

2013-05-15

Community of Inquiry in an Online Course

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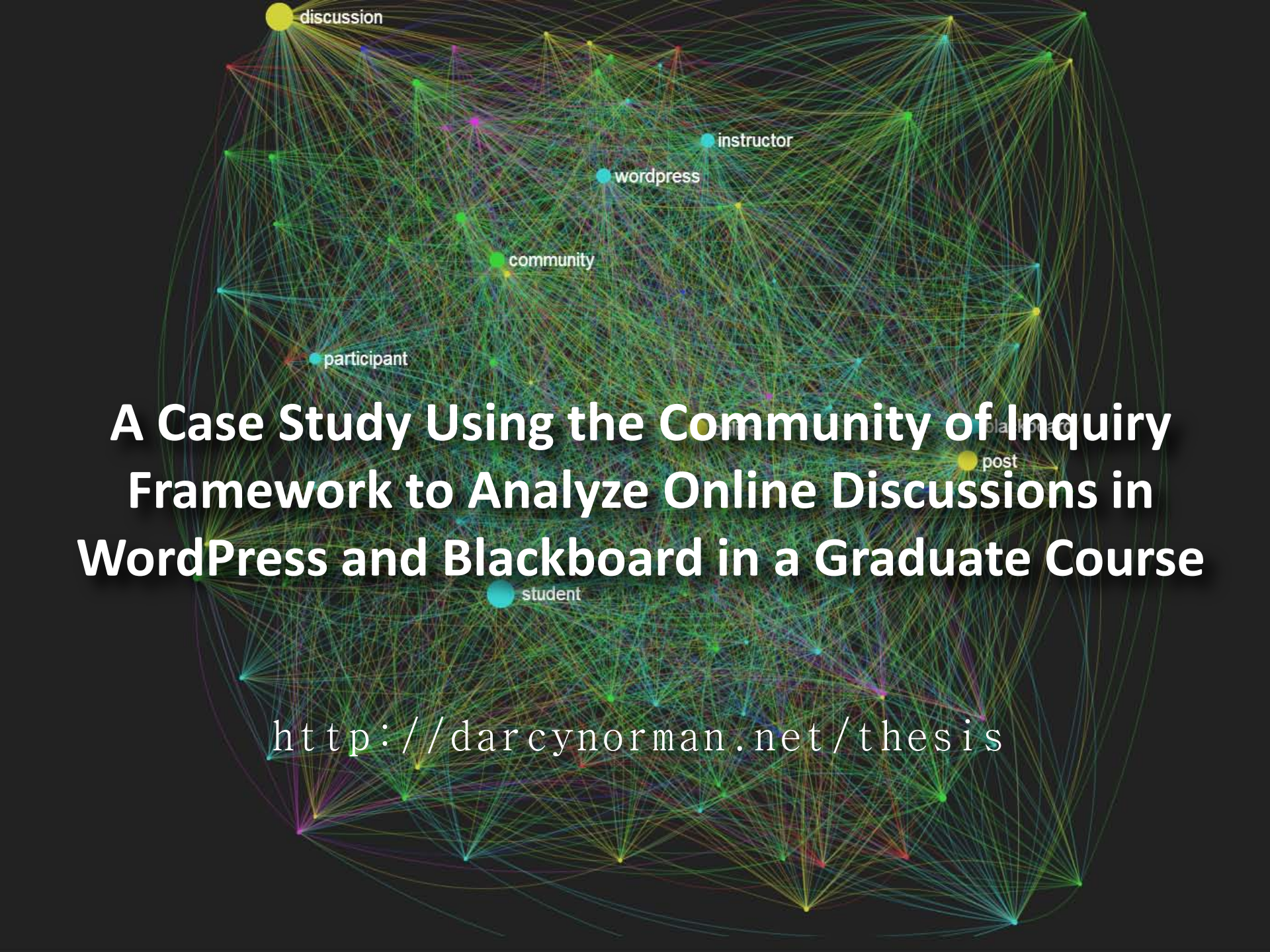
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Community of Inquiry in an Online Course

D'Arcy Norman

Collaboration for Learning 2013



A Case Study Using the Community of Inquiry Framework to Analyze Online Discussions in WordPress and Blackboard in a Graduate Course

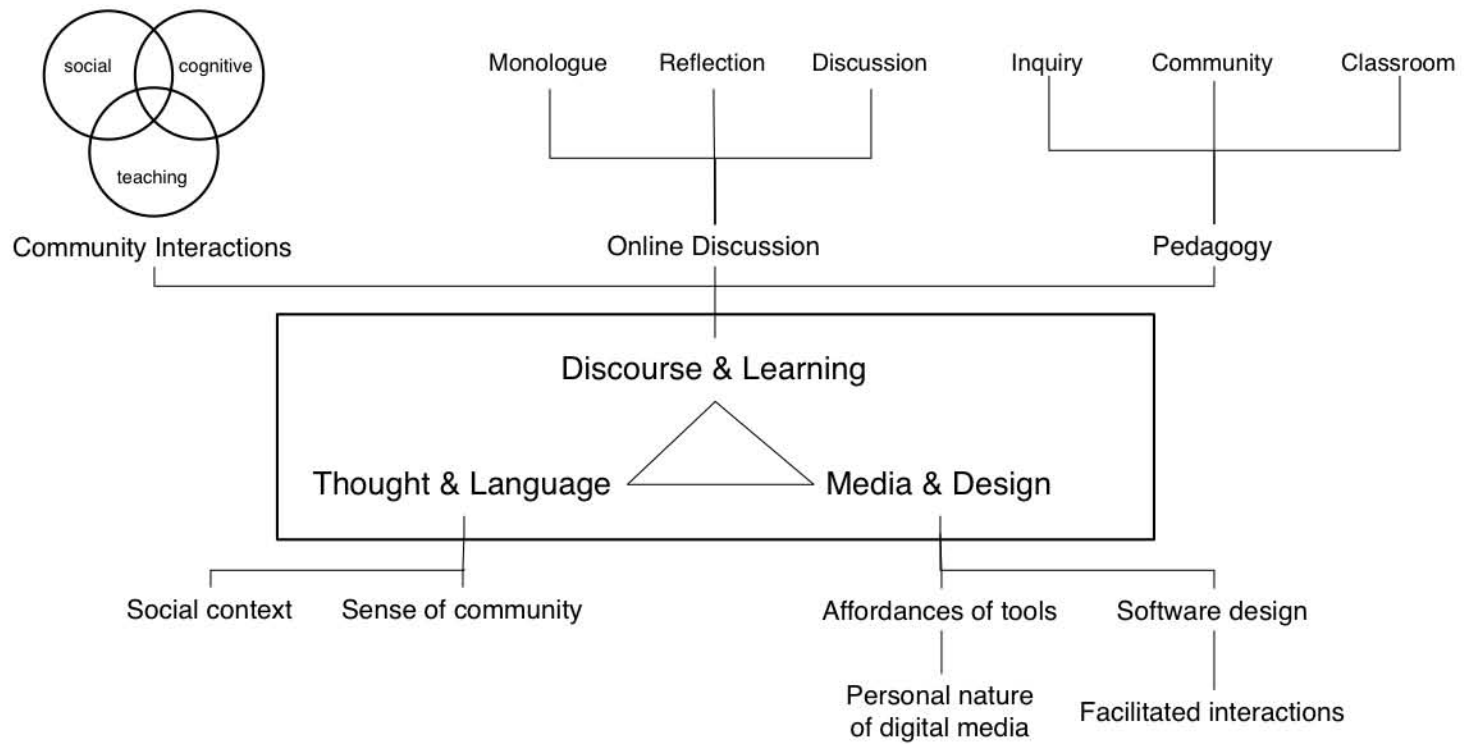
<http://darcynorman.net/thesis>

Research question

How does the selection of an online discussion software environment, specifically the Blackboard discussion board and WordPress blogging software, when combined with course design and pedagogical decisions, influence the nature of a learning community, as expressed through online discourse and social connectedness in higher education?

unofficial research question

WordPress rules, Blackboard drools. #amiright?



Types of data

- Online discussion archives
 - Metadata
 - Timestamps
 - Participants and connectedness
 - Coding of online discussion posts
- Survey
 - combined Col & Classroom Community
- Interview

Information about the posts...

ONLINE DISCUSSION METADATA

Metadata...

Title...

Author

Date



Thread: Software for Digital Media Presentation (LT2)

Post: [Software for Digital Media Presentation \(LT2\)](#)

Author: [INSTRUCTOR]

Posted Date: September 13, 2011 8:56 AM

Status: Published

While there's a ton of software listed on the site I suggested, 50+ Ways to Tell a Story (<http://50ways.wikispaces.com/>), you are allowed to use other software for this assignment. If in doubt, please ask. I have one request though: please don't use software in which your peers and I would have to purchase a license in order to view it. Thanks!

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Id	Platform	Discussion	Thread	Person	Date	Day	Wordcount	Images	Links	Attachments
1	Blackboard	FAQ	1.1	Instructor						
2	Blackboard	FAQ	1.1.1	Instructor	2011-09-13	74	62		1	
3	Blackboard	FAQ	1.1.1.1	Student-0	2011-09-22	83	0			
4	Blackboard	FAQ	1.1.1.1.1	Instructor	2011-09-22	83	39			
5	Blackboard	FAQ	1.1.1.1.1.1	Student-0	2011-09-22	83	0			
6	Blackboard	FAQ	1.1.1.1.1.1.1	Instructor	2011-09-23	84	106			
7	Blackboard	FAQ	1.1.1.1.1.1.1.1	Student-0	2011-09-23	84	0			
8	Blackboard	FAQ	1.1.2	Instructor	2011-09-13	74	56			
9	Blackboard	FAQ	1.1.3	Instructor	2011-09-13	74	104			
10	Blackboard	FAQ	1.1.4	Instructor	2011-09-26	87	158			1
11	Blackboard	FAQ	1.1.4.1	Instructor	2011-09-26	87	1			1
12	Blackboard	FAQ	1.1.4.2	Instructor	2011-09-26	87	34		1	
13	Blackboard	FAQ	1.1.5	Instructor	2011-09-29	90	126			
14	Blackboard	FAQ	1.1.6	Student-6	2011-09-29	90	92			
15	Blackboard	FAQ	1.1.6.1	Instructor	2011-09-29	90	103		2	
16	Blackboard	FAQ	1.1.6.1.1	Student-6	2011-09-29	90	76			
17	Blackboard	FAQ	1.1.6.1.1.1	Instructor	2011-09-30	91	116			
18	Blackboard	FAQ	1.1.6.2	Student-5	2011-10-07	98	67			
19	Blackboard	FAQ	1.1.6.2.1	Instructor	2011-10-08	99	100		2	
20	Blackboard	FAQ	1.1.7	Student-4	2011-10-06	97	92		1	
21	Blackboard	FAQ	1.1.7.1	Instructor	2011-10-06	97	30			
22	Blackboard	FAQ	1.1.8	Student-2	2011-10-11	102	77			
23	Blackboard	FAQ	1.1.8.1	Instructor	2011-10-11	102	71			
24	Blackboard	FAQ	1.1.9	Instructor	2011-10-13	104	352		1	

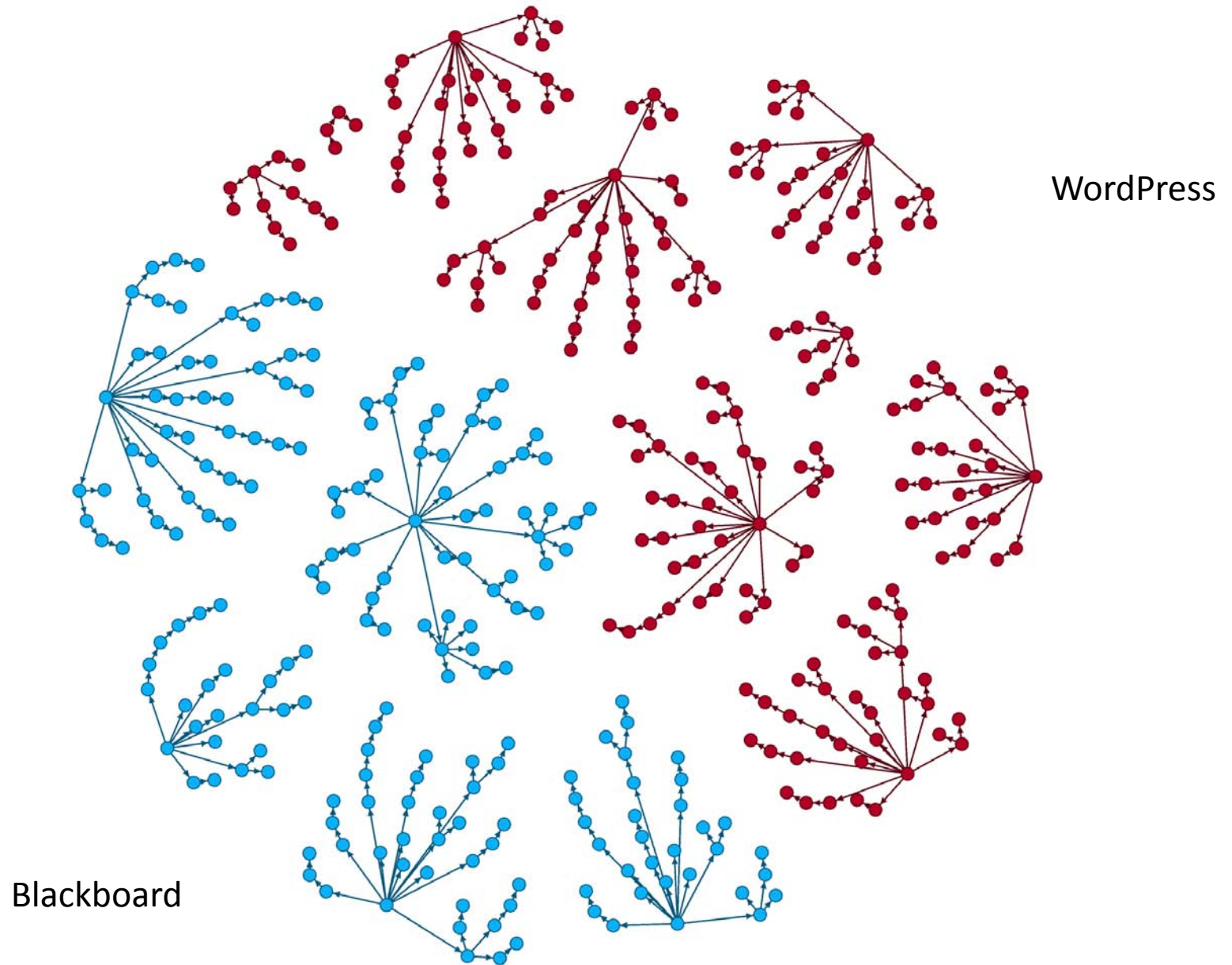


Figure 4.2 – Sample diagram of posts and responses built from metadata in online discussions...

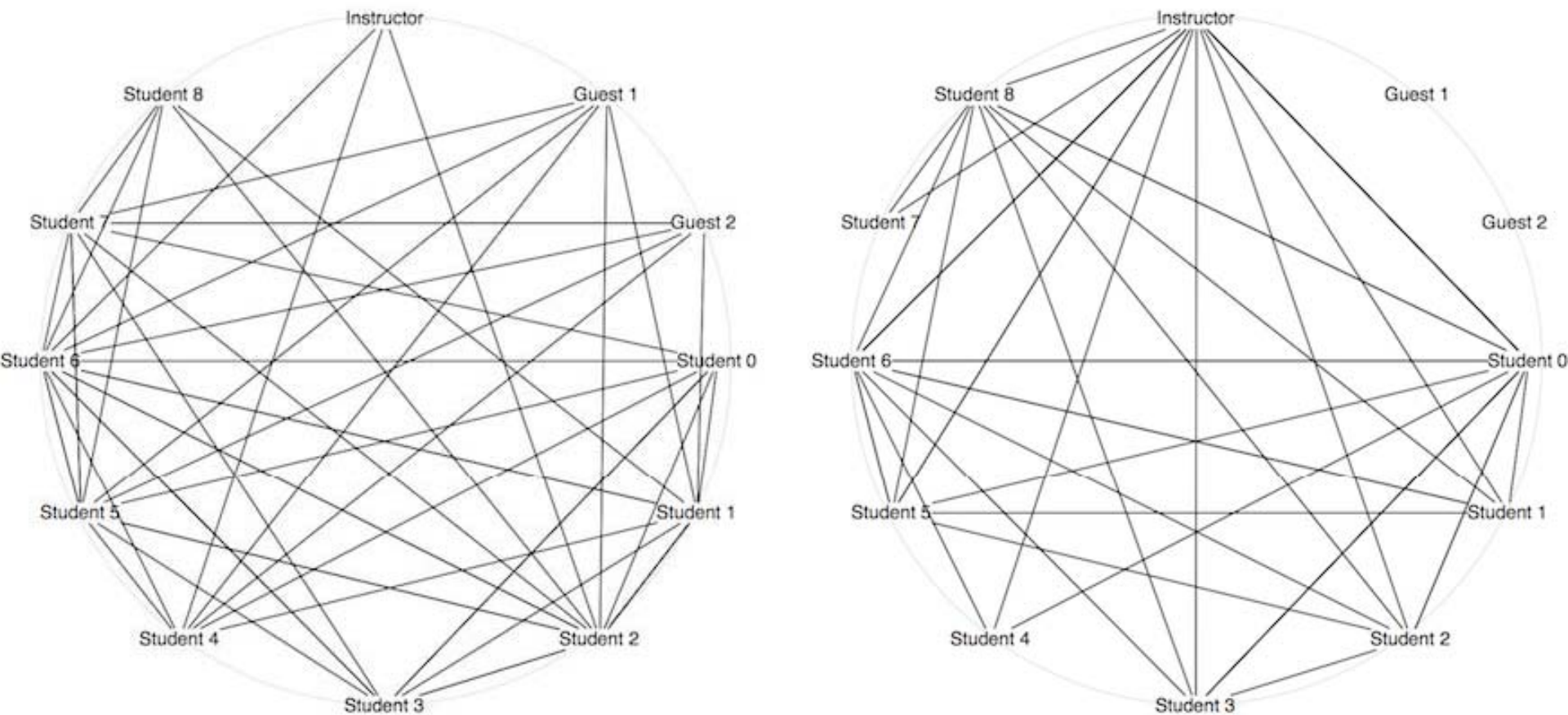


Figure 4.9 – Connections between individuals in WordPress (left) and Blackboard (right)

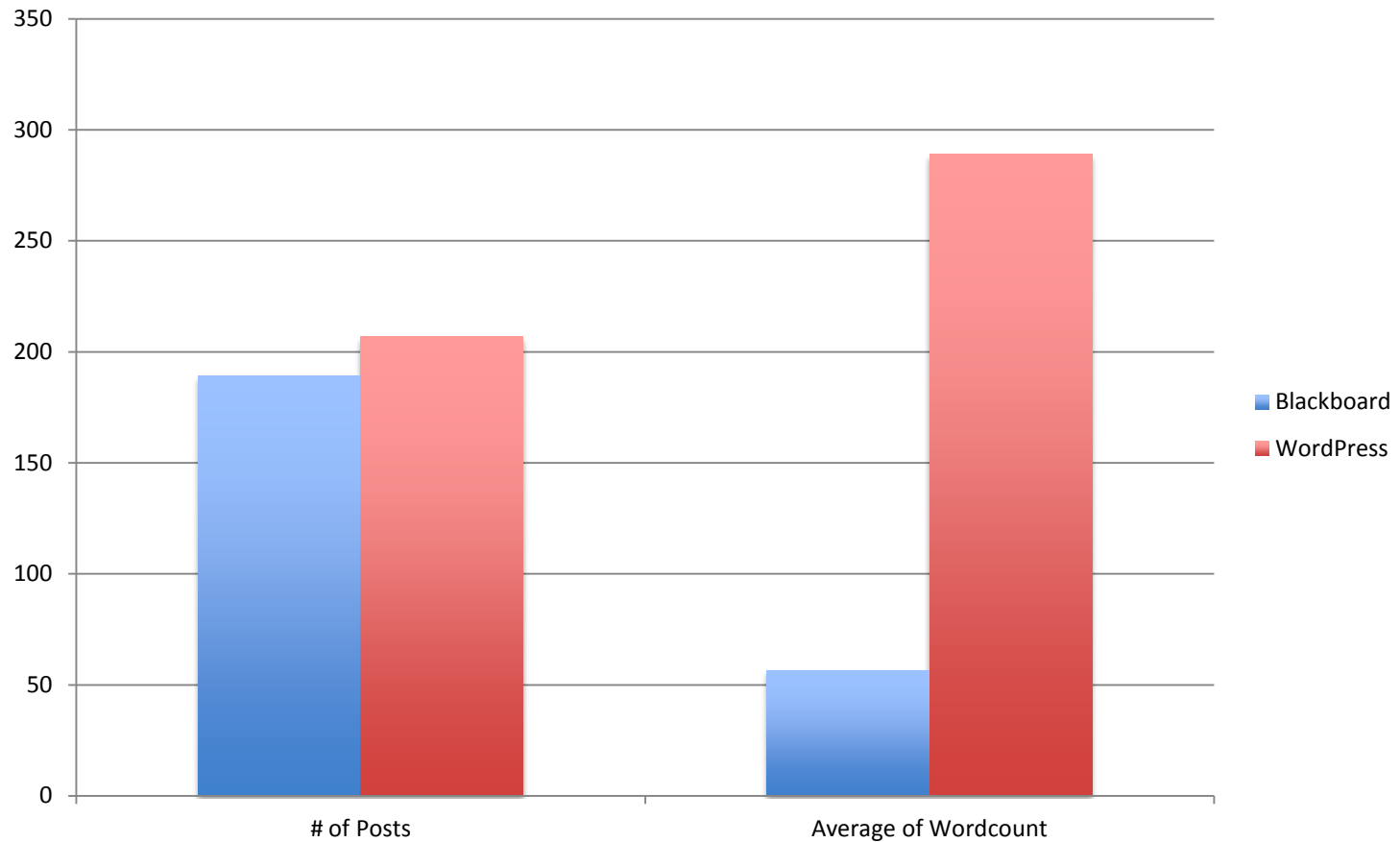


Figure 4.4 – Number of posts and average word count for Blackboard and WordPress

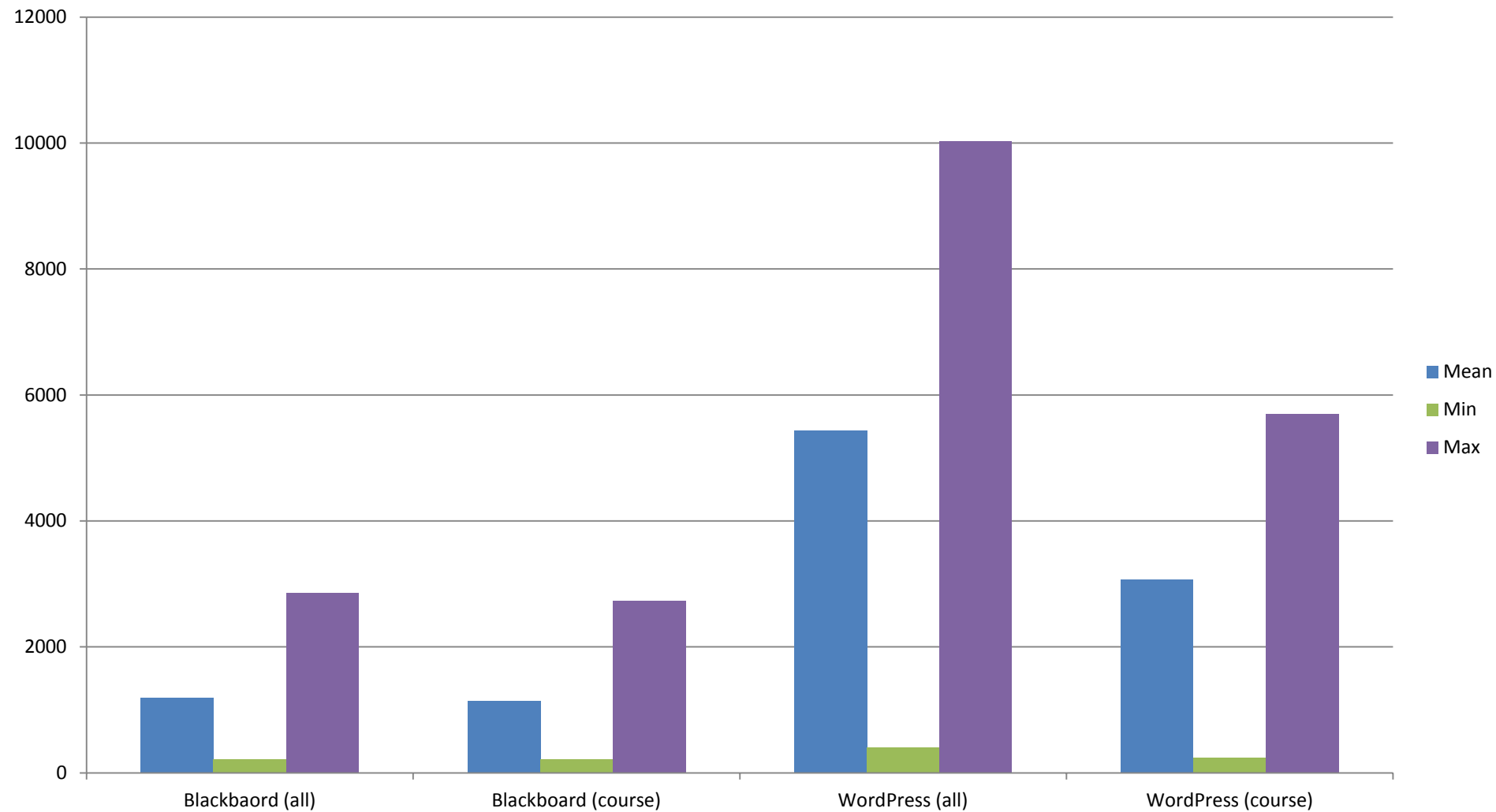


Figure 4.8 – Mean, max and min total word counts of students' posts to Blackboard and WordPress

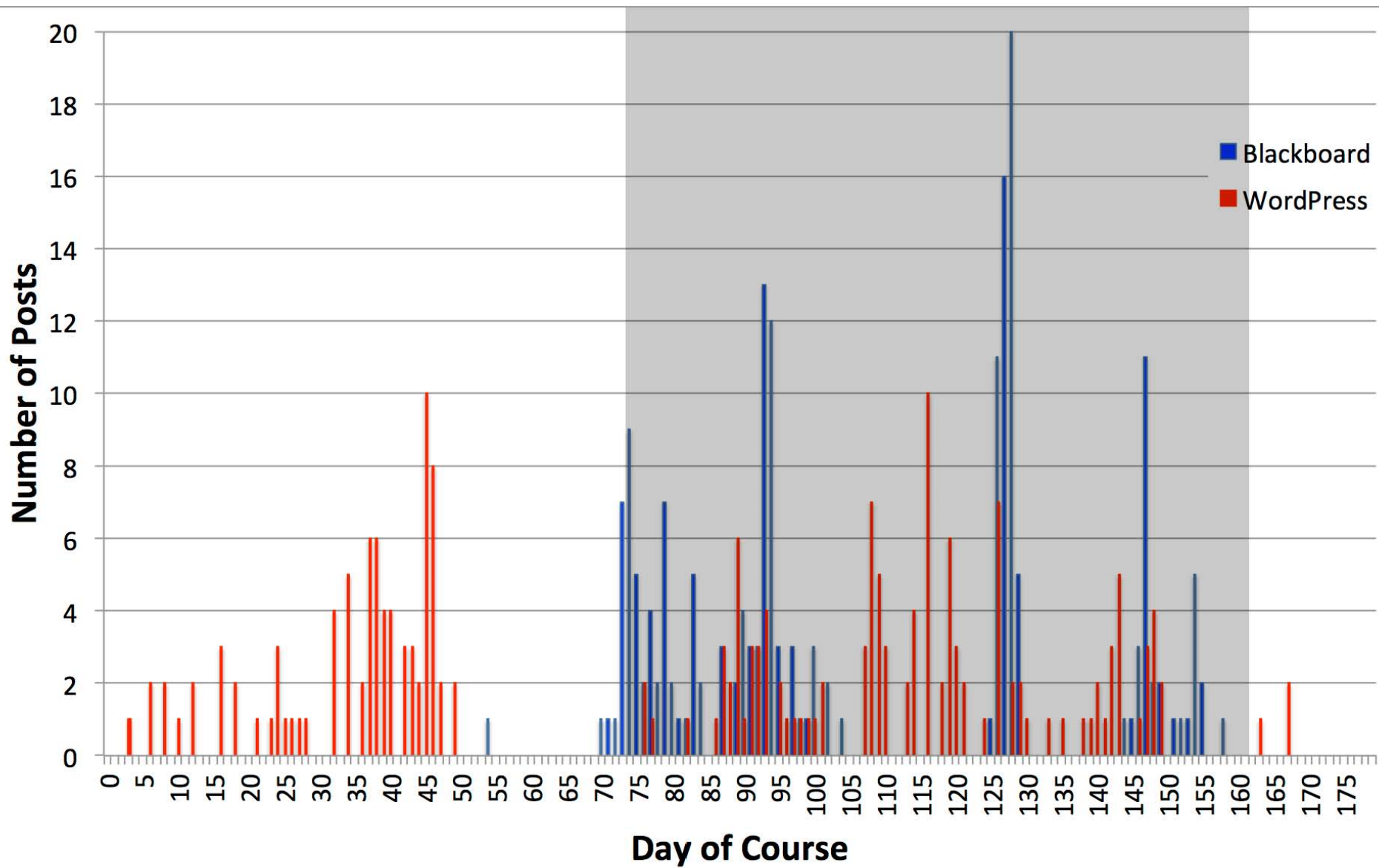


Figure 4.3 – Timeline of posting activity by day of course, for WordPress and Blackboard

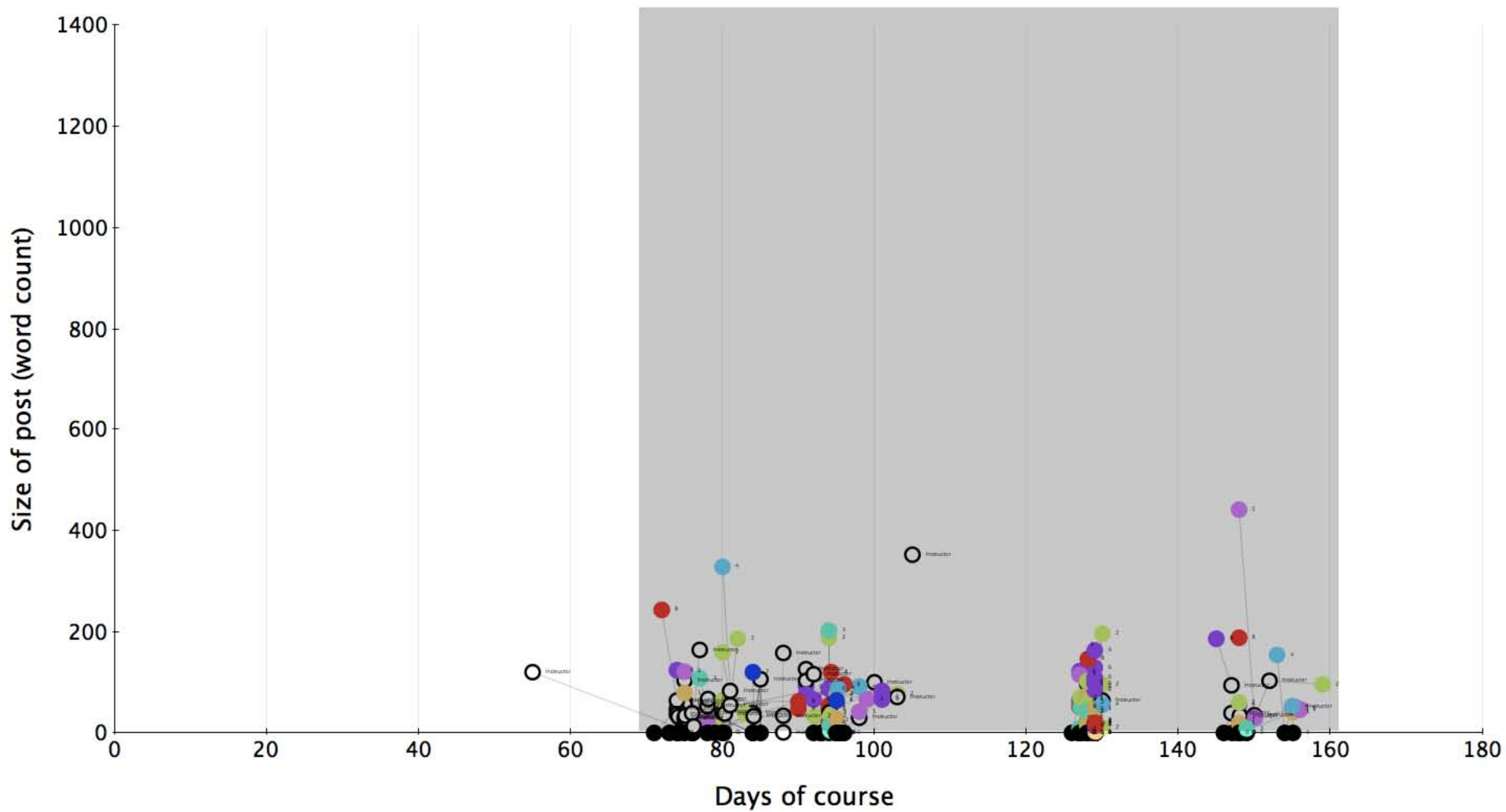


Figure 4.6 – Online discussion activity in Blackboard

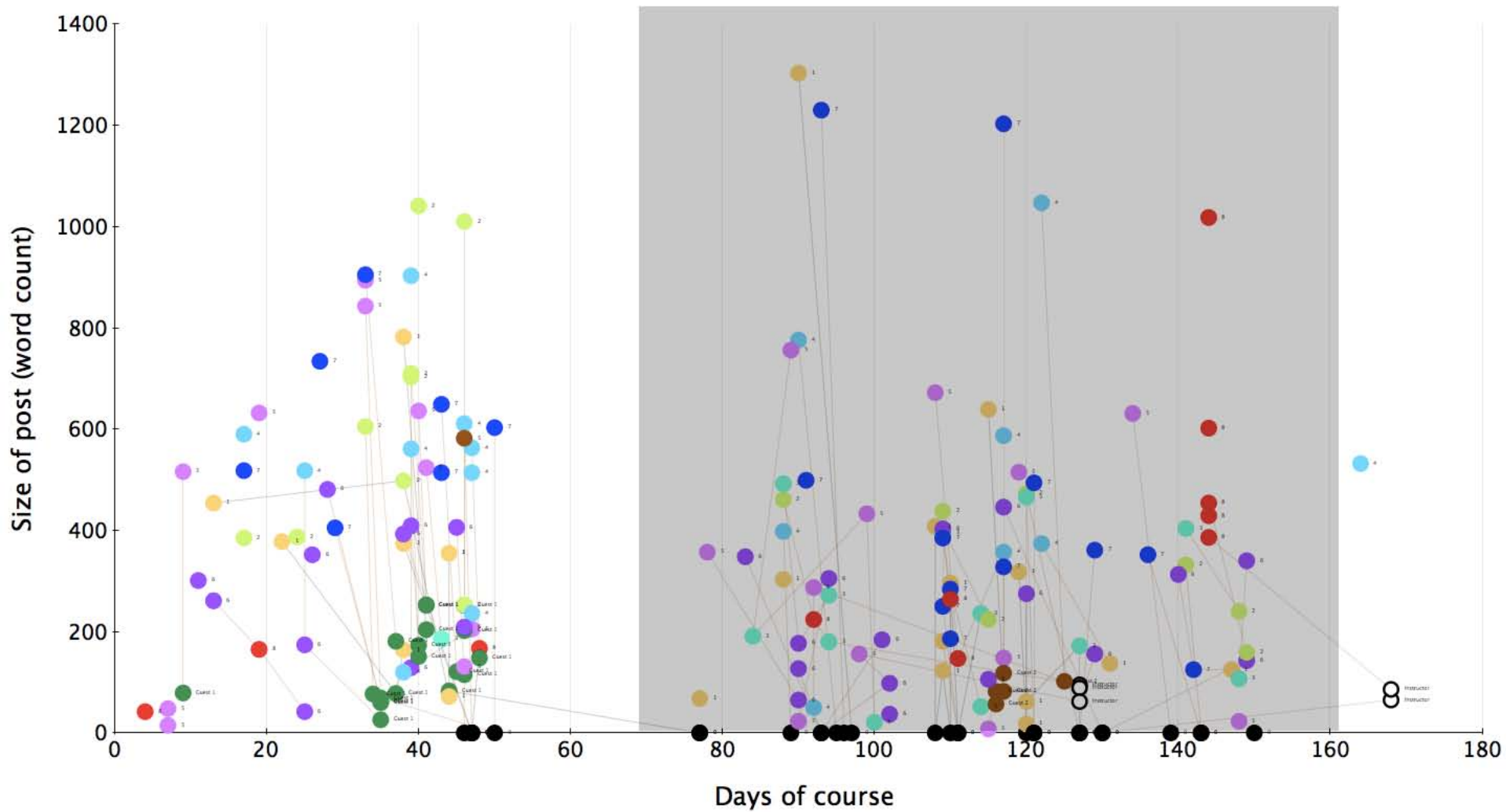


Figure 4.5 – Online discussion activity in WordPress

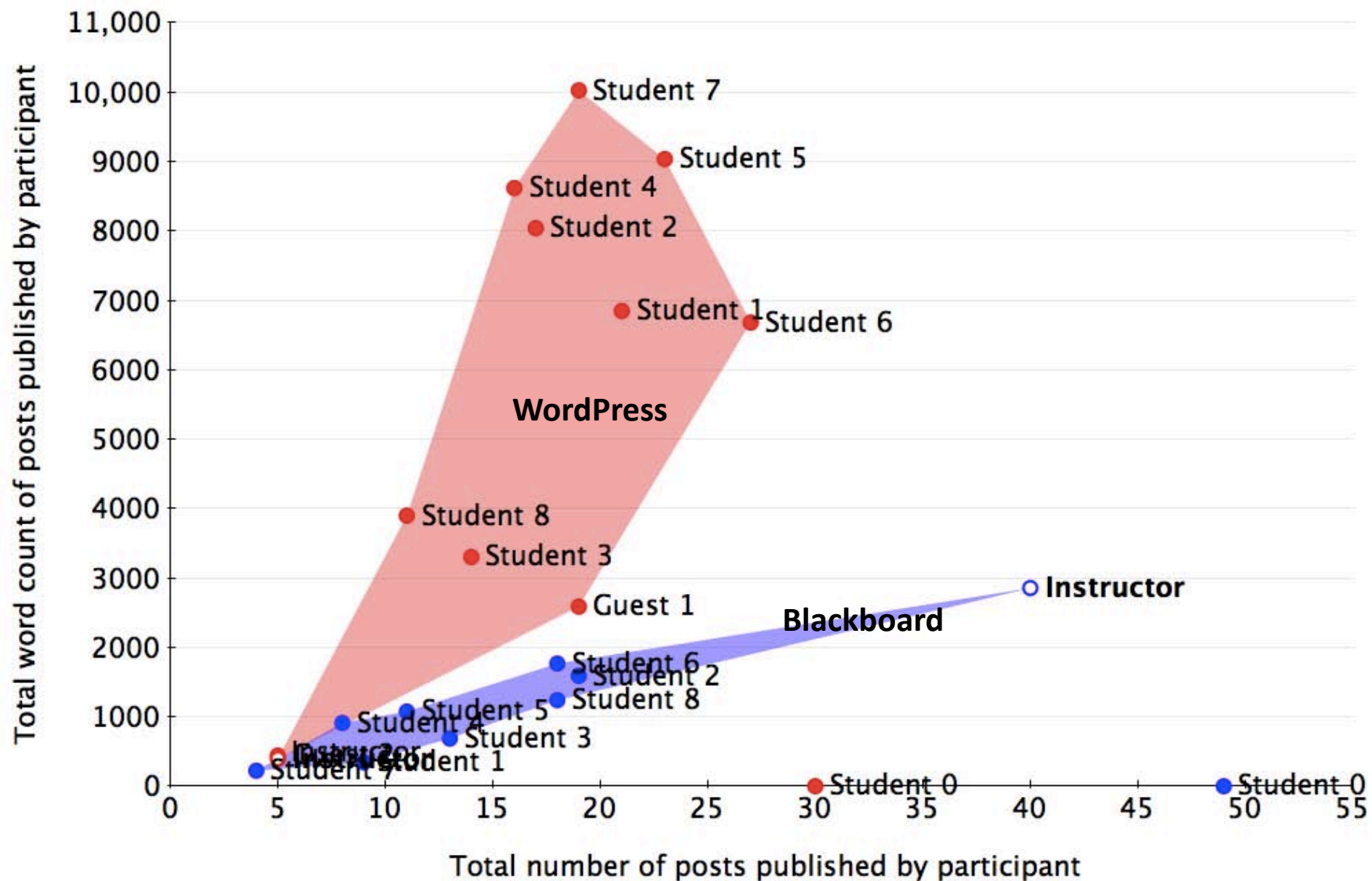


Figure 4.7 – Total number of posts vs. total wordcount of posts published by participants

Looking inside the posts...

CONTENT ANALYSIS



learning

**BASICALLY MEANINGLESS,
BUT PRETTY...**

CODING & LATENT SEMANTIC ANALYSIS

Community of Inquiry Presence	Category	Indicator
C: Cognitive Presence	C1: Triggering Event	C1A: Recognize the problem
		C1B: Sense of puzzlement
	C2: Exploration	C2A: Information exchange
		C2B: Discussion of ambiguities
	C3: Integration	C3A: Connecting ideas
		C3B: Creating solutions
S: Social Presence	S1: Emotional Expression	S1A: Emoticons
		S1B: Autobiographical narratives
	S2: Open Communication	S2A: Risk-free expression
		S2B: Acknowledging others
		S2C: Being encouraging
	S3: Group Cohesion	S3A: Encouraging collaboration
		S3B: Helping
		S3C: Supporting
T: Teaching Presence	T1: Instructional Management	T1A: Structuring content
		T1B: Setting discussion topics
		T1C: Establishing discussion groups
	T2: Building understanding	T2A: Sharing personal meaning and values
		T2B: Expressing agreement
		T2C: Seeking consensus
	T3: Direct Instruction	T3A: Focusing and pacing discussion
		T3B: Answering questions
		T3C: Diagnosing misconceptions
		T3D: Summarizing learning outcomes or issues

Table 3.1 – Coding template

	A	B	C	D	E	L	M	N
1		Id Platform	Discussion	Thread	Person	Cognitive	Teaching	Social
2		1	Blackboard FAQ	1.1	Instructor			
3		2	Blackboard FAQ	1.1.1	Instructor	C2A	T1B	
4		3	Blackboard FAQ	1.1.1.1	Student-0			
5		4	Blackboard FAQ	1.1.1.1.1	Instructor	C2A		
6		5	Blackboard FAQ	1.1.1.1.1.1	Student-0			
7		6	Blackboard FAQ	1.1.1.1.1.1.1	Instructor	C2A	T1A	
8		7	Blackboard FAQ	1.1.1.1.1.1.1.1	Student-0			
9		8	Blackboard FAQ	1.1.2	Instructor		T1A	
10		9	Blackboard FAQ	1.1.3	Instructor		T1A,T3B	
11		10	Blackboard FAQ	1.1.4	Instructor	C2A	T1A,T3B	
12		11	Blackboard FAQ	1.1.4.1	Instructor	C2A		
13		12	Blackboard FAQ	1.1.4.2	Instructor	C2A	T1A	
14		13	Blackboard FAQ	1.1.5	Instructor	C2A	T3B	
15		14	Blackboard FAQ	1.1.6	Student-6	C1B,C2A		
16		15	Blackboard FAQ	1.1.6.1	Instructor	C2A	T3B	S2B
17		16	Blackboard FAQ	1.1.6.1.1	Student-6	C1B		S2B
18		17	Blackboard FAQ	1.1.6.1.1.1	Instructor	C2A	T3B	
19		18	Blackboard FAQ	1.1.6.2	Student-5	C1B		S2B
20		19	Blackboard FAQ	1.1.6.2.1	Instructor	C2A	T3B	
21		20	Blackboard FAQ	1.1.7	Student-4	C2A		

Figure 3.7 – coded data stored in the spreadsheet

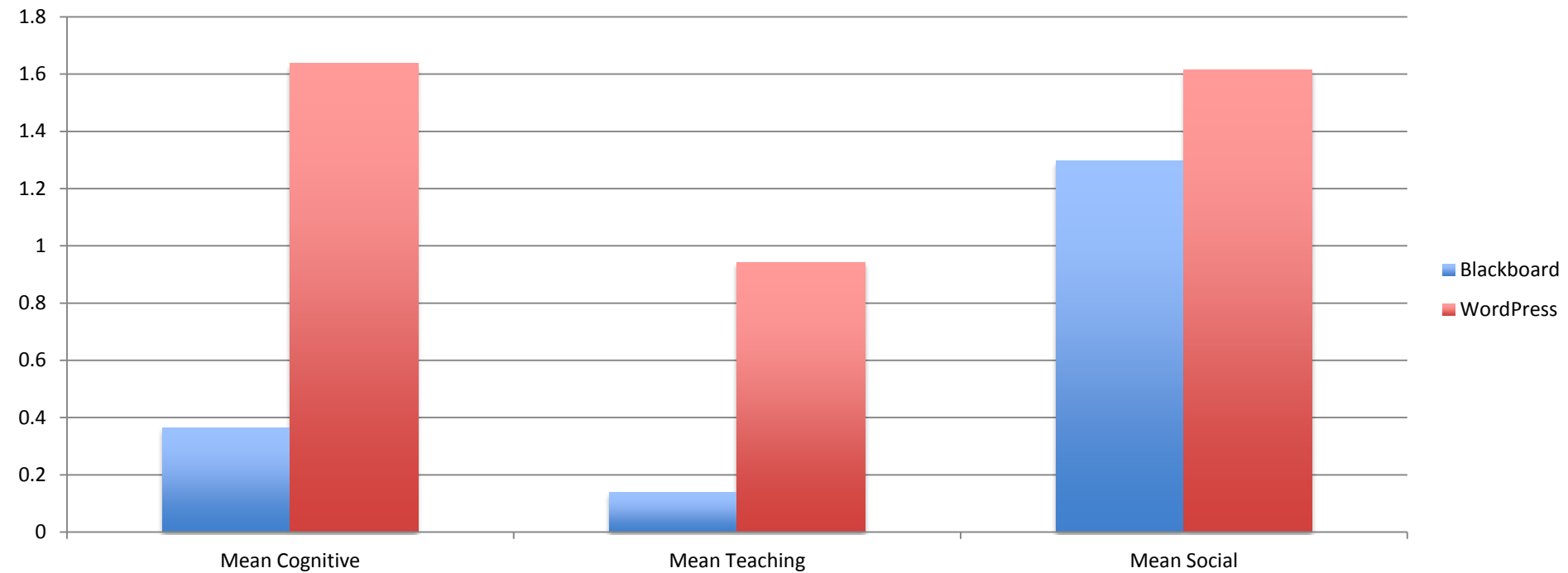
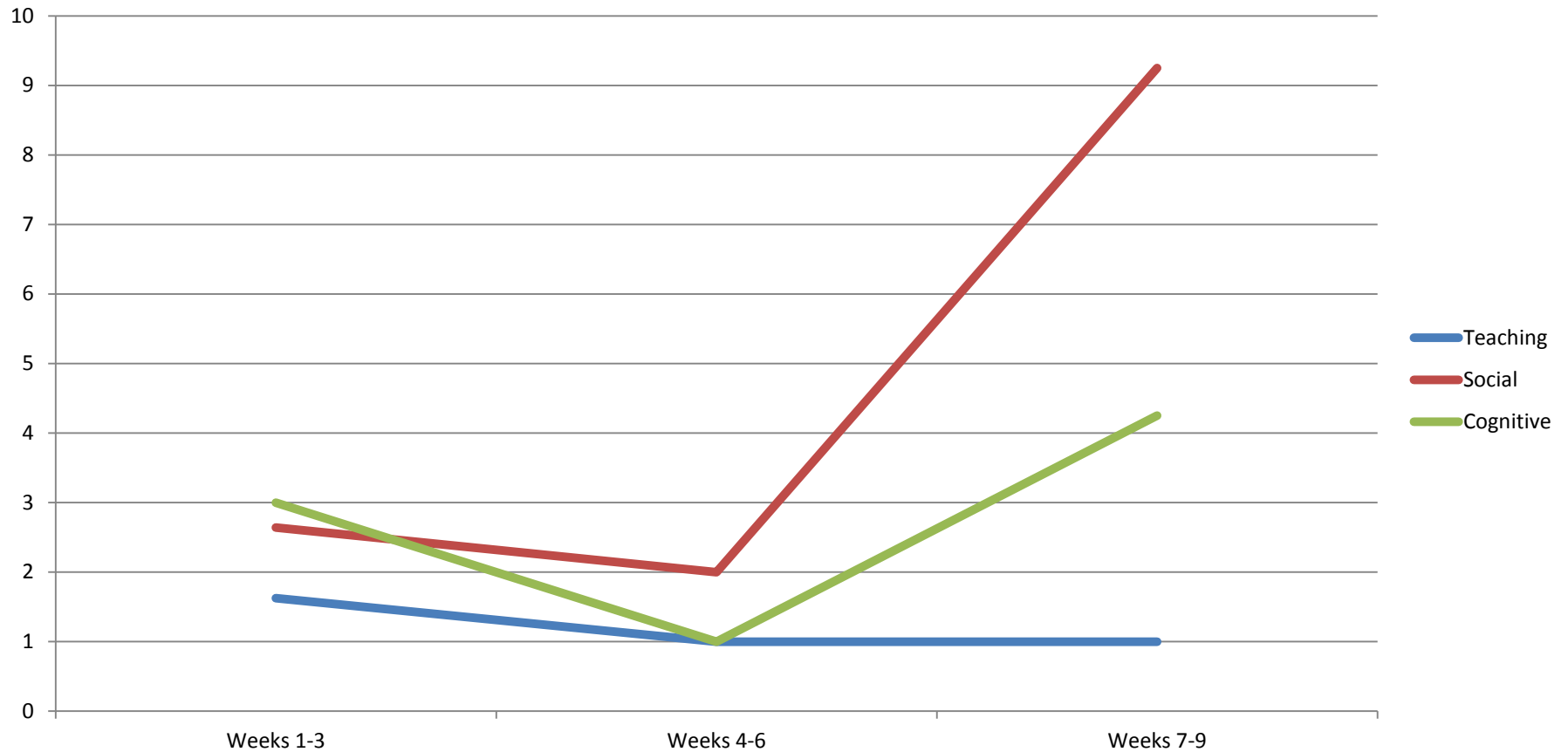
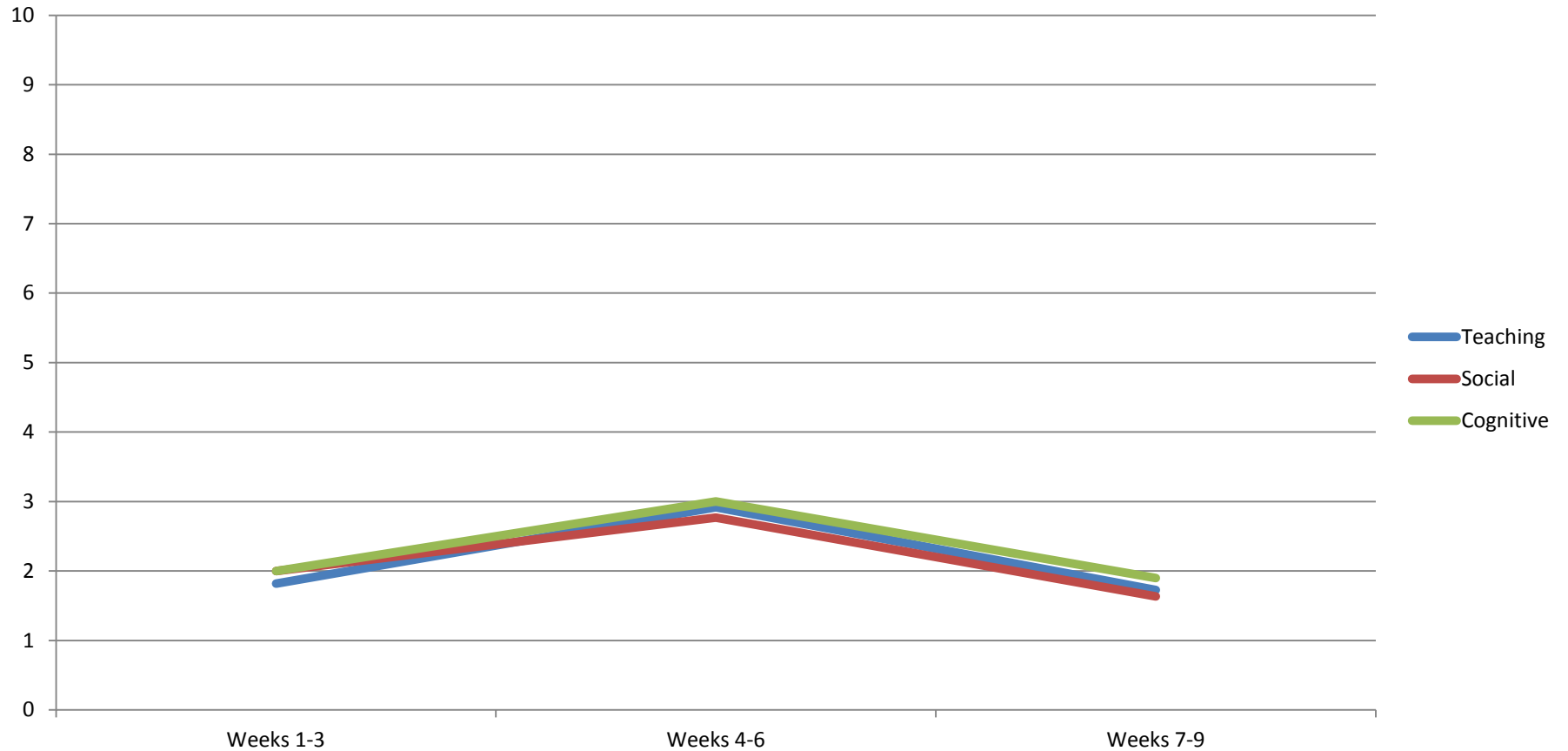


Figure 4.10 – Comparison of aggregated Col coded values for Blackboard and WordPress

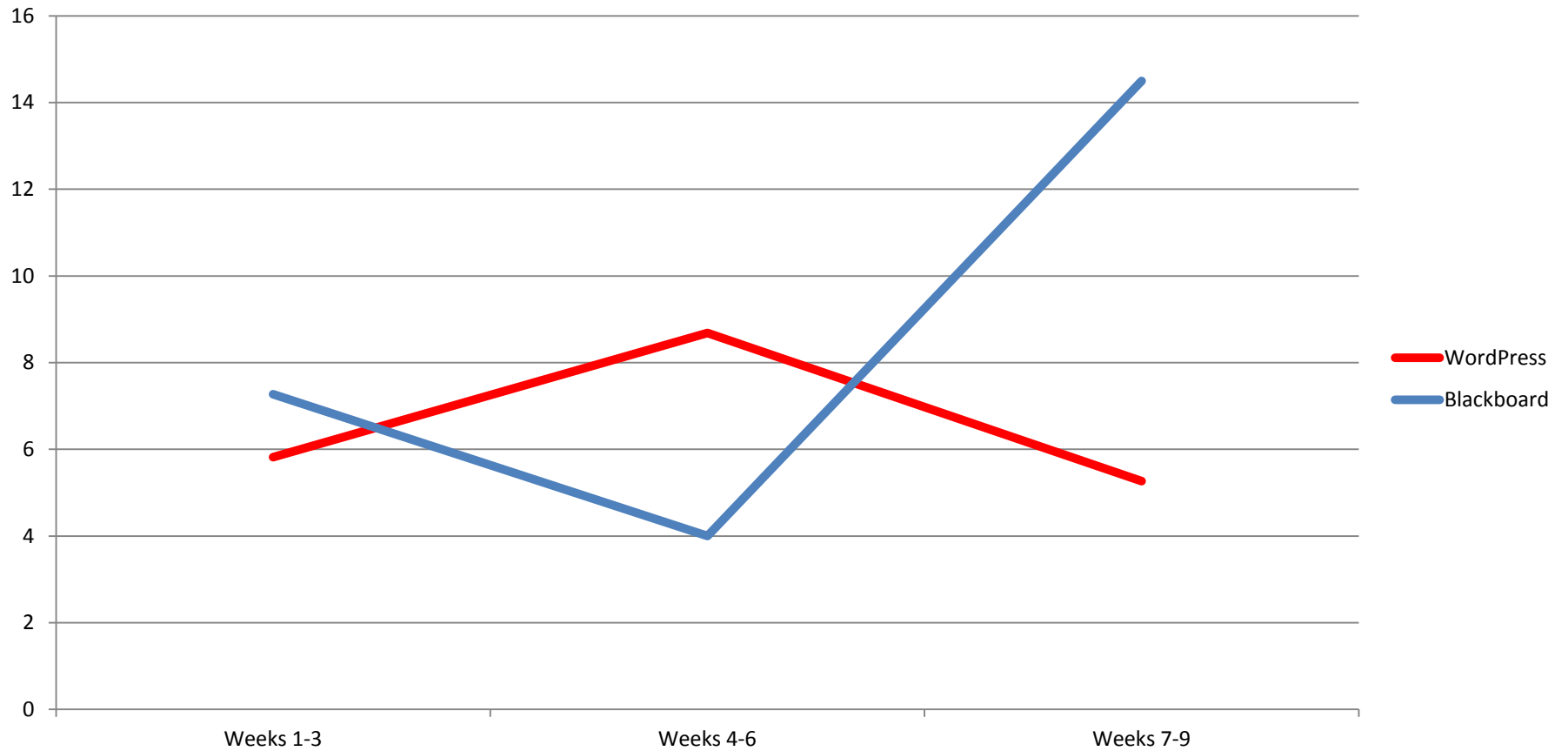
Mean Col Indications per post, by week of course - Blackboard



Mean Col Indications per post, by week of course - WordPress



Col Indications by week of course



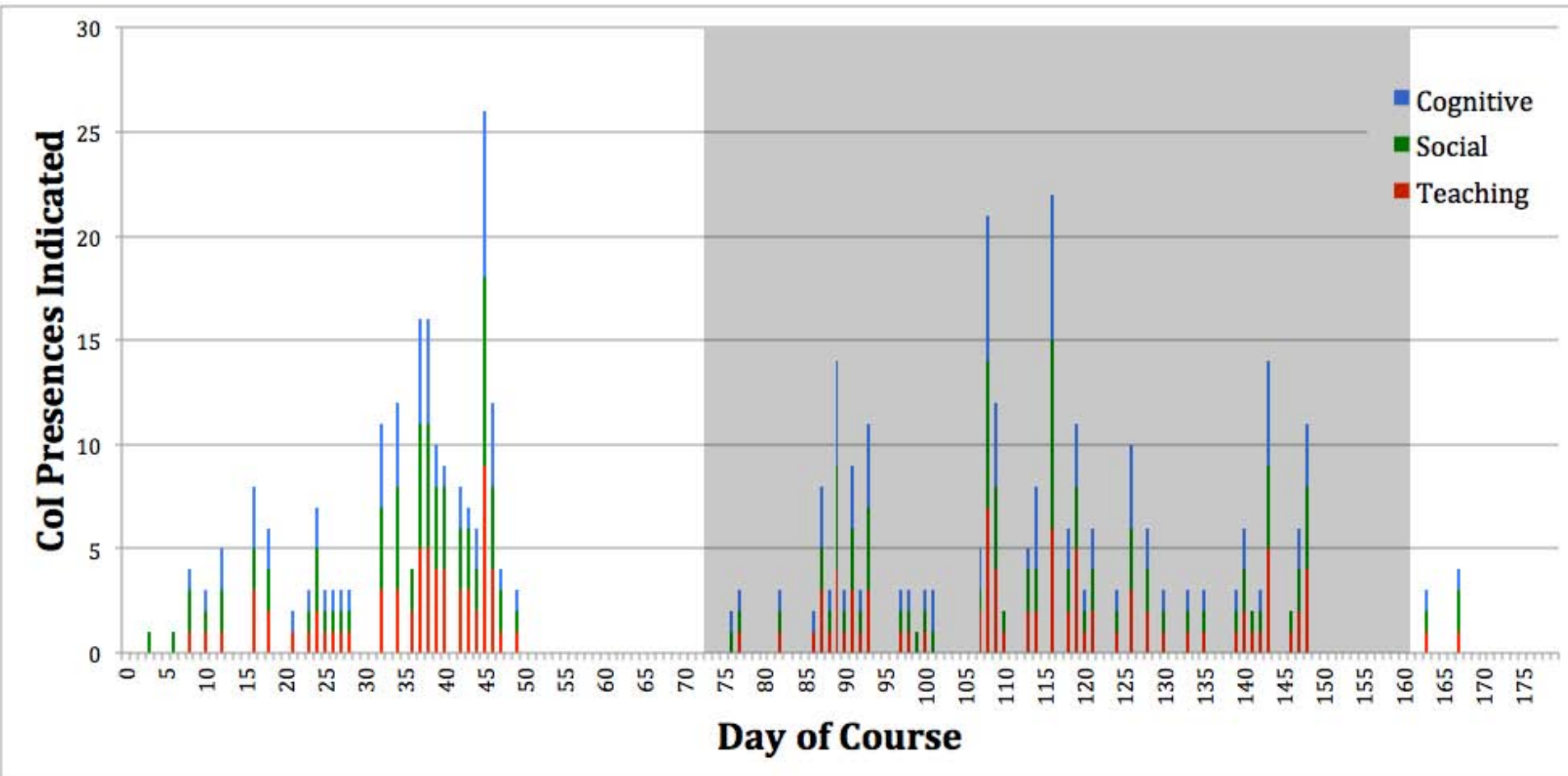


Figure 4.11 – Col presence indications in WordPress

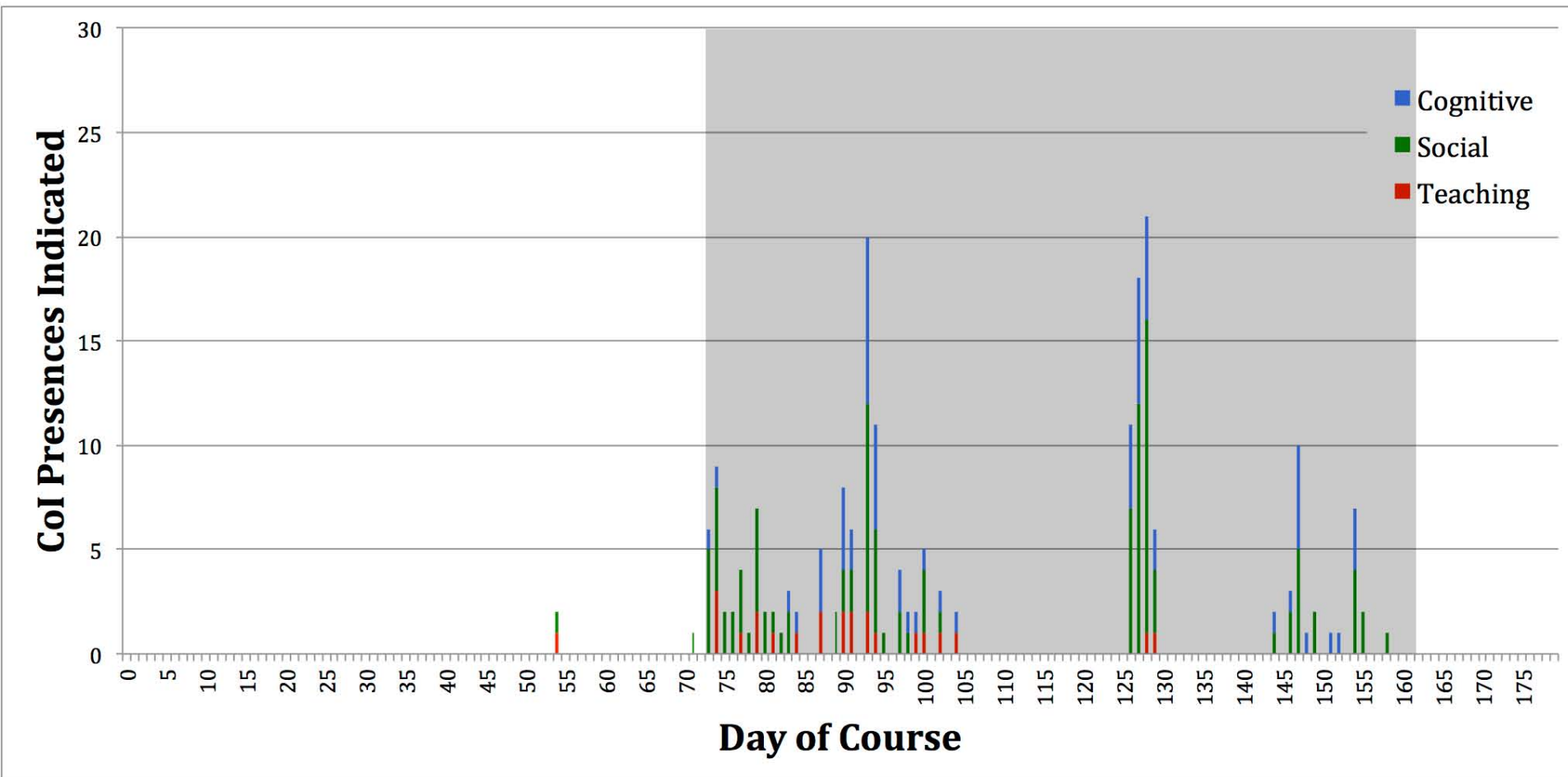


Figure 4.12 – Col presence indications in Blackboard

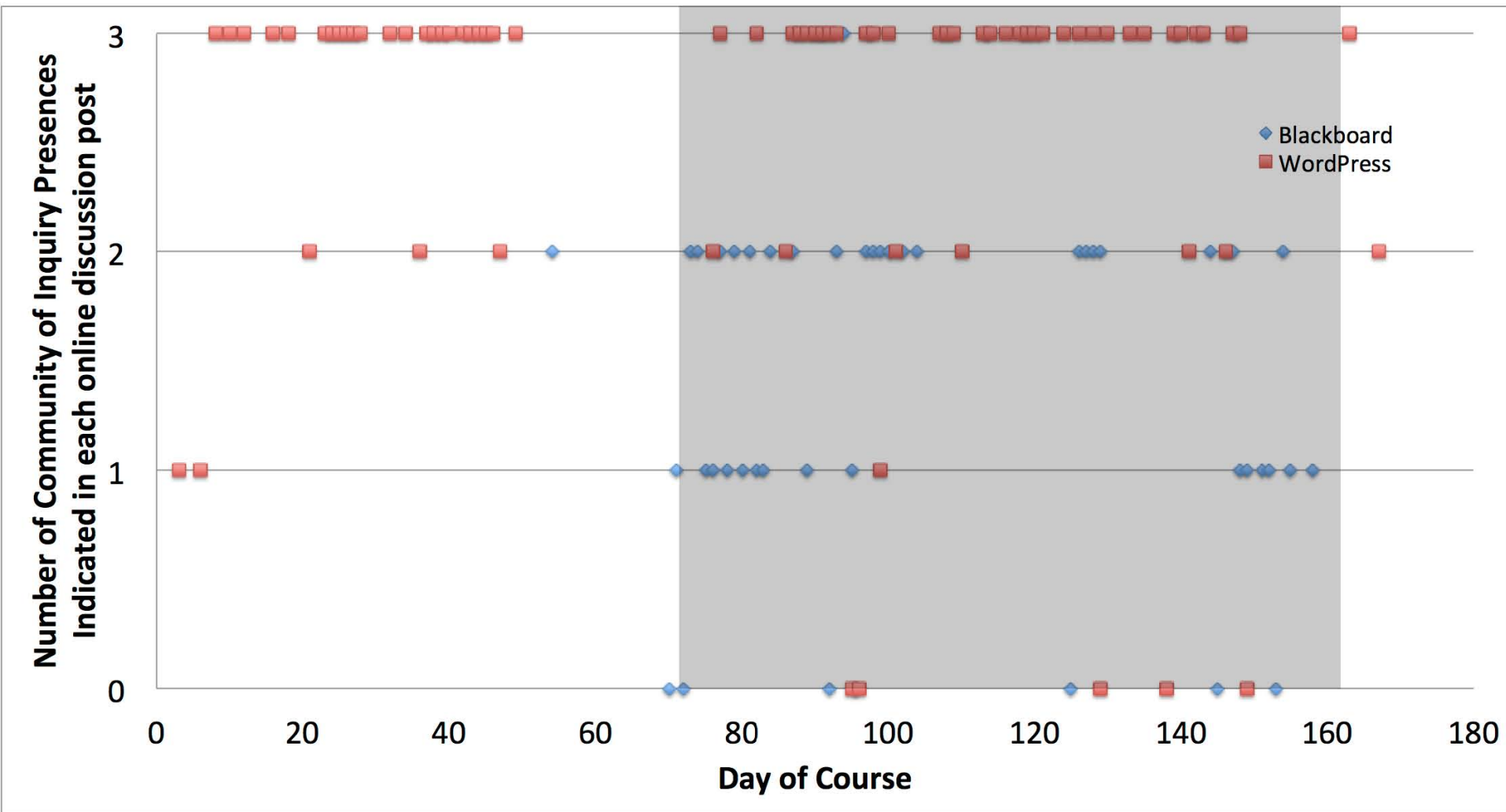


Figure 4.13 – Number of simultaneous presences show across all posts, Bb and WP

SO, WHAT?

What does this mean?

- Pedagogical direction on discourse may act independently of tool selection.
- Students follow orders. Who knew?
- Tool selection may set the tone of online activities.

Watch for...

- Learning analytics and discourse analysis
 - Eg. <http://lakconference2013.wordpress.com>
- Tool development to support (near) realtime analysis of discourse
 - Eg. <http://gephi.org>

Discuss...

- Role of instructor's selection of tool(s)?
- Role of pedagogical design on discourse – tension with discovery/inquiry?
- Individual control vs. dictated/communal spaces?
- Role of metadata analytics?
- Role of coded-data visualization?
- High performance computing in the humanities?
- Would having this kind of analysis or visualization available alter the discourse?

QUESTIONS? COFFEE?