A Meta-analysis on Involvement in Learning Outcomes across On-Ground, Online, and Hybrid Classroom Settings

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In this meta-analysis we investigate the influence of psychological sense of community (PSOC) on post-secondary students’ outcomes. According to McMillan and Chavis (1986), sense of community is “a feeling that members have of belonging, a feeling the members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment together” (p. 9). PSOC is important to evaluate in the United States educational system, as there have been ongoing conversations about how students might connect differently to their learning communities, across on-ground, online, or hybrid settings.

While there are many different measures of PSOC available in the literature, this meta-analysis focuses on studies that utilized the Classroom Community Scale (CCS) by Rovai (2002). The CCS consists of 20 items and measures sense of community in a learning environment using two subscales: feelings of connectedness and involvement in learning outcomes.

According to Tsai et al. (2008), majority of public institutions of higher education identified online education as an important long-term strategy that may have positive learning success as proven in some studies. Even though online education has provided students with convenience, it has limited their PSOC due to the experience of isolation. Carr (2006) also found that distance learners had higher dropout rates than traditional learners (as cited in Tsai et al., 2008). Given these mixed results, this meta-analysis explores the perceived learning outcomes, an aspect of Rovai’s classroom operationalization of PSOC, across three settings, on-ground (OG), hybrid (Hy), and fully online (FO).

A three-phase meta-analytic process has been applied to this study: selection of studies, data extraction, and analysis. The first phase was selection of studies, in which peer-reviewed articles were identified through a systematic database search, and then reviewed for inclusion. Inclusion criteria included: utilization of the CCS, the population consisted of post-secondary students, and learning outcomes and/or change in PSOC were reported in the study. After the inclusion process, 40 articles were included in this meta-analysis. After excluding the articles for being non-experimental, descriptive, qualitative, or literature review, a total of 6 articles were included for analysis after the secondary screening process. After that, within these 6 articles, information and effect sizes regarding learning outcomes measured by CCS across three educational settings were specifically coded for the final analysis.

When comparing the OG and FO settings, the Hedges’ g of .343 (p = .003) indicated that on-ground courses have a moderate, positive effect on student involvement in learning outcomes when measured by CCS than those in fully online courses. When comparing the OG and HY settings, there was no significant difference between students in these groups regarding self-reported student involvement in learning [Hedges’ g = .164, p = .362].

### References


Drouin, M., & Vartanian, L. R. (2010). Students’ feelings of and desire for sense of community in face-to-face and online courses. The Quarterly Review of Distance Education, 11(3), 147-159.


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### For further information

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