1), reshape2(v.1.4.2), magrittr(v.1.5), scales(v.0.5.0), backports(v.1.1.0), htmltools(v.0.3.6), rvest(v.0.3.2), assertthat(v.0.2.0), mnormt(v.1.5-5), colorspace(v.1.3-2), stringi(v.1.1.5), lazyeval(v.0.2.0), munsell(v.0.4.3) and broom(v.0.4.2)

Processing instructions

This project produced a computationally reproducible assessment report (this document). Anyone wishing to recreate this report from the source document will need to install the following on their computer:

1. An installation of the R programming language
2. An installation of the RStudio IDE
3. An installation of LaTeX

The necessary source files include the de-identified data set (BIOL200Data.csv), Rmarkdown code files (index.Rmd, 01-Introduction.Rmd, 02-Methods.Rmd, 03-Results.Rmd, 04-Discussion.Rmd, and 05-References.Rmd), bibtex reference file (references.bib), and custom art file in the /art folder.

To process the files, you must first open the project in RStudio. Click on the “Build Book” button in the Build menu. Bookdown allows you to build this project as `git_book` (html site), `pdf_book` (via LaTeX), or `epub_book` (compatible with iBooks and other e-book readers).

Citation of this work

All of the de-identified data, analysis code, and documentation that constitute this report project may be freely used, modified, and shared. The de-identified data set, BIOL200Data.csv, is released under the Creative Commons CC0 license. All documentation, including README.md, Codebook.md, and this report, are released under the Creative Commons CC-BY licence. Any questions, comments, or suggestions may be sent to Dr. Franklund.

Retrieving the registration data

Data collection

All registration records for the fall of 2017 were collated and de-identified. The data file, ‘registrations.csv’, contains only the course name (e.g. BIOL 101), the core competency (e.g. Natural Sciences), and the standardized measure (e.g. Selected Response Exam). The datafile is available [here](#).

Results and Discussion

Summary statistics

A total of 272 registrations have been completed as of October 14, 2017. This includes a total of 134 different courses. The distribution of the registrations between the eight core competencies is shown in figure 1.

A total of 115 exams were registered (0.4227941).

Histograms

References

- Buneman, P., Khanna, S., and Wang-Chiew, T. (2001). Why and Where: A Characterization of Data Provenance, pages 316–330. Springer Berlin Heidelberg, Berlin, Heidelberg.
- Nosek, B. (2012). An Open, Large-Scale, Collaborative Effort to Estimate the Reproducibility of Psychological Science. *Perspect. Psychol. Sci.*, 7(6):657–660.

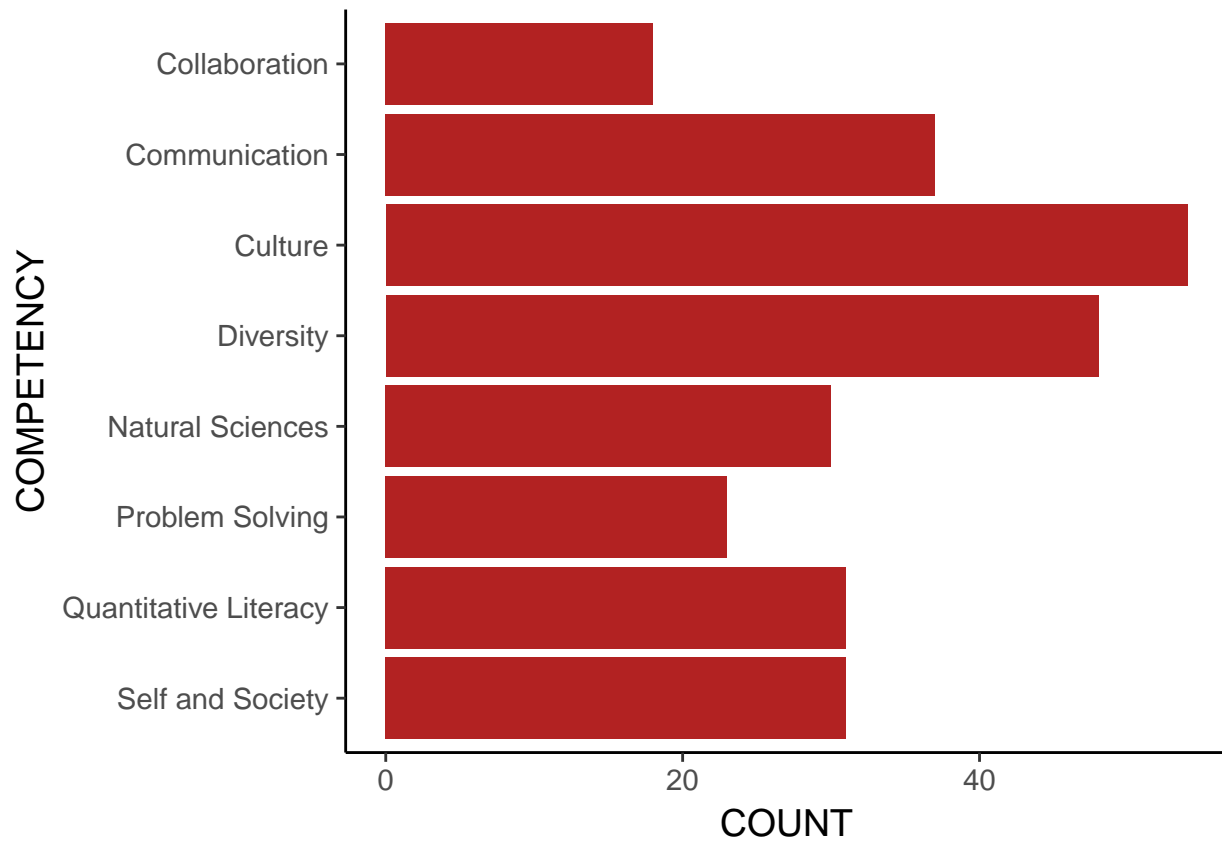


Figure 1: Distribution of course registrations by core competency.

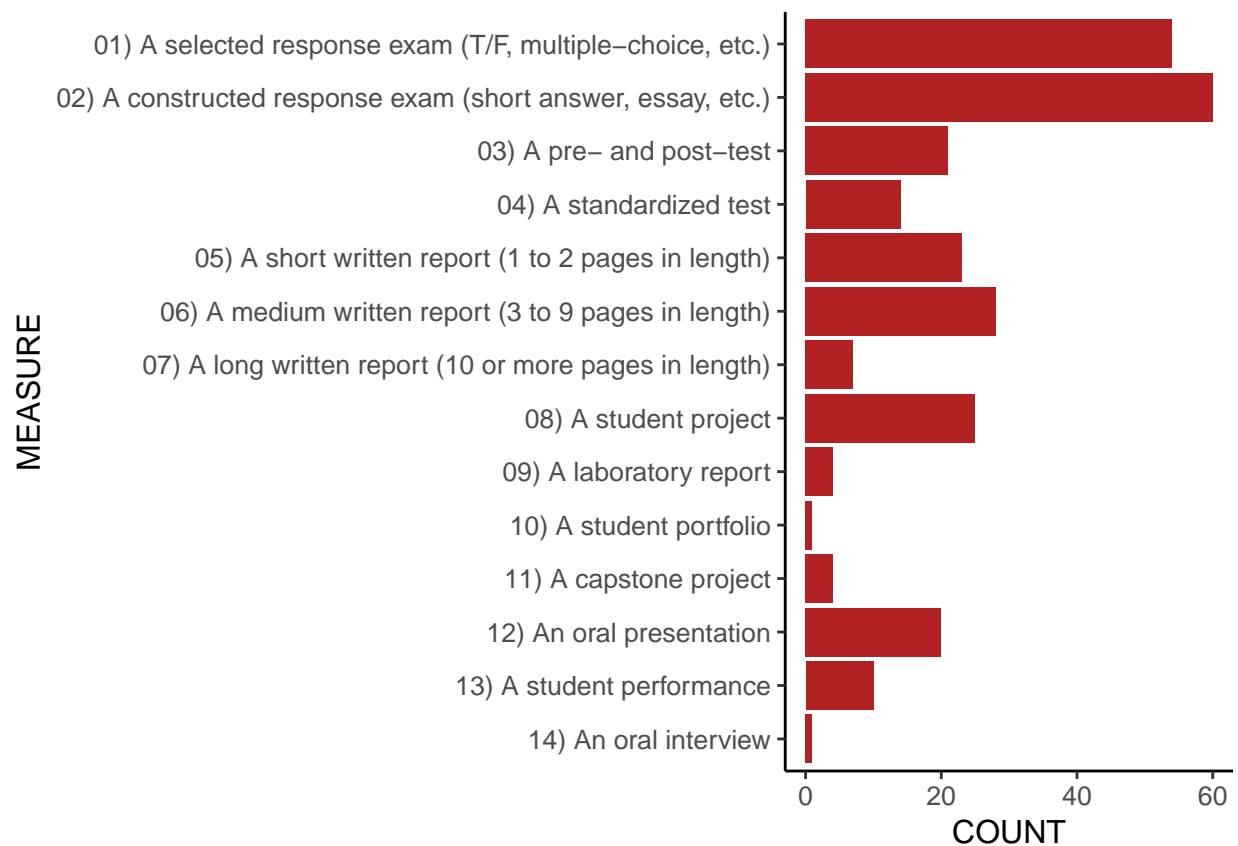


Figure 2: Distribution of course registrations by standardized measure.

R Core Team (2013). R: A Language and Environment for Statistical Computing. R Foundation for Statistical Computing, Vienna, Austria.

RStudio Team (2015). RStudio: Integrated Development Environment for R. RStudio, Inc., Boston, MA.