

Music Moves 1

Prepared by davidavery

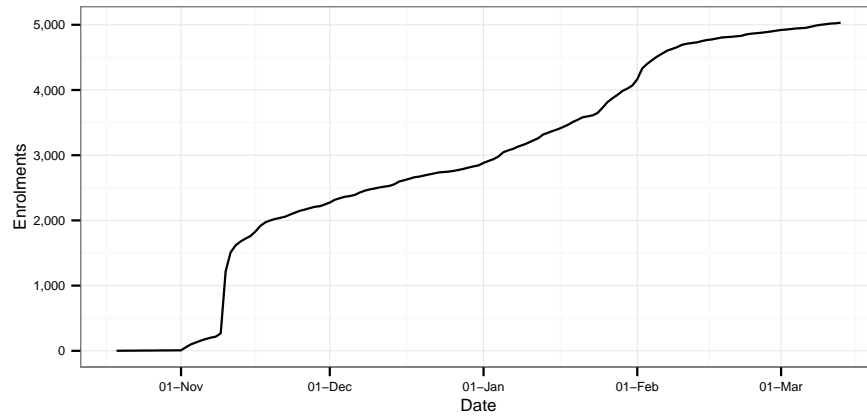
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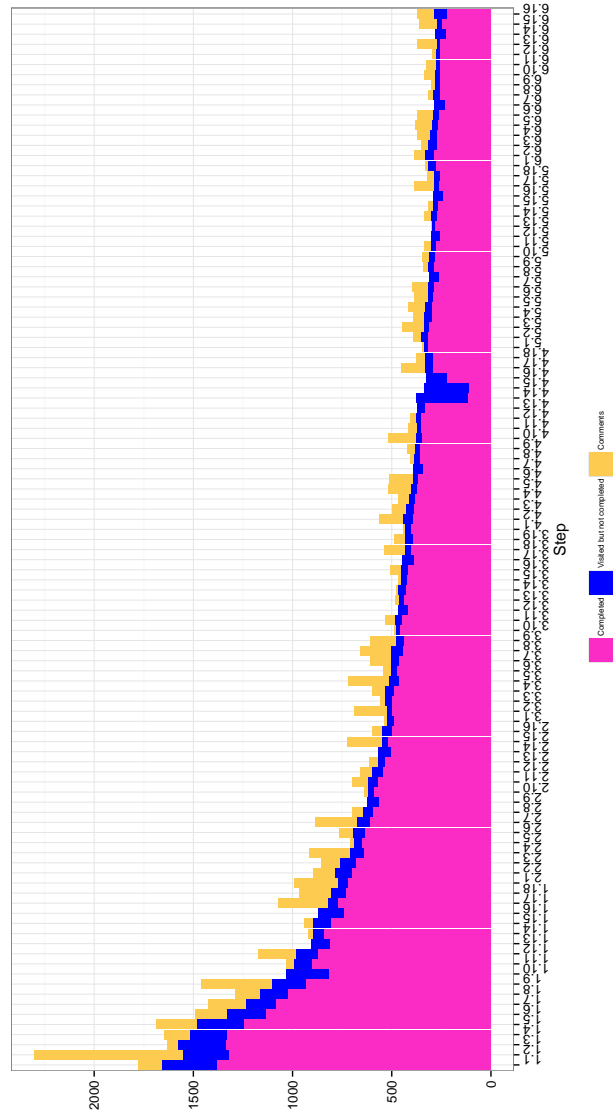
1 Enrolment

1.1 Enrolment cumulative growth



2 Activity

2.1 Activity by step



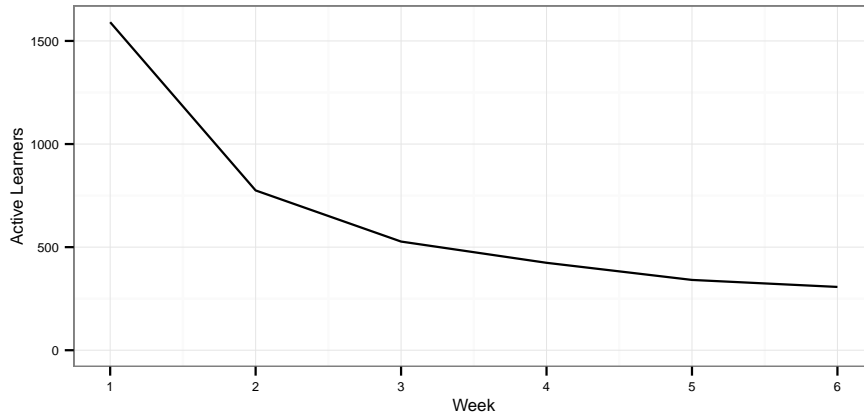
Step	Completions	Visits	Comments	Likes	Mean Completion (mins)
1.1	1384	1658	120	156	8.08 s.d=17.66
1.2	1321	1554	749	593	8.58 s.d=18.34
1.3	1338	1576	55	120	7.57 s.d=18.28
1.4	1334	1517	130	223	6.06 s.d=16.36
1.5	1245	1486	203	430	12.39 s.d=19.63
1.6	1134	1332	159	357	14.34 s.d=24.40
1.7	1084	1233	191	342	12.11 s.d=20.44
1.8	1026	1165	124	200	13.35 s.d=22.50
1.9	934	1105	357	189	14.71 s.d=24.66
1.10	817	1032			11.57 s.d=17.34
1.11	905	996	38	31	4.11 s.d=13.85
1.12	870	985	187	182	9.90 s.d=18.79
1.13	815	907			2.47 s.d= 9.59
1.14	845	898	24	49	3.50 s.d=14.18
1.15	810	898	42	74	11.35 s.d=19.53
1.16	739	869			5.80 s.d=11.51
1.17	771	820	250	198	4.84 s.d=16.63
1.18	735	806	158	262	5.55 s.d=13.83
2.1	721	772	218	194	6.44 s.d=17.04
2.2	704	785	108	191	13.53 s.d=25.72
2.3	684	761	91	194	13.54 s.d=20.02
2.4	643	711	204	244	10.31 s.d=21.85
2.5	652	694	16	35	3.09 s.d=10.59
2.6	636	695	67	114	10.65 s.d=17.20
2.7	611	674	211	66	6.72 s.d=13.50
2.8	596	648	51	89	11.57 s.d=18.97
2.9	568	624			2.76 s.d= 6.74
2.10	588	622	19	26	4.40 s.d=17.03
2.11	568	622	76	138	11.95 s.d=18.34
2.12	546	604	56	73	13.01 s.d=20.02
2.13	534	570	44	66	10.23 s.d=23.35
2.14	502	567			5.47 s.d=12.51
2.15	519	550	175	148	4.04 s.d=14.19
2.16	499	549	50	61	4.92 s.d=11.42
3.1	488	525	15	13	2.70 s.d=13.71
3.2	501	525	165	79	3.81 s.d=11.16
3.3	500	534	23	56	4.85 s.d=15.50
3.4	489	534	61	76	8.39 s.d=14.79
3.5	466	517	202	92	18.13 s.d=26.97
3.6	473	507	36	45	8.70 s.d=21.00
3.7	466	504	103	165	10.97 s.d=22.58
3.8	444	506	156	98	12.26 s.d=24.97
3.9	439	478	130	34	7.40 s.d=17.80
3.10	459	481	10	20	3.32 s.d=13.61

3.11	448	482	49	37	9.43 s.d=14.65
3.12	422	469			1.97 s.d= 2.34
3.13	441	468	16	6	2.54 s.d=11.43
3.14	430	468	9	16	9.79 s.d=20.23
3.15	424	456	13	13	8.05 s.d=16.94
3.16	420	453	55	78	10.14 s.d=18.35
3.17	388	448			9.70 s.d=15.99
3.18	404	435	105	98	2.49 s.d= 6.26
3.19	393	433	52	93	4.59 s.d=11.03
4.1	403	432	10	14	1.47 s.d= 5.12
4.2	393	443	117	160	13.64 s.d=22.74
4.3	388	427	70	82	11.67 s.d=20.05
4.4	383	415	54	46	11.14 s.d=23.74
4.5	372	405	115	34	8.70 s.d=17.02
4.6	371	397	116	70	6.26 s.d=14.12
4.7	344	392			8.84 s.d=17.15
4.8	360	386	20	23	7.45 s.d=23.93
4.9	360	382	38	63	7.06 s.d=14.09
4.10	351	379	141	128	7.03 s.d=15.75
4.11	355	376	42	38	6.54 s.d=13.45
4.12	356	377	28	29	6.83 s.d=11.75
4.13	331	371			2.64 s.d= 7.37
4.14	117	376			71.56 s.d=47.54
4.15	112	337			29.14 s.d=32.06
4.16	224	325			4.27 s.d=16.16
4.17	296	333	118	111	4.09 s.d=14.88
4.18	293	335	42	52	4.65 s.d=13.95
5.1	318	340	6	4	2.47 s.d=12.87
5.2	319	354	39	58	8.45 s.d=16.95
5.3	311	340	110	63	4.40 s.d= 7.88
5.4	301	338	54	70	11.45 s.d=18.75
5.5	300	334	85	99	10.06 s.d=18.73
5.6	292	319	68	63	9.07 s.d=20.48
5.7	289	319	79	38	10.62 s.d=20.34
5.8	265	311			3.97 s.d= 7.48
5.9	290	316	24	21	6.76 s.d=14.51
5.10	283	313	31	38	14.76 s.d=28.44
5.11	280	304	34	26	7.63 s.d=16.50
5.12	257	299			3.09 s.d= 9.28
5.13	282	298	4	0	2.18 s.d=12.62
5.14	271	304	33	40	10.41 s.d=14.88
5.15	269	291	24	21	9.98 s.d=22.83
5.16	242	288			4.39 s.d=15.50
5.17	265	288	99	70	4.01 s.d=12.46
5.18	258	287	32	30	3.81 s.d= 8.78
6.1	281	317	13	9	1.86 s.d= 9.47

6.2	287	335	51	63	12.05 s.d=20.00
6.3	275	317	35	37	16.91 s.d=32.78
6.4	275	309	62	122	11.70 s.d=16.97
6.5	271	298	85	102	8.63 s.d=21.28
6.6	265	296	76	47	14.37 s.d=25.91
6.7	234	287			5.27 s.d= 8.57
6.8	260	292	25	44	7.69 s.d=20.90
6.9	257	282	17	24	4.42 s.d= 6.89
6.10	258	284	54	46	7.88 s.d=14.66
6.11	259	280	46	43	6.05 s.d= 9.73
6.12	258	279	17	19	4.50 s.d=14.92
6.13	255	275	99	85	4.72 s.d=13.39
6.14	228	280			7.33 s.d=12.58
6.15	250	273	86	105	4.14 s.d=11.79
6.16	221	286	83	173	4.47 s.d=16.15

Table 1: Activity overview by step (completion time calculated from first visit to last completion)

2.2 Active learners by week



Week	Active Learners	Percentage
1	1591	1.00
2	775	0.49
3	527	0.33
4	424	0.27
5	341	0.21
6	307	0.19

Table 2: Active Learners by Week

2.3 Learner survival

By examining when each learner visits or completes a step, we can ascertain when they stopped engaging with the course. This can be seen either by date or by step.

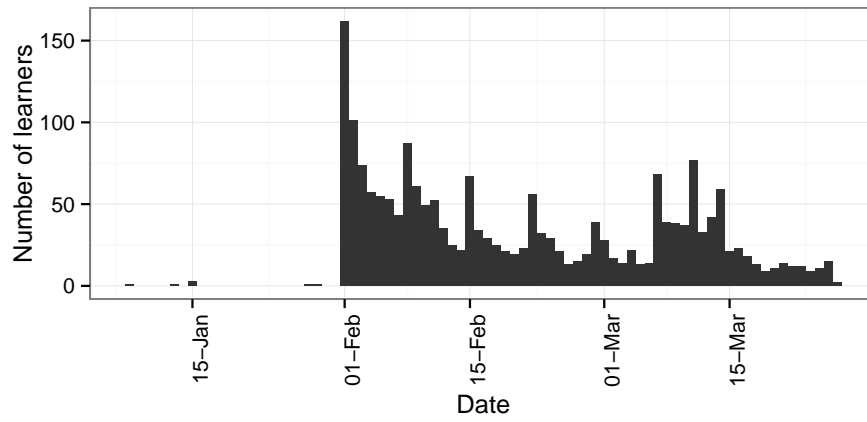


Figure 1: Last step progresses by date (course duration highlighted)

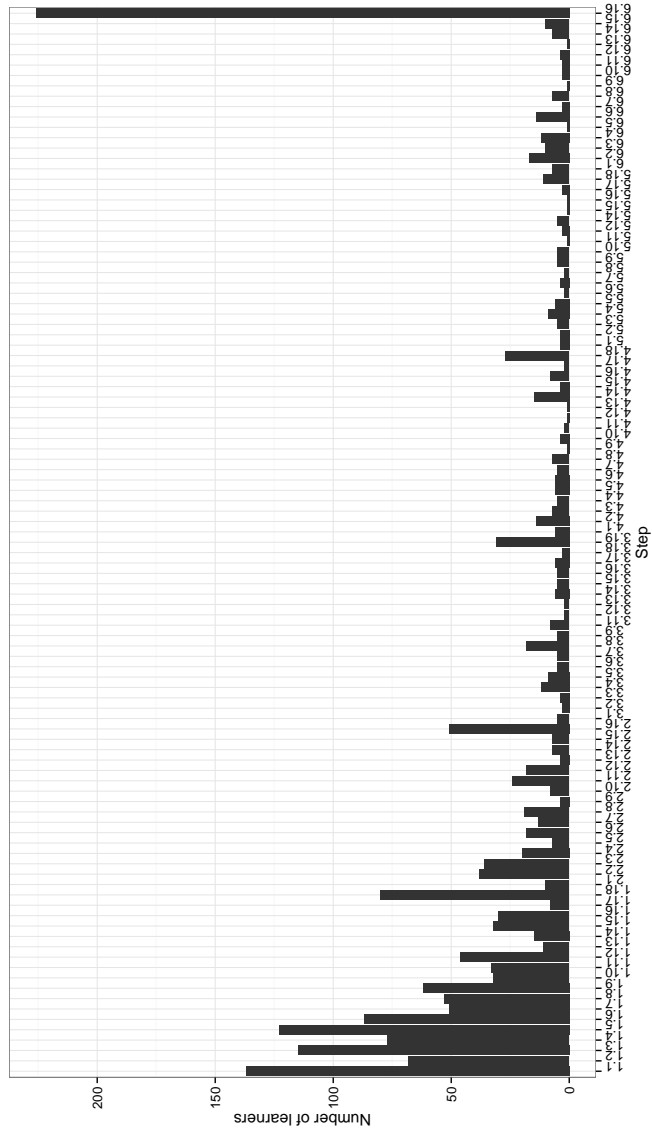


Figure 2: Last step progresses by step

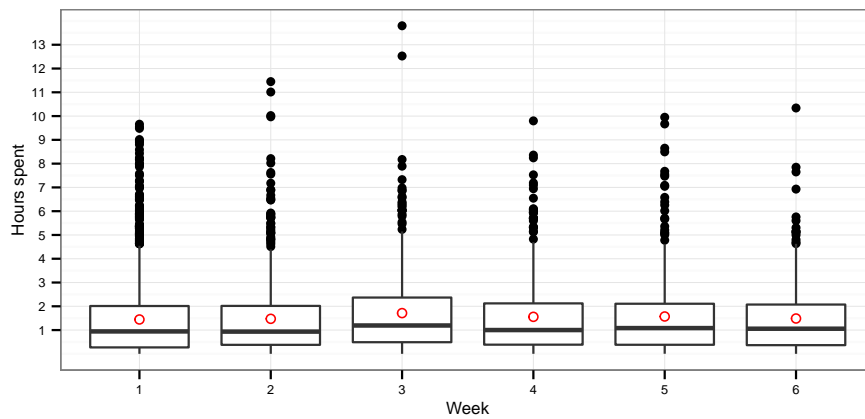


Figure 3: Hours spend by week

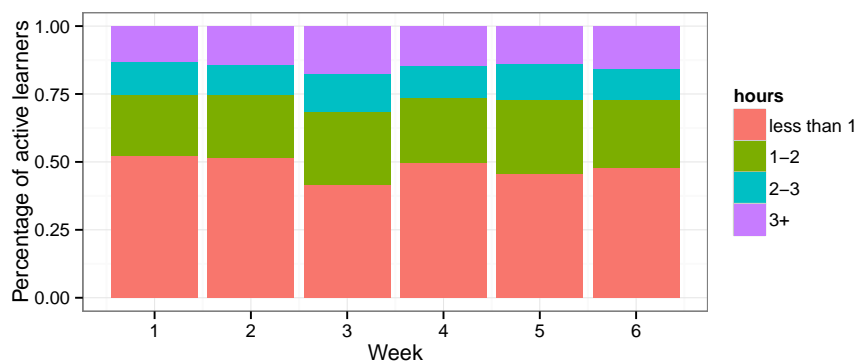


Figure 4: Hours spend by week

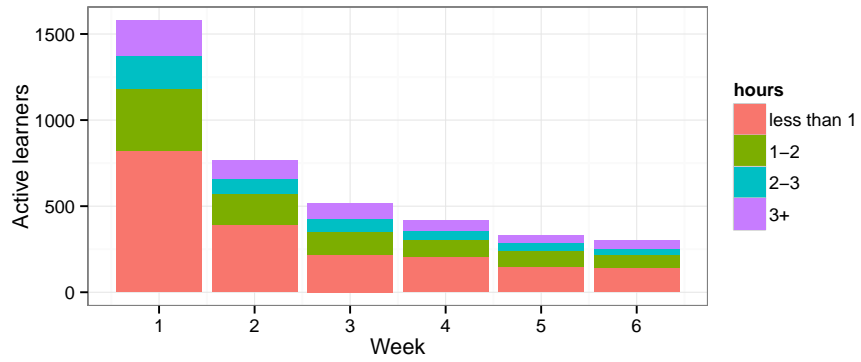


Figure 5: Hours spend by week

2.4 Activity heatmaps

2.4.1 Step completions

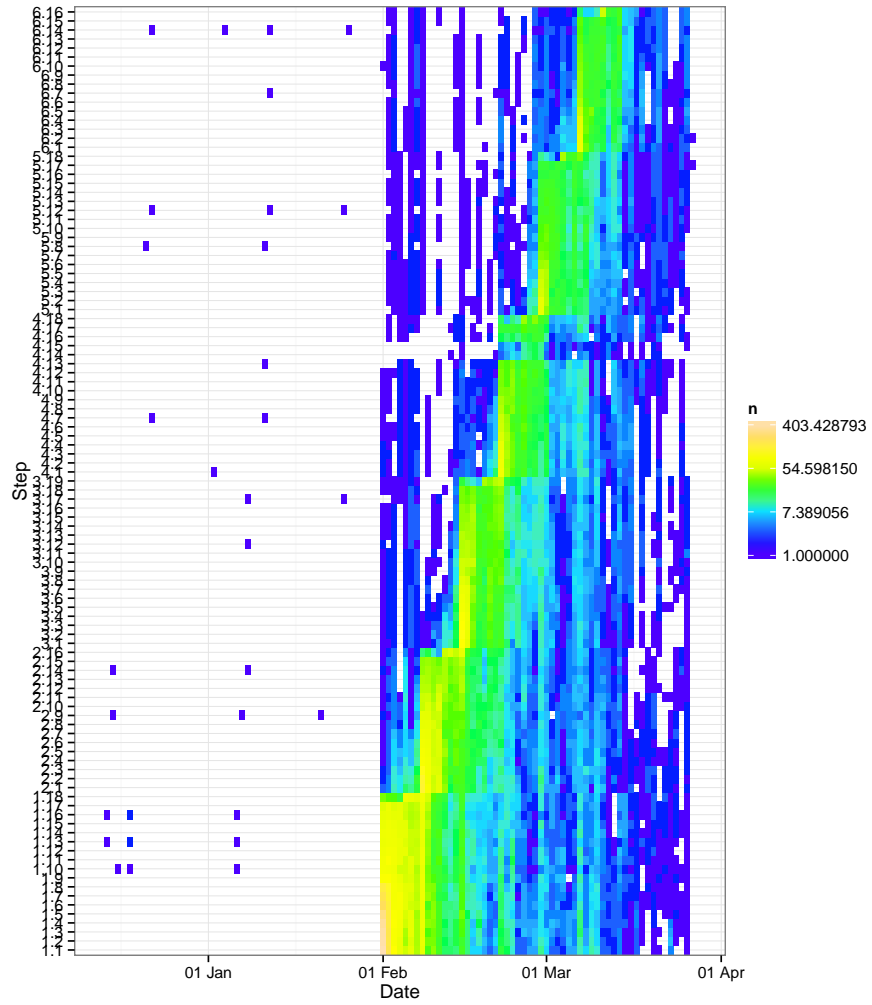


Figure 6: Step completions by step and date (course weeks denoted by dashed lines)

2.4.2 Comments

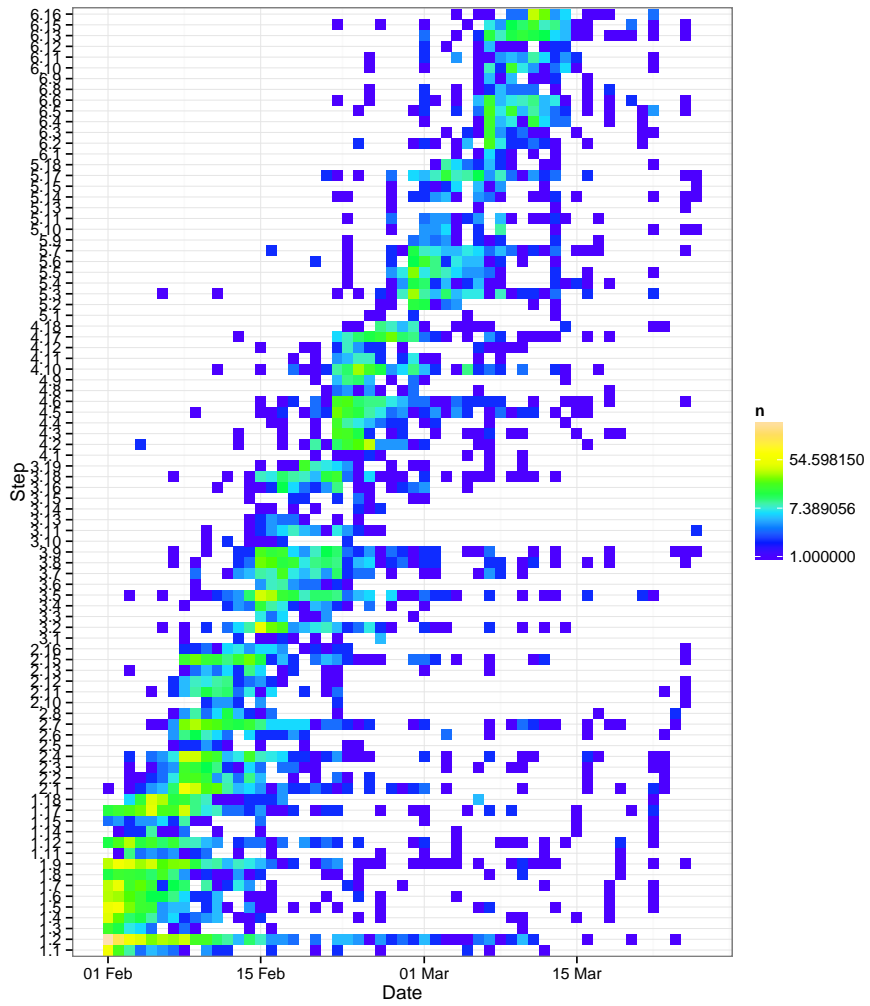


Figure 7: Comments by step and date (course weeks denoted by dashed lines)

3 Comments

3.1 Comments overview

Overview	
Total comments	7755
Unique authors	814
Mean word count	61.26 (s.d. = 49.54)
Total Likes	8474

3.2 Comments by step

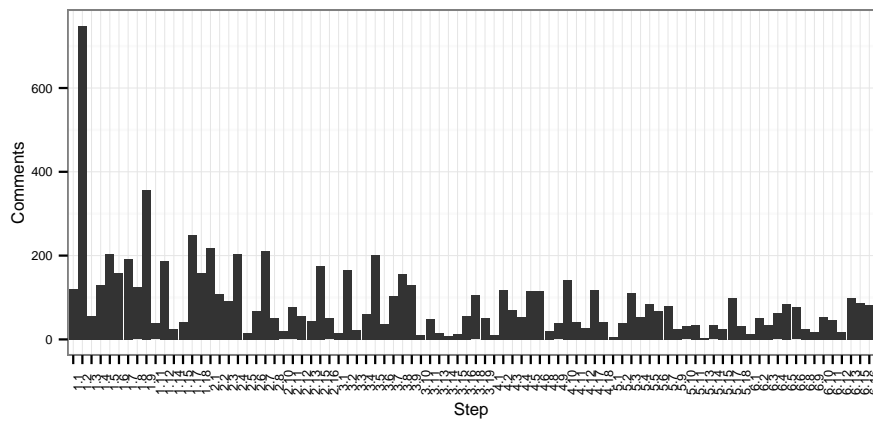


Figure 8: Comment count for each course step

3.3 Comments by date

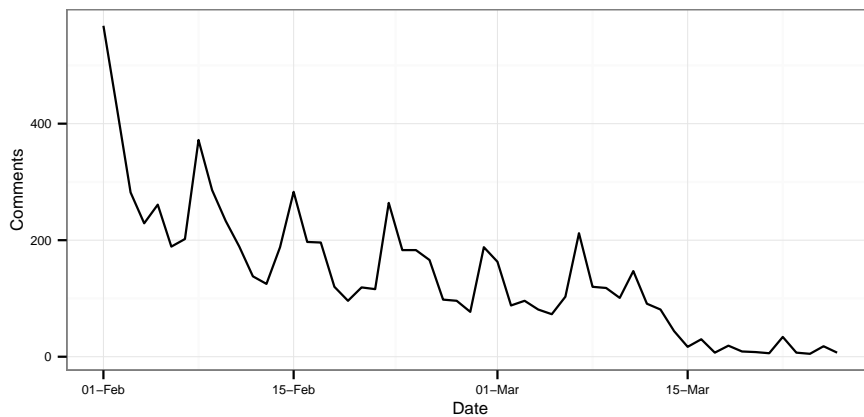


Figure 9: Comments by date (lines indicate course weeks)

3.4 Likes by step

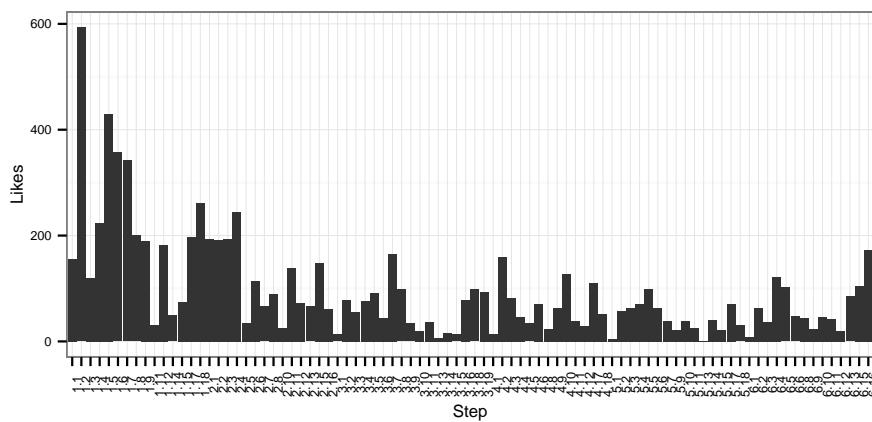


Figure 10: Like count for each course step

3.5 Comment sentiment

Using word lists and Bayesian processes we can calculate 'sentiment' for comments. While inherently problematic, this may reveal areas of learner discontent—for instance in a post-test discussion step.

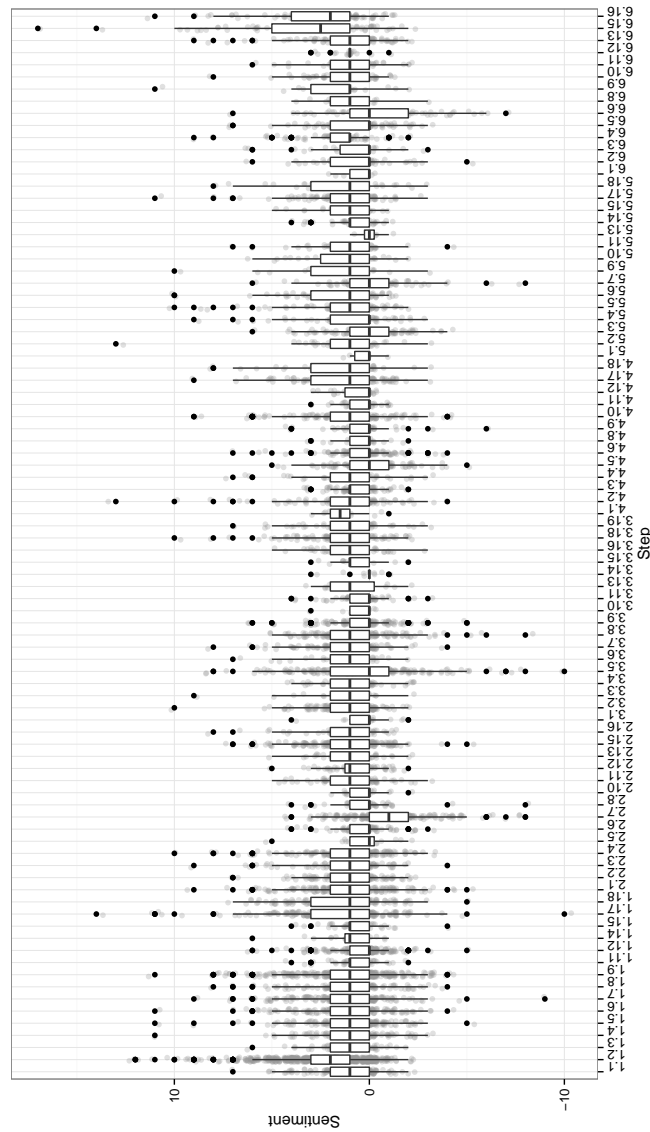


Figure 11: Step comment sentiment score. Positive numbers indicate occurrence of positive words.

3.6 Word count

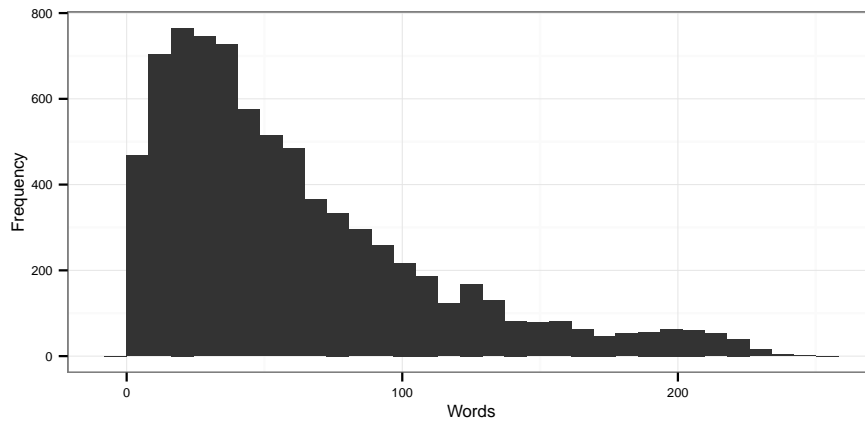


Figure 12: Histogram of word count in comments across the course

3.7 Top comments by Likes

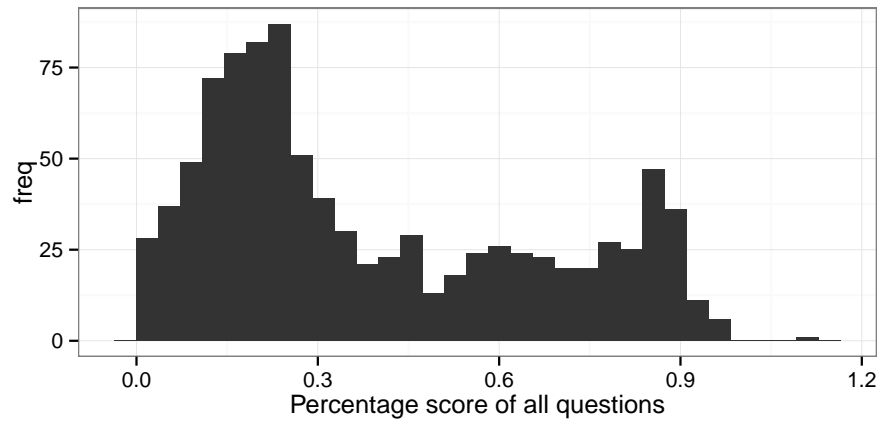
Step	Comment	Likes
2.3	This brought to mind a study about how reading affects the brain. Volunteers were asked to switch between 'casual' reading of a text i.e. as in reading for pleasure, and 'focused' reading, as in conducting a literary analysis. Researchers expected small changes in the part of the brain that regulates attention. But it appeared that 'focused' reading engaged parts of the brain associated with movement and touch - as if readers were physically placing themselves within the story as they analyzed it. http://www.openculture.com/2015/07/this-is-your-brain-on-jane-austen-the-neuroscience-of-reading-great-literature.html Other studies in this field are looking at poetry and rhythm in the brain, and how metaphors excite sensory regions of the brain. So potentially a close correlation with these studies concerning music.	23
6.16	To Hans, Alexander, Kristian (and Kristian's baby and other guests!), I am still amazed that all this is here for us on line for free, you have put in a huge amount of effort to prepare this and made studying enormously entertaining with your sense of humour! I am in awe at the fact that you must trawl through all our comments and our faltering efforts at understanding: we know you do because of the sheer number of "likes" you leave and comments you post (along with Diana and Hallygerd). I also really value the many, many contributions by other coursers, their various backgrounds of expertise, culture, musical tastes, bodily responses etc and I have learnt so much through the many threads I have got involved in when folk have replied to my muddled thoughts. Thank you all.	16
3.4	I think the same amazing 'experiment' done with 'bah' and 'fah' is even more impressive. Look at this 3 minute video; the moment you see the man's teeth hit the lower lip you definitely hear the F. https://www.youtube.com/watch?v=G-IN8vWm3m0	15
1.5	Very interesting that the idea of sitting still at classical concerts and not clapping till the end came in during the 19th century when the growing middle classes were attempting to distinguish themselves from the working classes. This is similar to the way French aristocrats invented "etiquette" to distinguish themselves from bourgeoisie, or nouveau riche - those who didn't know the unwritten rules marked themselves as inferior. There is still a lot of snobbery in classical music; not everyone knows when a piece is finished, but if you clap when you shouldn't, everyone turns round and glares at you! I hate that sort of formality.	13

1.12	As a first thing, I have to say that in my mother tongue (Spanish) we don't have this ambiguity with different terms, we just say "movimiento" and that's it. But since I grew up with English by my side, I do have an unprecise feeling that there might be a slight difference between both words. "Motion" does actually sound more technical, reminds me more of Physics at school or something similar. And maybe the existence or non-existence of a corresponding verb does make a difference: "I move my arm" shows that I change my arm's position on space, whereas "I set my arm in motion" refers more to the physical implication of the aforementioned movement. So, "motion" only comes into being if something is being "moved". Seen this way, I would say that motion could be understood as the consequence of movement. But, please, all you English native speakers, do feel free to correct me if you think I'm wrong!	13
2.5	The affordance of an instrument would be the type of sound-producing actions (and corresponding sounds) you can produce on it. So a piano affords piano-like sounds. You will never get the sound of a violin when you play (an acoustic) piano. This is why it is sometimes confusing to hear sounds produced on electronic instruments, because we feel that there is a lack of connection between the actions being produced and the sound we hear.	13
2.1	Fifteen or twenty years ago, while driving I spotted an acoustic guitar along the curb in someones trash. The top or head was broken in two pieces between the lower tuning pegs. I snatched it up. Since then it has been stored gathering dust in the rafters of the basement ceiling. Every now and then I would gaze at it thinking it crazy to attempt a repair. I could not bring myself to part with it. Call me crazy, but last week I cleaned it up, applied some glue, a couple screws, and bought some strings. Yes! it worked! Since I don't know how to play, I messed around some with a guitar when I was maybe 13 yrs old, this return has been full of wonder. A reawakening to life for this wooden box and possibly me as well. Most of the last two days have been spent with my new friend. Just to pluck one string, feel my finger touch-release upon the string, hear and feel the string as it travels along on a journey of the vibration. To know the song of the guitar body against my own body. Not quite music. Sounds like love.	12
2.11	Some dances are recorded in Laban notation, however it is hard to continually note whether your limbs are turned in or out so ballet has come up with its own version called Benesh notation. Most famous ballet dances are now recorded using Benesh notation and stored in libraries. The Royal Academy of Dance also notates all of its dance syllabus as it is a much more accurate way to describe dance rather than in words. The syllabus books have the written descriptions on one side and the Benesh notation on the other. (Benesh notation is written on a musical score so that it can lay direction in line with the musicians)	12

2.11	Perhaps it will happen later in the course, but I would really have valued at least one example of the theory in practice to help me fix it in my mind and make more sense of it. There is a lot of quite complex information being presented this week and I'm not sure it is all going to sink in!	12
3.7	Here's an example of people around the world dancing to the same piece of music https://www.youtube.com/watch?v=Zz-54AB9hyk Which one would be you?!	12

4 Quizzes and Tests

4.1 Overview



4.2 Rasch analysis

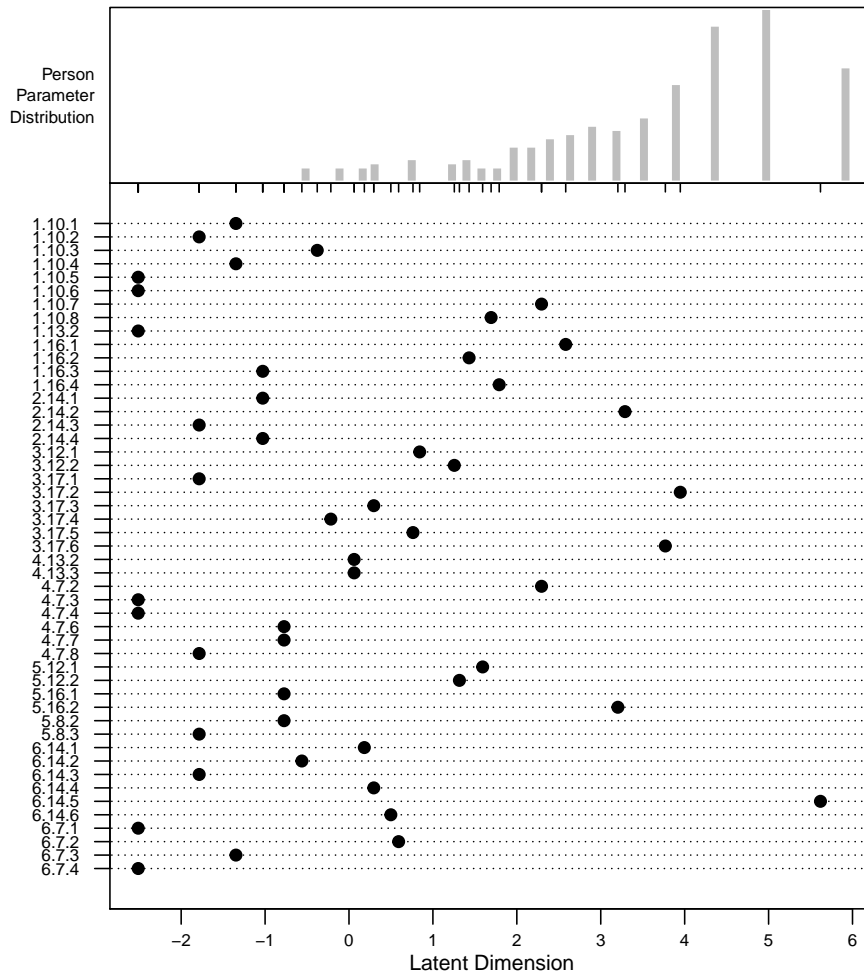
Rasch modelling can be used to produce a logistical representation of both learner ability and question difficulty. This data is based upon quiz/test performance for all students, taking only their first attempt at each question.

	Difficulty
Min.	-2.51
1st Qu.	-1.78
Median	-0.30
Mean	0.03
3rd Qu.	1.34
Max.	5.62

Table 4: Question difficulty summary

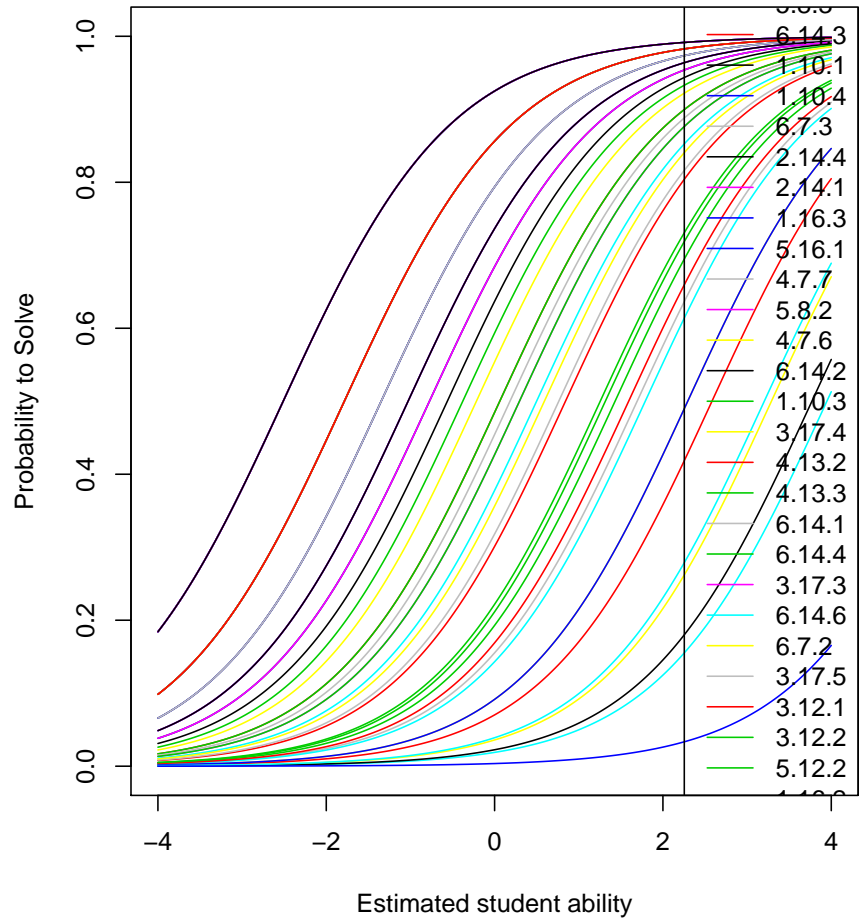
4.3 Person-Item Map

A 'Person-Item Map' shows how these two parameters relate. We would generally expect learner ability to fall within a normal distribution. Questions (shown on a scale of difficulty at the bottom) which discriminate across the full spectrum of ability would therefore overlap visually with the histogram at the top.



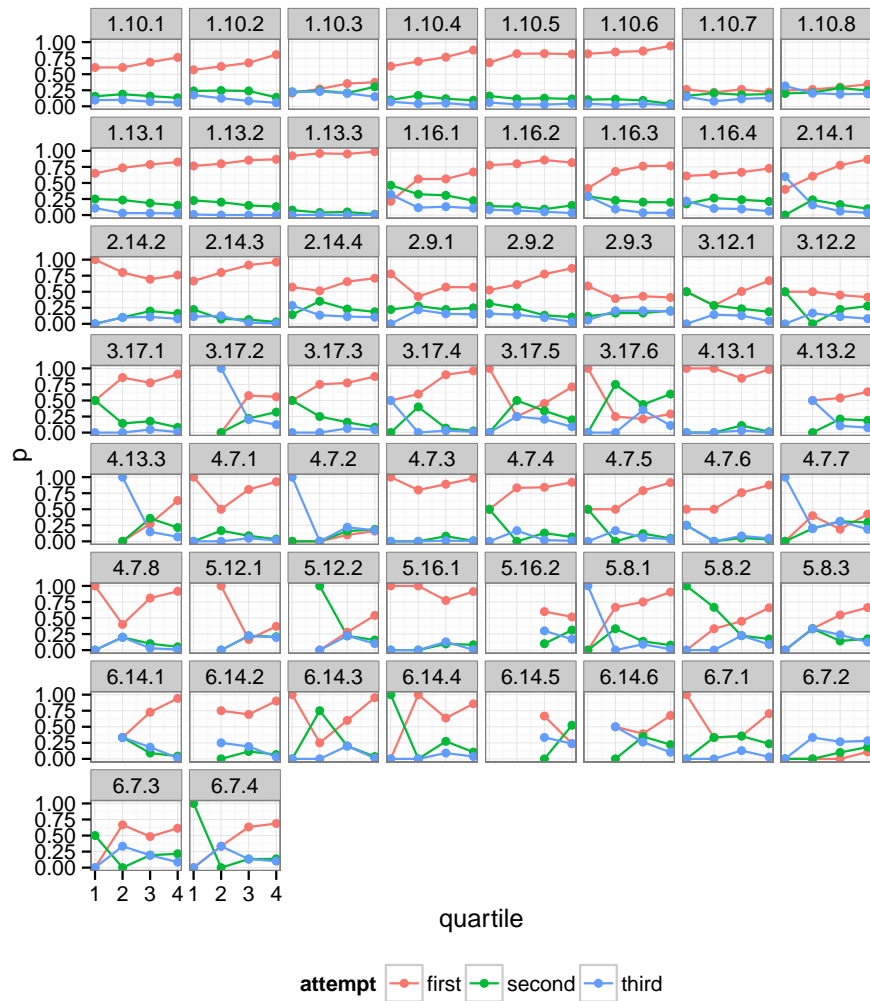
4.4 ICC Curves

The Item Characteristic Curve (ICC) shows the probability of a correct response as a function of the ability of persons. We might expect an 'average student'—with an ability of 0—to have a 0.5 (50%) chance of solving a given question. The more pronounced an S-curve that is visible, the better the question discriminates between different abilities. This curve may sit at different positions on the x-axis, showing questions of different difficulties.

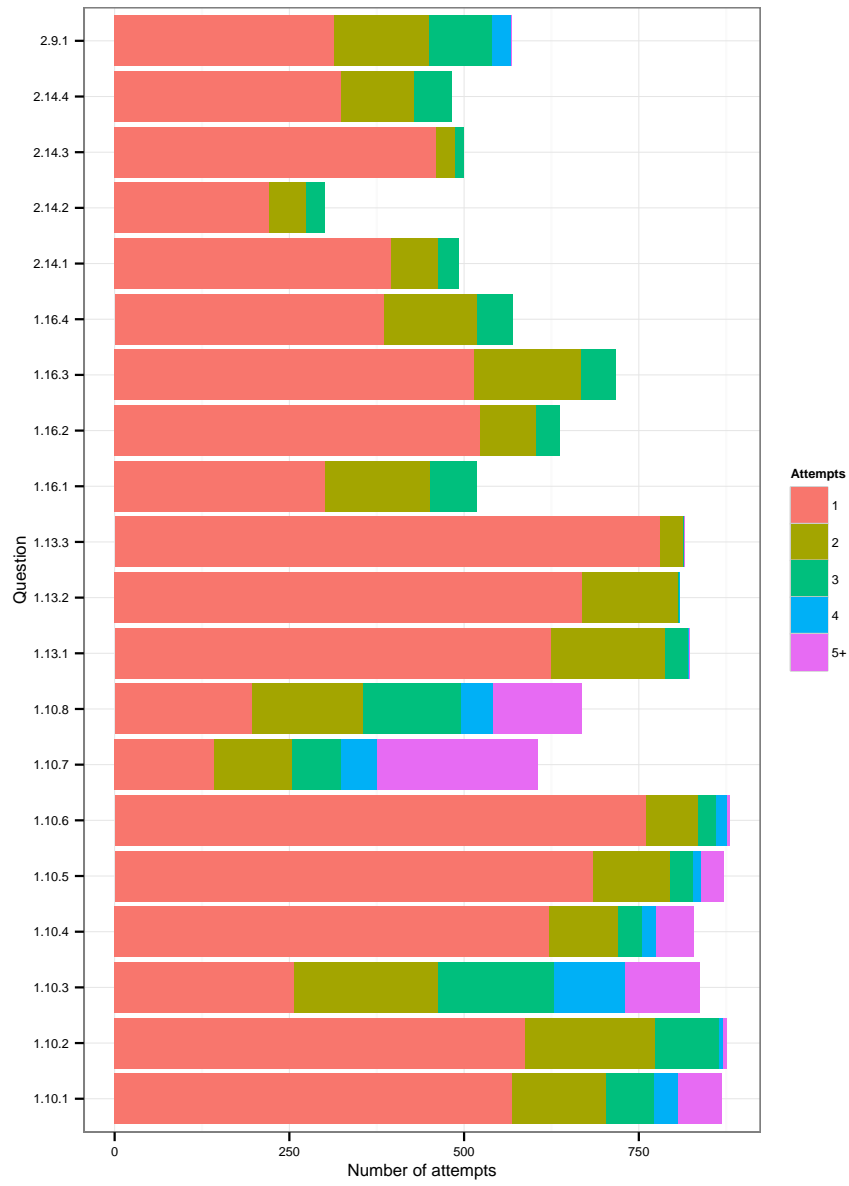


4.5 Quartile Analysis

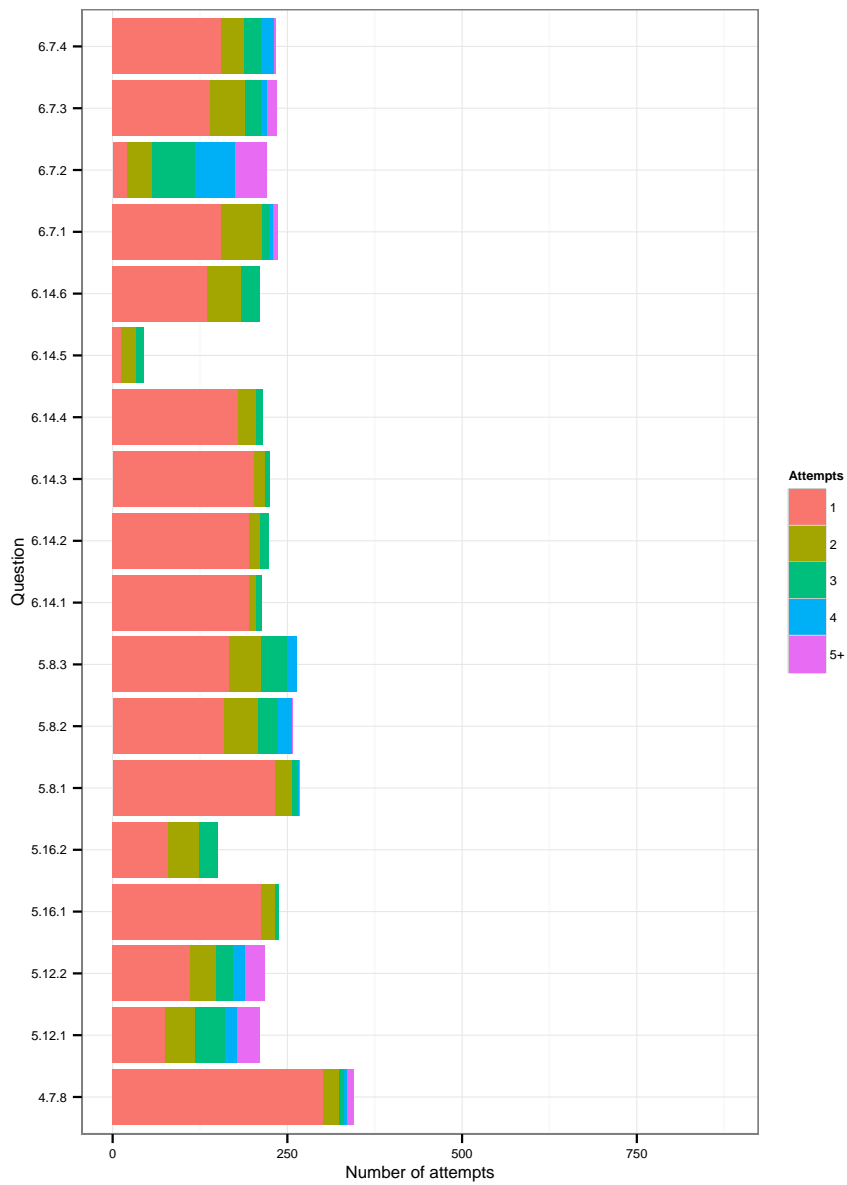
A simpler to interpret approach that doesn't involve modeling is to partition the cohort by their overall percentage score across all questions and consider the probability of a correct result at each attempt (shown only up to the third) for each of these quantiles.



4.6 Attempts to correct







5 Peer Review

5.1 4.14

Overview	
Total assignments	117
Total reviews	221
Mean assignment word count	388.54 (s.d. = 213.84)
Mean review word count	67.31 (s.d. = 48.92)
Mean reviews per assignment	1.89 (s.d. = 0.45)
Mean minutes to first review	468.96 (s.d. = 917.64)
Median minutes to first review	135.65
Minimum minutes to first review	1.55

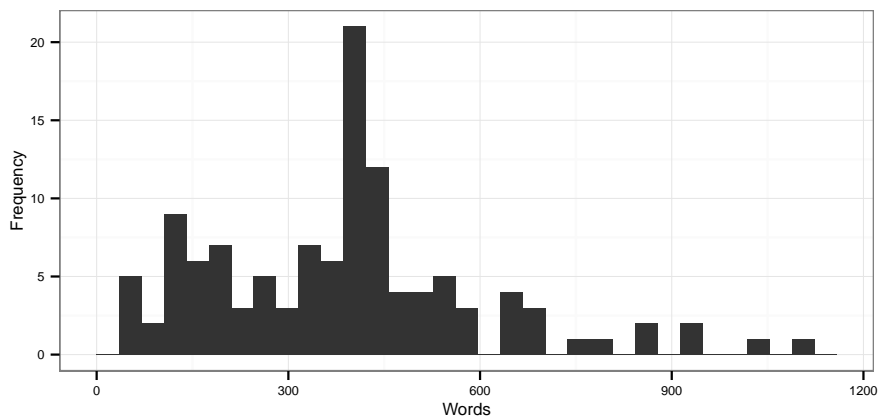


Figure 13: Assignment submission word count

Taking the time difference between first viewing the step and submitting/completing it we can estimate the the length of time learners are spending on task. This may however be influenced by people who first view the steps, then returning at a later time to submit.

It should be considered that learners may paste in assignments previously authored in an external application (e.g. Microsoft Word) resulting in length assignments which appear to be completed in an extremely short length of time. Similarly, points clustered around origin may be 'junk' submissions entered to skip the submission step.

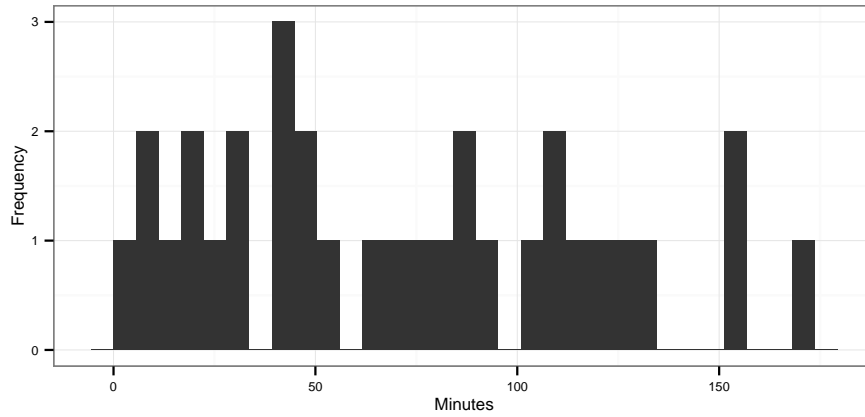


Figure 14: Minutes between viewing assignment step and submitting (capped to 3 hours)

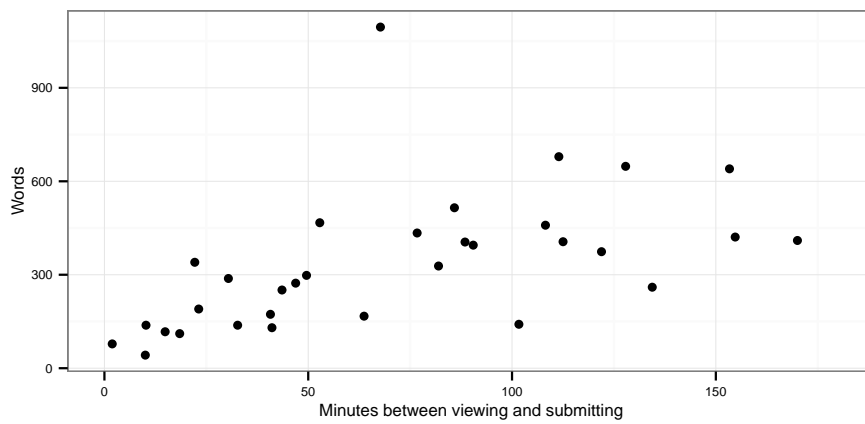


Figure 15: Time spend (as above) against words submitted

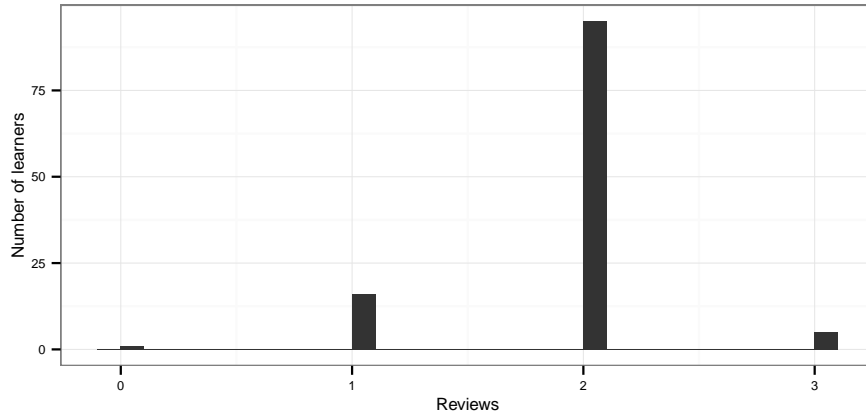


Figure 16: Reviews per assignment

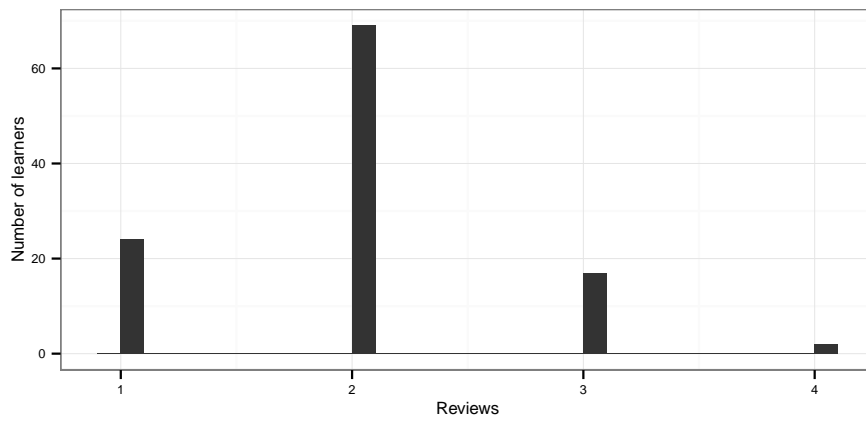


Figure 17: Reviews completed per user