

Harnessing professionals' motivations and experiences to improve accredited MOOC-based education

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ABSTRACT

The Georgia Tech online Master of Science in Computer Science (OMSCS) program launched in 2014 to deliver an accredited Master's degree at MOOC scale. With Udacity, they developed MOOCs for several Master's level courses, then built for-credit courses around those MOOCs. Most notably, this Master's degree cost only \$6,600 in *total tuition* for the *entire degree* (Joyner, Goel, & Isbell 2016). Since its inception, the program has drawn a non-traditional population of students: most OMSCS students are older, and the vast majority are working professionals (Joyner 2017).

This presented both a challenge and an opportunity: an accredited Master's program relies on teaching assistants, typically drawn from its own student body, to support feedback and interaction, but we predicted busy professionals would not themselves have the time or incentive to fill these roles. However, the experiences and knowledge those professionals possess mean that if they *did* serve as teaching assistants, they could provide much better feedback to their classmates to support their professional development.

To our surprise and benefit, the challenge never came to fruition: OMSCS students applied to work as teaching assistants in droves. Since we began hiring from within the program, we have received nearly four times as many applications as we have had open positions, and anecdotal evidence from instructors confirms that these professionals made for better support than traditional students.

Demographic Differences

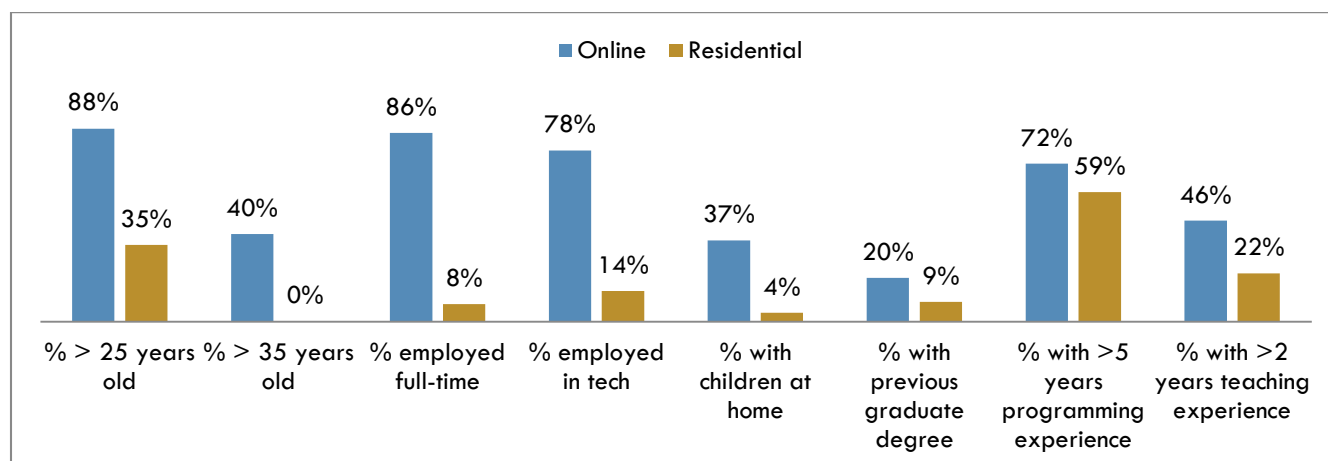


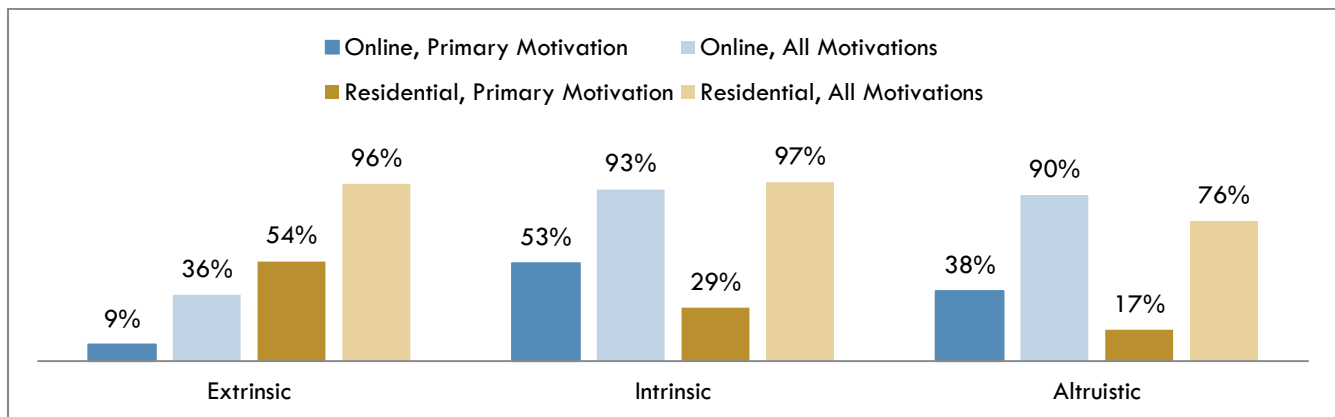
Figure 1: Demographic differences between online and residential teaching assistant applicants.

To investigate this, we performed a study of residential and online OMSCS teaching assistant applicants to understand the differences in their demographics and motivations. 72 residential applicants and 161 online applicants, all Master's students, completed this survey.

As expected, the survey found that online applicants to work as teaching assistants were older, more likely to be employed, more experienced, more educated, and more likely to have children living at home (Figure 1).

Motivational Differences

The greater employment, experience, and competing responsibilities (and the lower salary and tuition reimbursement) bring up the question: why are online students applying to work as teaching assistants? To investigate this, we asked applicants to identify their primary and secondary motivations for applying to work as a teaching assistant. We categorized these responses into three categories: extrinsic (tuition reimbursement or stipend), intrinsic (self-improvement or networking with faculty and classmates), and altruistic (helping the program). We found online applicants were significantly less motivated by extrinsic factors and significantly more motivated by intrinsic and altruistic factors (Joyner 2017).



These differences are not themselves surprising given the previous observation that enough applicants are available to support the program; the remarkable element is that these motivations are themselves sufficient to motivate enough teaching assistants to support the program and maintain its rigor and accreditation.

These motivational differences corroborate instructors' observations that online students make for better support for their classmates in light of the literature on motivation (Roth, Assor, Kanat-Maymon, & Kaplan 2007). Leveraging these motivations and professional experiences in the context of an accredited program increases the amount of interact and influence that students offer one another.

REFERENCES

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