Toward a Population Parameter for "Communities of Inquiry" in Higher Education, Asynchronous Course Forums

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Abstract

Gorsky, Caspi and their colleagues (2010) calculated a tentative bi-modal *population parameter* for the distribution of "teaching presence", "cognitive presence" and "social presence" in asynchronous course forums based on disciplinary differences, group size and academic level. Findings from this study, carried out at a campus-based college, did not support the parameter. However, a ratio was found between social presence versus the sum of cognitive and teaching presence that was constant across disciplines *and* institution type.

Keywords: higher education, distance education, asynchronous course forums, qualitative content analysis, population parameter.

Introduction

Gorsky, Caspi and their colleagues (2010) analyzed three week segments from 50 course forums, 25 from the exact sciences and 25 from humanities, at the Open University of Israel using the quantitative content analysis technique derived from the "Community of Inquiry" model (Garrison, Anderson, & Archer, 2000). Findings, shown in Table 1, pointed toward a bi-modal *population parameter* for the distribution of "teaching presence", "cognitive presence" and "social presence" based on disciplinary differences, *as well as* group size (small, medium, large) and academic level (introductory, regular, advanced). This study attempts to corroborate these findings based on the analysis of an entire asynchronous course transcript from an undergraduate history course forum at a campus-based college.

Methodology, Instruments and Procedure

The forum studied was from the course "The History of War" taught at an academic college in northern Israel. Of the 119 students enrolled in the course, 29 (24.3%) posted at least one message in the forum. Two instruments were used for obtaining data: (1) the course log site that recorded messages, and (2) the quantitative content analysis technique, which was used to analyze and code transcriptions from the forum. This widely used technique is reliable and valid (Garrison & Arbaugh, 2007). In the present study, the message unit was used; coding was at the category level. 188 messages were analyzed; 86 were posted by the instructor (45.74%) and 102 were posted by students (54.26%). 25% of postings were randomly chosen and re-estimated by a second rater; 92% agreement was achieved.

Findings

Table 1 shows findings from this study ("Campus-based college") juxtaposed with the calculated bi-modal population parameters for the humanities and exact science courses derived from the segments from the 50 Open University forums.

Table 1: Calculated population parameters and findings from the campus-based college forum

Institution (# of forums and discipline)	Social presence	Teaching presence	Cognitive presence	Totals
Open Univ. (25: exact sciences)	57.64%	18.27%	24.09%	100%
Open Univ. (25: humanities)	65.87%	18.98%	15.15%	100%
Open Univ. (Average)	61.75%	18.63%	19.62%	100%
Campus-based college (1: humanities)	63.72%	31.18%	5.10%	100%

There is a significant difference $\{\chi^2(2)= 24.71, p<.001\}$ between the campus-based college forum and the calculated population parameter for forums in the humanities. Given, however, similar rates of social presence, further analysis was carried out with coding based on social presence *versus* the sum of teaching and cognitive presence. Results are shown in Table 2.

Table 2: Distributions for social presence *vs.* the sum of teaching and cognitive presence

Institution (# of forums and discipline)	Social presence	Teaching + Cognitive presence	Totals
Open Univ. (25: exact sciences)	57.64%	42.36%	100%
Open Univ. (25: humanities)	65.87%	34.13%	100%
Open Univ. (Average)	61.75%	38.25%	100%
Campus-based college (1: humanities)	63.72%	36.28%	100%

In this case, there is no significant difference $\{\chi^2(1)=0.17, p=.68\}$ between the distribution from the campus-based college course forum and the distribution for the segments from the Open University humanities forums.

Lastly, a revised population parameter, this time two-dimensional, that fits *all* previous (Gorsky et al., 2010) and current findings was sought. The ratio between social presence *versus* combined teaching *and* cognitive presence for the 50 Open University forums (61.75 : 38.25) was tested (Table 2). No significant difference was found between this ratio and the ratio from (1) the Open University science forums $\{\chi^2(1)=0.54, p=.46\}$, (2) the Open University humanities forums $\{\chi^2(1)=0.58, p=.45\}$ and (3) the campus-based college forum $\{\chi^2(1)=0.09, p=.76\}$.

Discussion

On the one hand, initial findings showed a significant difference between the *overall* distributions of social, teaching and cognitive presence between the undergraduate history course forum analyzed at the campus-based college, and the calculated, three-dimensional population parameter for humanities forums in general. The near absence of cognitive presence in the college forum may possibly reflect institutional differences vis-a-vis teaching and learning. College students attended weekly lectures, had ample opportunity to talk with instructors and to establish friendships with classmates. Clearly the forum was not a primary resource for teaching and learning. Different dialogic behavior was seen in course forums at a

distance based, Open University where students met less frequently with instructors and peers. In any case, findings from both studies show clearly the importance of "social presence" in asynchronous course forums, whatever the institution (e.g., Caspi & Blau, 2008; Gorsky & Blau, 2009; Vaughan & Garrison, 2006).

On the other hand, there is *no* significant difference between the ratio of social presence and the sum of teaching and cognitive presence between the forum analyzed at the campus-based college and the newly presumed, *two-dimensional* population parameter for humanities forums in general. Such a reduction to two dimensions has been justified theoretically (Gorsky & Caspi, 2005; Gorsky et al., 2008) on the grounds that, at the most abstract level, "communities of inquiry" include "subject-matter-oriented dialogues" (cognitive *and* teaching presence) and "non-subject-matter-oriented dialogues" (social presence).

Furthermore, findings indicate the possible existence of a two-dimensional population parameter for higher education, asynchronous course forums (communities of inquiry) that transcends academic discipline and level, group size and institutional difference. Further research is now underway to corroborate this parameter in asynchronous forums at both a campus-based university and a campus based college, and by using an alternative syntactic unit, the sentence.

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