

# Revisiting Faculty Turnover: Is It Impacting Student Learning In Your Competency Development Model?

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## Aim

The purpose of the study was to seek an understanding of the relationship between faculty turnover and student learning in an organization with planned frequent faculty turnover. The overarching question of the study sought to explore differences in student achievement across multiple cohorts when faced with novice versus experienced faculty.

## Introduction

Faculty turnover in higher education continues to be problematic for institutions that wrestle with associated costs to include retention, recruitment, faculty satisfaction, and academic disruption. Despite the large number of studies conducted regarding faculty turnover, few have addressed the relationship to student learning in higher education. While faculty turnover remains a concern for institutions of higher learning, it is especially critical to university programs set in military organizations. High faculty turnover creates ripple effects to include longevity for teaching experience, teaching effectiveness and faculty development; issues especially concerning for competency-based education programs (Albanese, Mejicano, Anderson, & Gruppen, 2010; Narayan, Whicker & McGann, 2012; Topor & Roberts, 2016). Critical to the success of student competency development is the consistent availability of faculty to maintain the integrity of a curriculum linked to an academic program's competencies. Research on teacher effectiveness is gaining momentum, yet a lag continues to exist regarding research on the effects of teacher quality in student achievement, particularly in the higher education setting (Tian, Wei, & Li, 2019). Further, standardized assessments for consistent measurements of student achievement are not available in higher education and course grades do not provide consistent measures of student achievement due to the heterogeneity of assignments or exams utilized by individual professors (Carrell & West, 2010). Programs that utilize a competency-based approach however, center around the measure of student learning outcomes through identified competencies associated with their curriculum.

## Methods

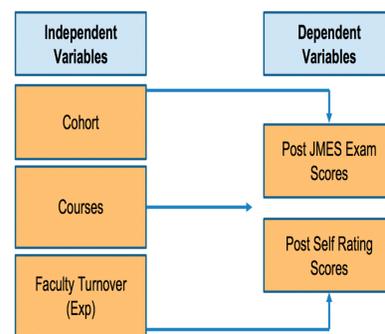
- Subjects of the study were students and faculty from a Federal Master's in Health Administration program in Southwestern U.S.
- Data included 2014-2018 student cohorts and faculty assigned to the program; faculty inclusion criteria includes faculty members who taught a core course with only one competency mapped
- Quantitative study used a non-experimental, between subjects design to explore the relationship between military faculty turnover and student learning in a competency development model. One-way analysis of variance (ANOVA) was used to determine whether there were any statistically significant differences between the mean test scores and mean self-assessed scores of five independent student cohorts.

## Study Design

RQ1: Is there a difference in yearly course competency exam scores compared to the number of years the instructor taught the course?

RQ2: Is there a difference between students' self-assessed competency development scores compared to the number of years the instructor taught the course?

### Methodology: Variables



### Competency Model



## Results

Descriptive statistics for Cohort (IV) and Post JMES Exam Scores (DV)

Cohort	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
2014	675	5.308	2.4005	0.0924	5.127	5.490	1.0	10.0
2015	506	5.704	2.1283	0.0946	5.518	5.889	1.0	10.0
2016	494	5.757	2.1424	0.0964	5.568	5.946	1.0	10.0
2017	610	5.975	2.1628	0.0876	5.803	6.147	1.0	10.0
2018	676	5.911	2.0500	0.0788	5.756	6.066	1.0	10.0
Total	2961	5.726	2.1979	0.0404	5.647	5.805	1.0	10.0

ANOVA Post JMES Exam Scores (DV) and Cohort (IV)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	179.729 <sup>a</sup>	4	44.932	9.407	0.000	0.013
Intercept	95473.066	1	95473.066	19987.711	0.000	0.871
Cohort	179.729	4	44.932	9.407	0.000	0.013
Error	14119.595	2956	4.777			
Total	111374.000	2961				
Corrected Total	14299.324	2960				

a. R Squared = .013 (Adjusted R Squared = .011)

There was a statistically significant difference between cohort groups as determined by one-way ANOVA,  $F(4, 2956) = 9.407, p = 0.000, \eta_p^2 = .013$ .

Descriptive statistics for Faculty Turnover Variable (IV) and Post JMES Exam Scores (DV)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Experienced	651	6.555	2.4541	0.0962	6.366	6.743	1.0	10.0
Novice	2310	5.492	2.0614	0.0429	5.408	5.576	1.0	10.0
Total	2961	5.726	2.1979	0.0404	5.647	5.805	1.0	10.0

ANOVA Post JMES Exam Scores (DV) and Faculty Turnover (IV)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	573.150 <sup>a</sup>	1	573.150	123.556	0.000	0.040
Intercept	73704.429	1	73704.429	15888.725	0.000	0.843
Faculty Turnover	573.150	1	573.150	123.556	0.000	0.040
Error	13726.174	2959	4.639			
Total	111374.000	2961				
Corrected Total	14299.324	2960				

a. R Squared = .040 (Adjusted R Squared = .040)

There was a statistically significant difference between faculty turnover groups (novice and experienced) as determined by one-way ANOVA,  $F(1, 2959) = 123.556, p = 0.000, \eta_p^2 = .040$ .

## Discussion and Conclusions

**Significant Findings:** Differences between the faculty turnover group of novice (1-2 years) and experienced (3+ years) teachers with competency exam scores were lower for the novice instructors than the more experienced instructors. However, results of student self-assessed scores were slightly higher for the novice instructor than the experienced group. Courses taught by the experienced instructor with no turnover resulted in the greatest mean scores for the competency exam scores. Significant differences amongst the competency exam scores in student cohorts suggests the importance of student characteristics as variables for consideration when exploring turnover impact on student learning.

**Implications:** This study begins to fill an existing gap in higher education literature for a focus only now emerging as a topic of interest. Examining turnover and competence together emphasizes the importance of time and experience needed to attain competency level for students as well as faculty. This research complements existing scholarship regarding competency models by extending the applicability of such models and utilizing them as potential standardized measures of assessment for use in research endeavors. Study findings are useful for programs utilizing competency-based curriculums in that it encourages continued exploration of curriculum content mapping to competencies in effort to mitigate disconnects and interruptions due to faculty turnover.

**Limitations:** Analyzing only five program cohorts limited the population data in turn limiting the analysis that could be used in the study. The number of faculty in the program was also relatively small in comparison with traditional university graduate programs. The military setting of the program creates unique circumstances due to the military requirements imposed on students and faculty alike.

**Future Studies:** The quantitative analysis conducted in this study utilized a simple and basic approach to a complex topic. Future research could improve on this analysis by considering co-variables to further define differences between groups to provide more robust results. Future research should include a deeper exploration of student characteristics to better understand student learning in the context of attaining competence.

## References

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