

Fullmind Instruction Associated with Higher End of Course Grades

Overview

During the 2022–2023 school year, Fullmind partnered with Colleton County School District in South Carolina to provide virtual educators for unstaffed classes. To help districts address the teacher shortage, Fullmind offers virtual staffing, a service to help source and staff certified educators for districts with unstaffed courses. Staffing educators virtually provides the ability to source from across the U.S., removing geographic barriers to qualified candidates for districts and their students.

Virtual instruction has gained popularity and prevalence since the COVID-19 pandemic, but is still met with criticism for lacking academic rigor or the ability to engage students in the same manner as face-to-face instruction (Dhawan, 2020). Despite these concerns, there's evidence to support comparable academic achievement between in-person and virtual classrooms (Casto & Tumibay, 2021; Francescucci & Laila Rohani; Holmes & Reid, 2017; Means et al., 2010). A virtual option for educational services also provides access to instruction students may not receive otherwise.

In this South Carolina district, virtual educators filled five vacancies across four subjects; Algebra I, Biology I, English II, and U.S. History. To better understand the impact of virtual instruction with Fullmind educators on student academic performance, Fullmind examined end-of-course grades from all Fullmind classrooms and non-Fullmind classrooms in the same subject areas.

Impact

Analyzing end-of-course grades by group (non-Fullmind) revealed a significant positive association between receiving instruction from a Fullmind educator and obtaining a 'C' or above in the course (with the strongest association in receiving a 'B', when examining the standardized residuals). Further, there was a strong, *negative* association between instruction from a Fullmind educator and receiving an 'F' in the course, $p < .001$ (Figure 1).

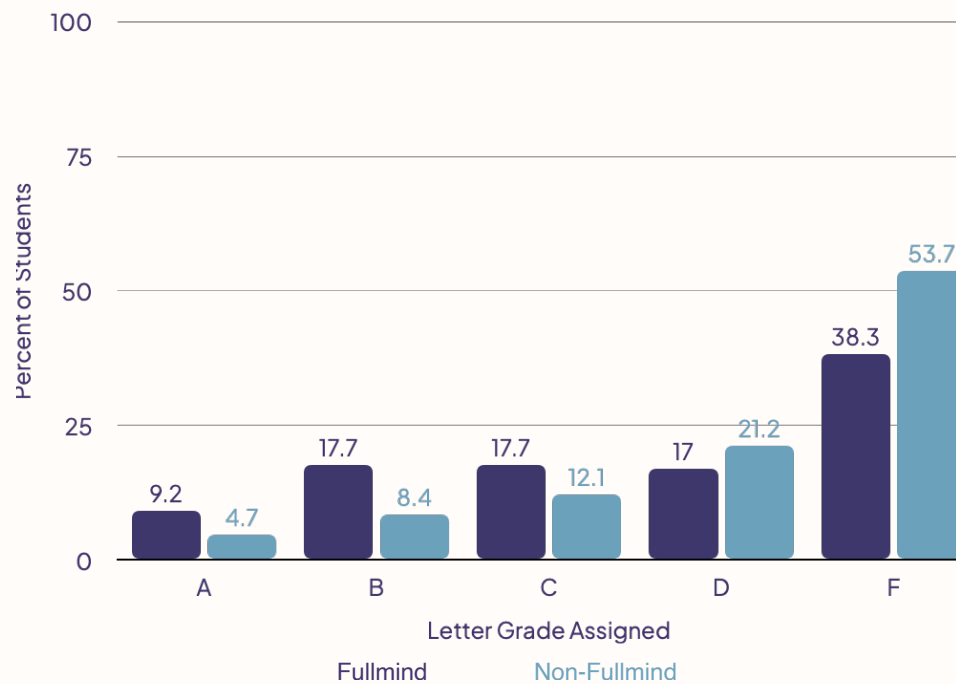
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Table 1. Sample Size of Subject Groups

Subject	Fullmind (n)	Non-Fullmind (n)
Algebra	22	156
Biology I	18	162
English II	73	63
U.S. History	28	129

- Castro, M. D. B., & Tumibay, G. M. (2021). A literature review: efficacy of online learning courses for higher education institutions using meta-analysis. *Education and Information Technologies*, 26(2), 1367–1385. <https://doi.org/10.1007/s10639-019-10027-z>
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- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies Center for Technology in Learning*. www.ed.gov/about/offices/list/oepdp/ppss/reports.html.

Figure 1. Percent of Students Receiving Letter Grade by Group



When disaggregated by subject, both Fullmind and non-Fullmind students appeared to perform comparably (Table 2). Though in some subjects, it appears one group may have outperformed the other, these are not statistically significant, and so differences are likely due to chance and are not reflective of true differences in grade obtainment between the two groups.

Table 2. Percentage of Students Receiving Grade ‘C’ or Above by Group and Subject

Subject	Fullmind (n = 141)		non-Fullmind (n = 514)		p
	n	%	n	%	
All	63	44.7%	129	25.1%	< .001
Algebra I	0	0.0%	30	19.2%	–
Biology I	3	16.7%	17	10.5%	–
English II	55	75.3%	41	65.1%	.26
U.S. History	5	17.9%	37	28.7%	.35

Note: Algebra and Biology samples did not meet chi square assumptions.

Results may indicate there is no loss in rigor or engagement between in-person or virtual classroom; students perform comparably, as measured by end-of-course grades, regardless of the medium for instruction. In some cases, there may be a slight advantage for students receiving virtual instruction from a Fullmind educator compared to in-person educators.