

## Overview

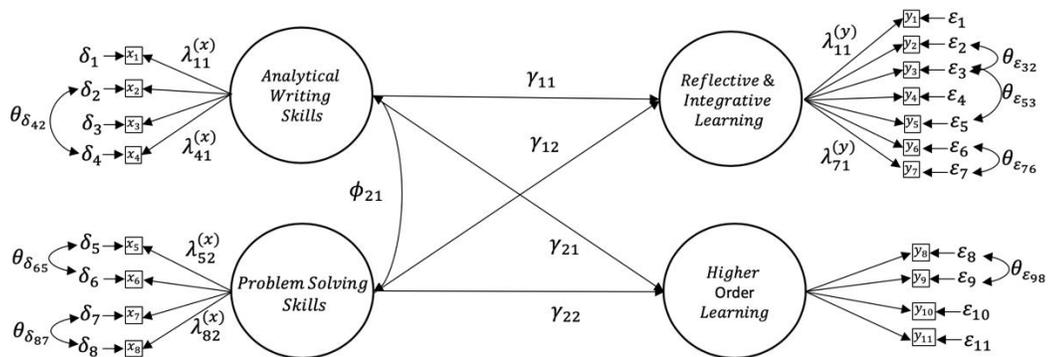
**Background-** Developing students' transferable skills is crucial for higher education stakeholders and the public good. The discourse of public good and higher education has been redefined as a collective private gain, which represents a shift toward "a more individualized terrain of skills for employability which can result in increased earnings and job security" (Williams, 2016, p. 629). However, **employers feel that undergraduate students are not sufficiently prepared with the necessary skills to apply to the workforce after college** (AAC&U, 2015). The lack of emphasis on skills that employers deem as top priorities, including the development of transferable skills, has been a long-standing criticism of higher education. This study explores how faculty members' emphasis on teaching transferable skills relates to deep approaches to learning in postsecondary education.

**Theoretical Framework-** The theoretical framework is based on Biggs 3P model of teaching and learning. In his model, Briggs referred to the 3Ps as: Presage (student factors and teaching context), Process (learning focused activities), and Product (learning outcomes). Additionally, Biggs (2003) considered the intentional use deep approaches to learning activities to be an important effect on learning outcomes.

**Data Source & Respondent Characteristics-** The data for this study come from six years of results from the Faculty Survey of Student Engagement (FSSE) administered between 2014 - 2019. FSSE measures faculty and instructor perceptions of undergraduate student engagement and teaching practices at four-year colleges and universities. Our study focuses on a transferable skills item-set (see this paper's measures section for more details). **Over 9,600 instructors, across 72 institutions, are represented in the sample.** Of these instructors, 34.9% are tenured and 16.9% are on the tenure track. The most popular disciplines include Arts & Humanities (22.0%), Social Sciences (11.3%), Business (10.5%), and Health Professions (10.0%).

**Measures & Methods-** The guiding research question of this study is, "How does the development of transferable skills relate to deep approaches to learning?". The term 'transferable skills' refers to problem-solving and analytical writing skills. Whereas, deep approaches to learning (DAL) encourages students to understand the underlying meaning of content and is present across all disciplinary areas in higher education (Nelson Laird et al., 2008). More specifically, reflective & integrative learning and higher-order learning are both critical components of DAL. (Nelson Laird et al., 2008, Nelson Laird et al., 2014).

Structural equation modeling was the analytical method used for this study. Since the FSSE survey uses Likert-scale questions (ordinal responses), we used robust weighted least squares (WLSMV) as the estimator for the model. The latent variables are standardized with a mean of 0 and variance of 1. The model had sufficient goodness-of-fit measures. The  $\chi^2$  (139, N= 7970) = 3961.23,  $p < .05$ , is statistically significant and didn't provide evidence of good model fit; this is likely due to the bias against the large sample size. Alternatively, the CFI (.994) and the TLI (.993) are both excellent. Moreover, the RMSEA (.059) is sufficient. Our SEM model is as follows:

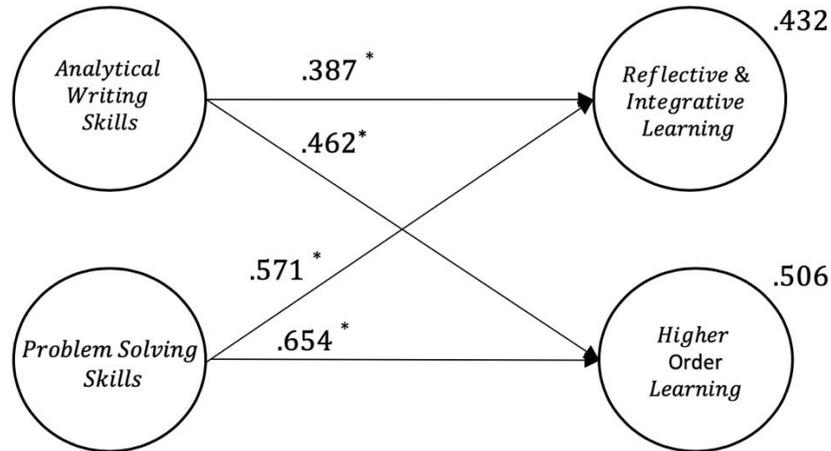


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## Research Findings

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**Results-** The results indicate that the subscales in this study are reliable measures of problem-solving ( $\alpha = .903$ ), analytical writing skills ( $\alpha = .919$ ), reflective and integrative learning ( $\alpha = .922$ ), and higher-order learning ( $\alpha = .804$ ). Furthermore, the analytical writing skills and problem-solving skills scales had a statistically significant relationship with the deep approaches to learning scales. The emphasis of problem-solving skills relates strongly with reflective & integrative learning ( $.571, p < .05$ ) and higher-order learning ( $.654, p < .05$ ). To a similar extent, analytical writing skills also has a strong relationship with reflective & integrative learning ( $.387, p < .05$ ) and higher-order learning ( $.462, p < .05$ ). The figure below displays these key parameter estimates as they are situated in the structural model.



**Implications-** Our study has meaningful implications for pedagogical considerations. Employers need a workforce with transferable skills, and instructors want to create a classroom environment that is educationally effective and enriching for students. Our findings provide an empirical link between the emphasis of transferable skills and deep approaches to learning that applies to any four-year institution. Therefore, faculty members should be encouraged to emphasize transferable skills as part of the curriculum. By doing so, it could lead to better student outcomes and a workforce that meets the needs of employers.

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## Limitations & Future Research

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There are several limitations to be mindful of with this study. First, the findings should not be generalized to represent all faculty members at all institutions in the United States. The data only represent instructors who voluntarily completed the FSSE survey within certain disciplines at 72 baccalaureate-degree granting institutions. Future research would benefit from providing evidence of the other aspects of Biggs 3P model. In particular, we did not introduce student factors or student outcomes; both are key components of teaching and learning according to Biggs 3P model.

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## Conclusion

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Our study demonstrates that faculty members' emphasis on developing students transferable skills has a strong, positive relationship with the emphasis on deep approaches to learning. Previous research has supported the notion that transferable skills are a public good because it provides students with the skills to succeed in the workforce. We contribute to the literature by providing evidence that faculty members who emphasize transferable skills are also emphasizing effective learning practices.

For the full paper, please visit: [http://nsse.indiana.edu/html/publications\\_presentations.cfm](http://nsse.indiana.edu/html/publications_presentations.cfm)