Skills Based Hiring Article Review

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Introduction

According to a 2022 paper, "Skills-Based Hiring is on the Rise" (Fuller, 2022), in the early 2000s employers began adding degree requirements for jobs that previously did not require degrees. The researchers hypothesized that employers felt that the social skills, teamwork, and commitment acquired by students receiving college degrees was a good proxy for having the skills needed to succeed in their work environment. During periods of worker shortages, such as the years following the 2009 recession and the 2020 COVID pandemic, employers reviewed their job postings and removed unnecessary degree requirements to speed up the hiring process and reduce the worker shortage. Burning Glass Institute published a paper, "Skills-Based Hiring: The Long Road from Pronouncements to Practice" (Sigelman, 2024), lamenting the failure of this initiative to make a meaningful change in the hiring of non-degree workers. In this article review I will summarize the paper's findings and suggest an experiment that could help employers identify the source of the hiring failure and point to ways to improve the hiring process.

Article Summary

After explaining the reasons behind the skills-based hiring movement and accompanying employer commitment to remove unnecessary degree requirements, the researchers asked the question, "but do these proclamations result in a real increase in access for workers?" (Sigelman, 2024) They first looked at job advertisements. From 2014 to 2023 the annual number of job postings requiring degrees decreased four-fold. This sounded encouraging but does not answer the question, was there a marked increase in jobs filled by non-degree candidates? Burning Glass Institute and Harvard Business School initiated a project, "Managing the Future of Work", which reviewed 11,300 roles at large firms (the sample population). They reviewed the hiring results one year before and one year after a posting removed the Bachelor of Arts (BA) degree requirement. The results showed that there was only a 3.5% increase in non-degree hiring and that this increase only applied to the jobs that removed the requirement, which was 3.6% of all jobs. They estimated that in the larger US population only 97,000 additional jobs out of 77 million yearly hires were impacted positively by the skills-based hiring movement. Even more alarming, the meager hiring improvement was mainly attained by only 37% of the surveyed companies. That means 63% of the companies initiating skills-based hiring had almost no change in non-degree hiring, and in some cases the hiring backslid to even less than before staring the initiative. Their analysis revealed three categories of firms that removed degree requirements: "Skill-Based Hiring Leaders" who increased their share of non-degree hirs by 20%, "In Name Only" with no significant difference in hiring behavior, and "Backsliders"

that over time hired even less workers without a BA. The authors believe an additional 250,000 jobs a year could be filled by non-degree workers if all companies embraced the movement.

Critique

In the existing study, the question they wished to answer was, did the skills-based hiring movement achieve meaningful results? In this study the observational units were job openings, with a sample size was 11,300 openings taken from multiple large companies. The treatment was the job posting, which either had a degree requirement or did not. The study identified one of the main confounding factors, occupation, by listing the results by occupation. Other confounding factors that were not mentioned but could be significant are gender, age, years of related experience, and presence of a relevant certification. The study did not capture the reason for the lack of hiring. Were the resumes screened and potentially filtered out before the hiring manager reviewed them? Were the hiring managers trained to focus on skills and not degree? The results were profound enough, and the sample size large enough, that it was fair to say the initiative has been unsuccessful at the date of the report. What the study cannot answer is, why not? For the remainder of my critique, I will suggest an experimental study that could shed light on the question, "Are managers more likely to hire candidates with a degree than candidates without a degree but equivalent experience, even when a degree is not necessary for the job?"

My proposed experiment is a two-factor randomized design. The research questions we wish to answer are, do managers give preference to a degree over experience or certification for jobs that do not require a degree and does skills-based hiring training make a difference in hiring manager choices? The experimental units are hiring managers randomly selected from companies in the same industry with consideration given for the sex and age of the managers to balance these covariates. Choosing from one industry allows for the job opening to be familiar to all managers and for the relevant experience to be applicable to the job. The treatment factors are the resumes they will review (3 levels) and the training they will receive (3 levels). Each manager will review one resume for an entry level position that does not require a degree according to the job posting. The three resumes are identical except that one has a college degree and no experience, the second does not have a college degree but has the "equivalent experience" documented in the job posting, and the third has neither a degree nor experience but has a professional certification mentioned in the job posting as being equivalent. The degree would be in a major not related to the job opening. If there is concern that a STEM degree could sway the decision, then a fourth resume with a STEM major could be added to make four treatment levels. I considered making the resumes a repeated measure to reduce the number of

managers required for the study, but I chose to make it a between factor so that each manager will see the exact same resume except for the presence of degree, certificate, or experience. This will eliminate covariates that would be introduced by creating separate resumes that may not be perceived as equivalent. There will be an equal number of each of the three resumes. The resumes will be randomly assigned to the managers. The managers could be blocked by sex or age range, depending on how many managers we have for the experiment. My assumption is that the number of managers will be relatively small, so I will not block the managers.

The second factor is skill-based training. One third of the managers would take a class in skills-based hiring a week or more before reviewing the resumes. One third of the managers would take a class in skills-based hiring the day before reviewing the resumes. The other third is the control group, who would not take the class. Splitting the training into one week versus one day before the experiment is intended to ascertain if the skills-based messaging needs to be reinforced immediately prior to the resume exercise. The training treatments would be randomly assigned to the managers. Combined with the resume factor we now have 3x3 (9) possible treatment levels. The timing of the training class could be significant.

The null hypothesis is that the average number of candidates the managers would hire with a degree, a certification, or relevant experience would be equal. The alternate hypothesis is that at least one of the mean scores is different. The number of managers we select for the study is a function of the power, effect size, error variance, significance level, and whether the design is balanced. We could choose the desired power (80%), a significance level of .05, and an effect of .25. The design can be balanced by selecting managers based on sex and age. The error variance could come from other studies on hiring. The number of managers needed could then be calculated using the power.anova.test function in R. If it is not possible to select enough managers to meet the power calculation then a mixed design using repeated measures for resume reading could be re-evaluated. The test for the NULL hypothesis could be performed with a two-way ANOVA with interaction terms. If the ANOVA test shows the treatment(s) has a p-value less than alpha, check that the residual assumptions are met, then perform a post-hoc analysis using the TukeyHSD function in R.

Conclusion

The article discussed the failure to date of skill-based hiring to make a significant difference in the number of non-degree candidates being hired. The article did not mention any work being done to identify the cause of the failure. We don't know whether the non-degree resumes were rejected by first level screening, whether the managers rejected the candidates, or if the interview teams rejected the candidate. I proposed an experimental study that would shed light on whether the managers were contributing to the problem. The

experiment would address whether the managers preferred degree candidates over non degree or certificate holders, and whether training managers on the benefit of hiring non-degree candidates makes a significant difference. Given the huge financial stakes in not filling worker positions I believe this experiment would be a low-cost way to identify a root cause and allow for a remedy.

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