

Organizational Influence in Online Vocational Learning

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Abstract

Online vocational training is gaining prominence in the workplace. In 2018, the expenditures on vocational training exceeded \$11 billion in the U.S. and \$23.7 billion globally.¹ Roughly 25.6% of training hours were delivered online and the trend is still rising.² Firms encourage employees to continue professional development using learning platforms, due to their flexibility and convenience. In the workplace, an employee's online learning is likely influenced by the learning behaviors of their peers and supervisors. We refer to this type of social influence as "organizational influence", as it reflects the social relationship within a workplace organization. Understanding the effect of organizational influence is crucial for creating user engagement in workplace learning, yet it is also challenging, as data on the workplace relationships among users is typically unavailable.

In this research, we compile a unique dataset in collaboration with a leading accounting management training platform. Each course on the platform consists of a series of short videos. For each individual user at the platform, the time series of their learning history, including both content and intensity, is contained in the dataset. More importantly, the dataset is unique in that it also contains the organizational structure among individuals, which allows us to identify peers and supervisors, thus enabling an in-depth analysis. Our dataset includes users from 1,701 organizations over a period of 74 weeks (from January 2017 to May 2018).

We posit that individual's workplace behavior is dynamically influenced by social factors within the organization. Thus, we model employee learning as a function of the past learning behaviors of her peers and supervisors, in addition to her own past behavior and overall preferences towards learning. The average effect for peer and supervisor influence is identified using a dynamic panel model, where potential endogeneity concerns are addressed using instrumental variables. Various robustness analyses are conducted to ascertain the reliability of the results. We then perform moderation analyses on how the dynamics of influence is related to organizational heterogeneity (i.e., organization size and the presence of supervisor monitoring), individual heterogeneity (i.e., employee's tenure and learning diligence), and content heterogeneity (i.e., the type and timeliness of learning content). Furthermore, utilizing course rating information, we examine the underlying mechanisms of organizational influence, attributing the effect to informative communication (i.e., peers or supervisors recommend a course because of high-quality content) and social pressure (i.e., influence regardless of the quality of the content).

Our results show that both peer learning and supervisor learning have a positive influence on an employee's learning activities on the platform. After controlling for individual differences and the endogeneity due to unobserved shocks, the elasticity on employee learning is estimated to be 0.05 and 0.04 for peer and supervisor influence, respectively. We further show that several factors related to organization, individual, and content significantly moderate the strength of the influence.

Our study makes contributions on two aspects. First, it generates insights on the dynamics of social influence in the workplace. While the influence due to friends and other informal social ties has been studied extensively, empirical research is lacking on the workplace social influence. Understanding how to motivate employees to engage in online learning has direct implications on workplace efficiency as well as the career development of employees. Second, we contribute to the literature on online education in general, providing empirical evidence on how individuals participate in online learning and what workplace drivers influence this behavior. These findings also have implications for the course management and policy design on learning platforms.

Keywords: workplace dynamics, online learning, organizational influence, dynamic panel data model

¹ <https://market.biz/report/global-vocational-training-market-2018/292944/#details>

² <https://trainingmag.com/sites/default/files/trn-2018-industry-report.pdf>