SPEEDING VE STUDENTSKÉM DOTAZNÍKU PISA 2018: PŘÍPAD ŽÁKŮ PRAŽSKÝCH ZÁKLADNÍCH ŠKOL

SPEEDING IN THE PISA 2018 STUDENT QUESTIONNAIRE: A CASE OF PRAGUE BASIC SCHOOL STUDENTS

Martin Boško[1], **Hana Voňková**[1], **Ondřej Papajoanu**[1], **Angie Moore**[1]

[1] The Anchoring Center for Educational Research, Pedagogická fakulta, Univerzita Karlova, Praha

Abstrakt

Velmi rychlé časy odpovídání v dotazníku mohou být indikátorem nedbalého odpovídání. V tomto článku analyzujeme časy odpovědí žáků pražských základních škol na žákovský dotazník PISA 2018 a charakteristiky rychle odpovídajících žáků (*speeders*). Rychle odpovídající žáci mají nižší hodnoty některých socio-ekonomických indexů, jako je například index kulturního bohatství rodiny (*CULTPOS*) a index domácích vzdělávacích zdrojů (*HEDRES*), a také horší výsledky v PISA testech.

Klíčová slova: *čas na odpovídání, pražské základní školy, PISA 2018, žákovský dotazník, speeding*

Abstract

Very fast response times in a questionnaire can be an indicator of careless responding. In this paper, we analyse response times of Prague basic school students on the PISA 2018 student questionnaire and the characteristics of fast-responding students (speeders). Fast responding students have lower values in some socio-economic indices, such as the cultural possessions index (*CULTPOS*) and home educational resources index (*HEDRES*), and perform worse on the PISA tests.

Keywords: *response time, Prague basic schools, PISA 2018, student questionnaire, speeding*

1 INTRODUCTION

Response times have become crucial for survey analysis. Using these, we analyse data of Prague basic school students from the PISA 2018 student questionnaire. We identify speeders and consider their background characteristics. We also discuss the implications of our findings.

2 THEORY

In the literature, fast response times have been proposed as an indicator of carelessness or insufficient effort in responding to questionnaires (Curran, 2016; Goldammer et al., 2020) and multiple approaches for the identification of fast responding (speeding) were suggested. For example, Huang et al. (2012) set a 2s per item threshold for their questionnaire with 5-point Likert-scale items. Another approach was suggested by Greszki et al. (2014), who identified the speeding threshold as 70%, 60% or 50% of the median time.

3 METHODOLOGY

Our analysis is based on PISA 2018 student questionnaire response time data and includes 225 Czech basic school students from Prague. We examine the differences in their total time spent on the student questionnaire and the differences in the characteristics of speeding and non-speeding students (e.g., gender and socio-economic status [SES]). The speeding threshold was set to 70% of the median total time for Czech basic school students from Prague, students answering faster than this threshold being identified as speeders.

4 RESULTS

The preliminary results indicate that speeding students are mostly male and that they have lower values in some PISA SES indices, specifically the index of cultural possessions (*CULTPOS*) and home educational resources (*HEDRES*). We have found that the mean reading, science, and mathematics PISA test scores of speeding students are significantly lower than the mean scores of non-speeding students, which suggests that students speeding in the PISA questionnaire also perform worse on PISA tests than their non-speeding counterparts.

5 CONCLUSION AND DISCUSSION

Data containing responses from carelessly responding students does not bring valid evidence concerning the concept under study. Proper identification of speeders and their characteristics is important for avoiding incorrect conclusions based on the survey data. Our preliminary findings suggest that being a male, having a lower socioeconomic status, as well as lower performance on achievement tests might be associated with speeding in questionnaire surveys. However, further analyses on larger samples are necessary to gain a deeper understanding of the characteristics of speeding students.

ACKNOWLEDGEMENTS

This conference contribution was made possible with the support of the Czech Science Foundation's grant GA CR 21-09064S project "Heterogeneity in reporting behavior on surveys among different countries, schools and groups of students".

6 LITERATURE

Curran, P. G. (2016). Methods for the detection of carelessly invalid responses in survey data. *Journal of Experimental Social Psychology, 66*, 4–19.

Goldammer, P., Annen, H., Stöckli, P. L., & Jonas, K. (2020). Careless responding in questionnaire measures: Detection, impact, and remedies. *The Leadership Quarterly, 31*(4), Article 101384. https://doi.org/10.1016/j.leaqua.2020.101384

Greszki, R., Meyer, M., & Schoen, H. (2014). The impact of speeding on data quality in nonprobability and freshly recruited probability-based online panels. In M. Callegaro et al. (Eds.), *Online panel research: Data quality perspective, A* (s. 238–262). John Wiley & Sons, Ltd. https://doi.org/10.1002/9781118763520.ch11

Huang, J. L., Curran, P. G., Keeney, J., Poposki, E. M., & Deshon, R. P. (2012). Detecting and deterring insufficient effort responding to surveys. *Journal of Business and Psychology, 27*(1), 99–114. https://doi.org/10.1007/s10869-011-9231-8