

Schooling Methods in Student Test Scores*

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An increasing number of schools and universities have adopted virtual or hybrid teaching methods ever since the COVID-19 pandemic in 2020. Using data from the National Center for Education Statistics and from various district-level assessments, this paper investigates the impact of schooling modes on students' pass rate in state standardized assessments in grades 3-8 during the 2020-2021 school year. The exploration of the data across 11 states suggests that the overall student pass rates declined during the pandemic school year. The pass rates have also seen more drastic changes in schools with larger share of black students as well as in schools who had a higher share of virtual and hybrid schooling. The results of this study are significant as they can be used by educational authorities and policymakers to support student learning.

NOTE TO SELF : I WANT TO CHANGE THE FIRST SENTENCE IN ABSTRACT

1 Introduction

In 2020, the World's Health Organization (WHO) declared the coronavirus disease, commonly known as COVID-19, a public health emergency of international concern (World Health Organization 2020). As an airborne disease, COVID-19 was highly contagious from person to person, which made virtually all lifestyle activities a health risk during the pandemic. During this time, hosting in-person classroom activities and instructional periods were also considered a health hazard and were strongly discouraged. It attempts to support students and staff despite the uncertainty and unpredictability of the pandemic, school leaders and authorities implemented alternative learning models which offered students the opportunity to continue their studies in a safe way. In the United States, hybrid and virtual schooling modes were commonly adopted in 2020-2021 in response to the pandemic.

In this paper, I am interested in the evolution of the knowledge of canadian official languages in Quebec. Using data from the Canadian Language Census from 2001, 2006, 2011, 2016 and

*Code and data are available at: [LINK](#).

2021, I explore the trends in Quebecers' knowledge in English and French for more insights on the influence of the government's francization efforts on the provincial bilingualism rate. I find that, despite the restriction on the usage of English in Quebec, the province has an increasing trend in bilingual population. **MODIFY THIS IF NEEDED AFTER DISCUSSION**

The remainder of this paper is structured as follows. Section 2 discusses the data collection and the studied variables. Section 4 builds a model that illustrates the trend in bilingualism rate in Quebec throughout

2 Data

Talk more about it.

Talk way more about it.

3 Model

The goal of our modelling strategy is twofold. Firstly,...

Here we briefly describe the Bayesian analysis model used to investigate... Background details and diagnostics are included in

3.1 Model set-up

Define y_i as the number of seconds that the plane remained aloft. Then β_i is the wing width and γ_i is the wing length, both measured in millimeters.

$$y_i | \mu_i, \sigma \sim \text{Normal}(\mu_i, \sigma) \tag{1}$$

$$\mu_i = \alpha + \beta_i + \gamma_i \tag{2}$$

$$\alpha \sim \text{Normal}(0, 2.5) \tag{3}$$

$$\beta \sim \text{Normal}(0, 2.5) \tag{4}$$

$$\gamma \sim \text{Normal}(0, 2.5) \tag{5}$$

$$\sigma \sim \text{Exponential}(1) \tag{6}$$

We run the model in R (R Core Team 2022) using the `rstanarm` package of Goodrich et al. (2022). We use the default priors from `rstanarm`.

3.1.1 Model justification

We expect a positive relationship between the size of the wings and time spent aloft. In particular...

We can use maths by including latex between dollar signs, for instance θ .

4 Results

Our results are summarized in.

5 Discussion

5.1 First discussion point

If my paper were 10 pages, then should be at least 2.5 pages. The discussion is a chance to show off what you know and what you learnt from all this.

5.2 Second discussion point

5.3 Third discussion point

5.4 Weaknesses and next steps

Weaknesses and next steps should also be included.

References

- Goodrich, Ben, Jonah Gabry, Imad Ali, and Sam Brilleman. 2022. “Rstanarm: Bayesian Applied Regression Modeling via Stan.” <https://mc-stan.org/rstanarm/>.
- R Core Team. 2022. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.
- World Health Organization. 2020. *WHO Director-General’s Opening Remarks at the Media Briefing on COVID-19 - 11 March 2020*. World Health Organization. <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>.