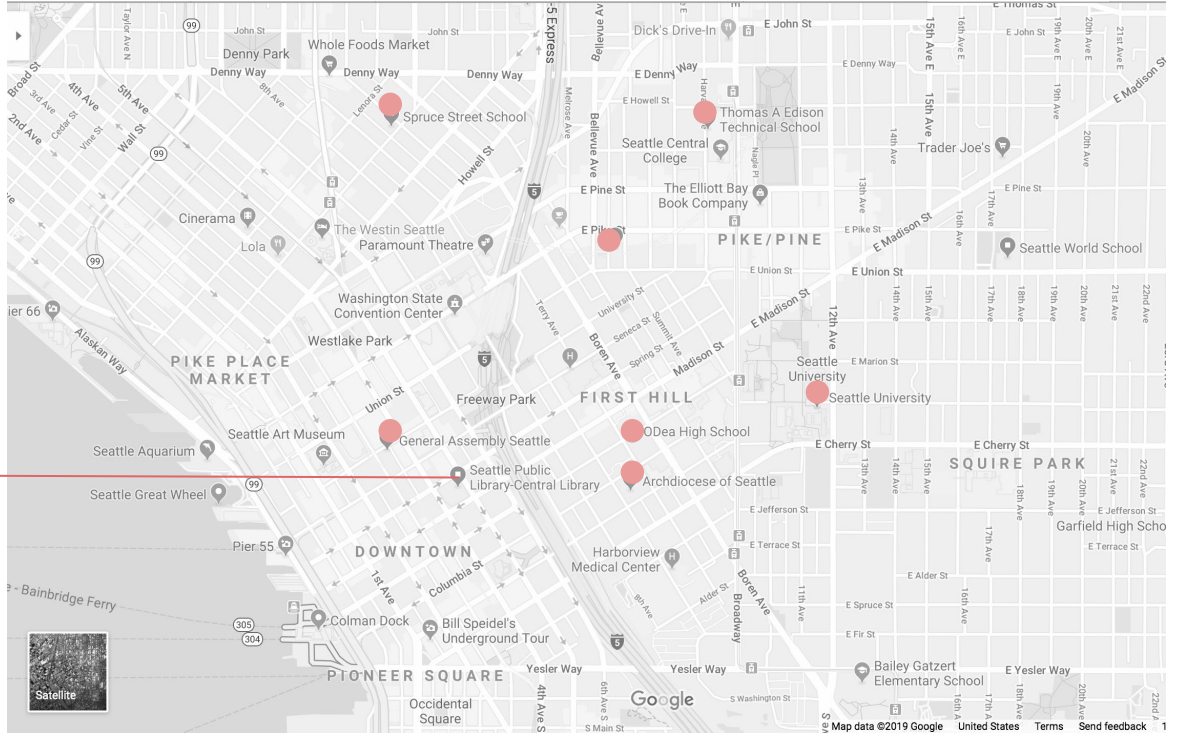


exploring the relationship between
checkout activity of high-school related items
& local high school bell schedule
during the week of September 5th - 9th, 2016

Yichen Li

schools near the central library



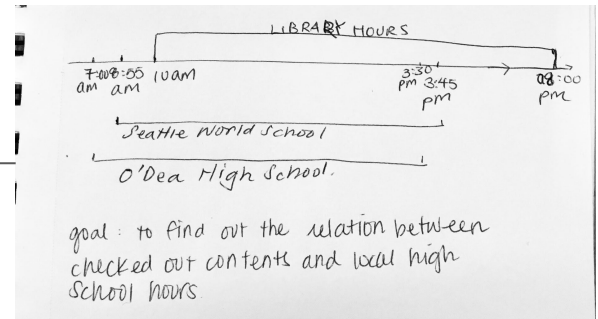
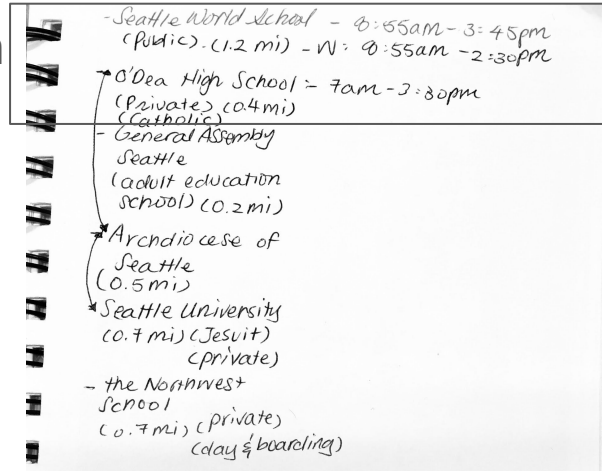
the library

school proximities and bell schedules

final selection: O'Dea High School and Seattle World School.

the Northwest School was omitted (partially boarding k-12 school equipped with its own library)

timeline



hypothesis

increased checkout and checkin of instructional and test preparation materials (i.e. high school textbooks, SAT guides) after dismissal of the two local high schools, during regular school year.

it is presumed that other non-boarding high schools in the area would operate according to similar bell schedules.

assumption

high school students go to the library after school and browse materials relevant to their studies.

relevant dewey decimal classes

109 History & collected biography

150 Psychology

190 Modern Western philosophy (19th-century, 20th-century)

300 Social sciences, sociology & anthropology

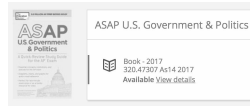
310 Statistics

320 Political science

330 Economics

342 Constitutional & administrative law

378 Higher education



400-499 Language

500-509 Science

510-519 Mathematics

530-539 Physics

540 Chemistry

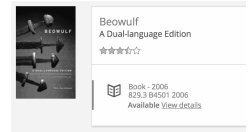
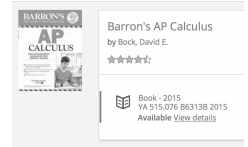
570 Biology

810 American literature in English

820 English & Old English literatures

909 World history

970 History of North America



initial query

I focused the initial query on September 6th, 2016, a Tuesday, limited to 10000 rows.

```
SELECT
  HOUR(cout),
  SUBSTRING(deweyClass, 1, 3),
  COUNT(SUBSTRING(deweyClass, 1, 3)),
  title,
  SUM(CASE
    WHEN (HOUR(cout) = 00) THEN 1
    ELSE 0
  END) AS 12am,
  SUM(CASE
    WHEN (HOUR(cout) = 01) THEN 1
    ELSE 0
  END) AS 1am,
  SUM(CASE
    WHEN (HOUR(cout) = 02) THEN 1
    ELSE 0
  END) AS 2am,
  SUM(CASE
    WHEN (HOUR(cout) = 03) THEN 1
    ELSE 0
  END) AS 3am,
  SUM(CASE
    WHEN (HOUR(cout) = 04) THEN 1
    ELSE 0
  END) AS 4am,
  SUM(CASE
    WHEN (HOUR(cout) = 05) THEN 1
    ELSE 0
  END) AS 5am,
  SUM(CASE
    WHEN (HOUR(cout) = 06) THEN 1
    ELSE 0
  END) AS 6am,
  SUM(CASE
    WHEN (HOUR(cout) = 07) THEN 1
    ELSE 0
  END) AS 7am,
  SUM(CASE
    WHEN (HOUR(cout) = 08) THEN 1
    ELSE 0
  END) AS 8am,
  SUM(CASE
    WHEN (HOUR(cout) = 09) THEN 1
    ELSE 0
  END) AS 9am,
  SUM(CASE
    WHEN (HOUR(cout) = 10) THEN 1
    ELSE 0
  END) AS 10am,
  SUM(CASE
    WHEN (HOUR(cout) = 11) THEN 1
    ELSE 0
  END) AS 11am,
  SUM(CASE
    WHEN (HOUR(cout) = 12) THEN 1
    ELSE 0
  END) AS 12pm,
  SUM(CASE
    WHEN (HOUR(cout) = 13) THEN 1
    ELSE 0
  END) AS 1pm,
  SUM(CASE
    WHEN (HOUR(cout) = 14) THEN 1
    ELSE 0
  END) AS 2pm,
  SUM(CASE
    WHEN (HOUR(cout) = 15) THEN 1
    ELSE 0
  END) AS 3pm,
  SUM(CASE
    WHEN (HOUR(cout) = 16) THEN 1
    ELSE 0
  END) AS 4pm,
  SUM(CASE
    WHEN (HOUR(cout) = 17) THEN 1
    ELSE 0
  END) AS 5pm,
  SUM(CASE
    WHEN (HOUR(cout) = 18) THEN 1
    ELSE 0
  END) AS 6pm,
  SUM(CASE
    WHEN (HOUR(cout) = 19) THEN 1
    ELSE 0
  END) AS 7pm,
  SUM(CASE
    WHEN (HOUR(cout) = 20) THEN 1
    ELSE 0
  END) AS 8pm,
  SUM(CASE
    WHEN (HOUR(cout) = 21) THEN 1
    ELSE 0
  END) AS 9pm,
  SUM(CASE
    WHEN (HOUR(cout) = 22) THEN 1
    ELSE 0
  END) AS 10pm,
  SUM(CASE
    WHEN (HOUR(cout) = 23) THEN 1
    ELSE 0
  END) AS 11pm
FROM
  sp_l_2016.outraw
WHERE
  DATE(cout) = '2016-09-06'
  AND (SUBSTRING(deweyClass, 1, 3) = 109
    OR SUBSTRING(deweyClass, 1, 3) = 150
    OR SUBSTRING(deweyClass, 1, 3) = 190
    OR SUBSTRING(deweyClass, 1, 3) = 300
    OR SUBSTRING(deweyClass, 1, 3) = 310
    OR SUBSTRING(deweyClass, 1, 3) = 320
    OR SUBSTRING(deweyClass, 1, 3) = 330
    OR SUBSTRING(deweyClass, 1, 3) = 342
    OR SUBSTRING(deweyClass, 1, 3) = 378
    OR SUBSTRING(deweyClass, 1, 3) BETWEEN 400 AND 499
    OR SUBSTRING(deweyClass, 1, 3) BETWEEN 500 AND 509
    OR SUBSTRING(deweyClass, 1, 3) BETWEEN 510 AND 519
    OR SUBSTRING(deweyClass, 1, 3) BETWEEN 530 AND 539
    OR SUBSTRING(deweyClass, 1, 3) = 540
    OR SUBSTRING(deweyClass, 1, 3) = 570
    OR SUBSTRING(deweyClass, 1, 3) BETWEEN 810 AND 829
    OR SUBSTRING(deweyClass, 1, 3) = 909
    OR SUBSTRING(deweyClass, 1, 3) = 909)
GROUP BY SUBSTRING(deweyClass, 1, 3), title
ORDER BY HOUR(cout) ASC, COUNT(SUBSTRING(deweyClass, 1, 3)) DESC
```

initial query result

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
1	HOUR(cc	SUBSTRING(COUNT(SU	title		12am	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	
2	9	812	1	prime of Miss Jean Brodie a drama in three acts	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	9	320	1	What are the parts of government	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	9	320	1	Government how local state and federal government works	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	10	468	2	Pimsleur language programs Spanish 1 B the complete course	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
6	10	812	1	Coyote ugly	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7	10	500	1	13 things that dont make sense the most baffling scientific mys	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8	10	814	1	I feel bad about my neck and other thoughts on being a woman	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
9	10	433	1	Lets learn German picture dictionary	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
10	10	812	1	Night mother	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11	10	468	1	Pimsleur language programs Spanish II B the complete course	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
12	10	811	1	Selected poems including The woman at the Washington Zoo	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
13	10	822	1	Harry Potter and the cursed child Parts one and two a new play	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	10	909	1	1968 the year that rocked the world	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
15	10	507	1	curious kids science book 100 creative hands on activities for ag	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
16	10	468	1	Pimsleur language programs Spanish 1 A the complete course	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
17	10	320	1	America the strong conservative ideas to spark the next generat	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
18	10	814	1	Fran Lebowitz reader	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
19	10	821	1	Poems to learn by heart	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
20	10	378	1	Barrons ACT 36 aiming for the perfect score	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21	10	468	1	Pimsleur language programs Spanish II A the complete course	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
22	10	909	1	Cold War an international history	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
23	10	320	1	Zionism the birth and transformation of an ideal	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
24	10	320	1	Broad influence how women are changing the way America wo	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
25	10	378	1	Cracking the PSAT	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
26	10	320	1	Sayyid Qutb reader selected writings on politics religion and soc	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
27	10	508	1	Our seasons	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
28	10	810	1	best American nonrequired reading 2008	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
29	10	824	1	view from the cheap seats selected nonfiction	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
30	10	468	1	Spanish Latin American the plus course	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
31	10	811	1	Grumbles from the forest fairy tale voices with a twist poems	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
32	10	818	1	smartest book in the world a lexicon of literacy a rancorous rep	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
33	10	814	1	best American magazine writing 2015	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

initialquery

+

Ready

Average: 14.80310078

Count: 646

Sum: 9548

-

+

100%

dewey class 378 | initial query result

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
1	HOUR	(cc SUBSTRI(4,T	COUNT(SU title		12am	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm
20	10	378	1 Barrons ACT 36 aiming for the perfect score		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
25	10	378	1 Cracking the PSAT		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
98	12	378	2 UW Huskies from A to Z		0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
99	12	378	1 Writing a successful college application essay		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	12	378	1 Chart your success on the COMPASS test		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
127	12	378	1 WSU Cougars from A to Z		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
145	13	378	1 Uchic college girls real advice for your first year and beyond		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
146	13	378	1 Dont tell me what to do just send money the essential parentin		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
179	13	378	1 College rules how to study survive and succeed in college		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
316	15	378	1 GRE 2016 Graduate Record Examination strategies practice anc		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
379	16	378	1 community college career track how to achieve the American D		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
430	16	378	1 Petersons how to get money for college financing your future bi		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
448	17	378	1 Barrons new GRE Graduate Record Examination		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
506	17	378	1 Open the gates to the Ivy League a plan B for getting into the tc		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
515	17	378	1 GRE 2016 Graduate Record Examination strategies practice anc		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
580	19	378	1 GRE 2016 Graduate Record Examination strategies practice anc		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
586	19	378	1 Where you go is not who youll be an antidote to the college adr		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
622	19	378	1 Essential words for the GRE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
646	19	378	1 Chart your success on the COMPASS test		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

filtering results down to dewey class 378 (Higher Education) only, it is observed that the majority (13/19) of 378 material are related to college entrance.

contrary to my belief, only less than half (5/13) of them are checked out after high school dismissal (4-7pm), with equal amount (5/13) checked out between 12pm-1pm, possibly lunch time for high schoolers.

nonetheless, the sample size is too small.

dewey class 510-519 | initial query result

examining entries related to math (dewey class 510-519) shows that maths-related items that are checked out before 2pm are largely aimed towards young children (i.e. “how I learnt to count”)

3pm shows most concentrated activity for checking out maths-related items, with harder topics such as “Algebra II”, “Abstract Mathematics”, and “Calculus” first appearing during this time, however, there were still volumes aimed towards children.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	X	Y	Z	AA
HOUR	SUBJECT	TEST/COUNTS	site	12am	1am	2pm	3am	4am	5am	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	11pm
11	513	1 Add it up		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
11	510	1 My search for Ramanujan how I learned to count		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
11	513	1 Scooby Doo an even or odd mystery the case of the Oddella		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
11	513	1 mission of addition		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
11	510	1 Sorting through spring		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
11	513	1 Zero is the leaves on the tree		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
11	513	1 Place value		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
11	513	1 Bedtime - math		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
11	513	1 Bedtime math		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
11	510	1 great math mystery		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
11	513	1 mission of addition		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
11	516	1 Shapes		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
11	513	1 brilliant madness		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
11	512	1 math duels quick and dirty guide to algebra		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
11	513	1 math math and other STEM delusions		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	519	1 That's a possibility a book about what might happen		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Seeing symmetry		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Geometry essentials for dummies		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 Help me learn addition		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 I S & A and other unlikely additions		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 501 math word problems		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 Painless math word problems		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 Express review guides Math word problems		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 Barrows pre-algebra		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Triangles		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 Basic math pre-algebra for dummies		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	512	2 Life of Fred Beginning algebra		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	512	1 Algebra II for Dummies		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Geometry essentials for dummies		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 Spectrum Grade 3		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Measurement solids, circles standard units		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 10 times 10		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 Lemniscate a printer and more fun with math		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 How not to be wrong the power of mathematical thinking		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Geometry for dummies		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	512	1 primer of abstract mathematics		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 I big salad		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 Life of Fred Fractions		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 100 hungry monkeys		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 coin counting book		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	512	1 Algebra		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	515	1 Calculus		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 Basic math and pre algebra		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	2 Pre calculus for dummies		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Ovals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	519	1 Essential statistics for public managers and policy analysts		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 concept of a Riemann surface		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 beach for Albert		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 primer for mathematics competitions		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	517	1 Go figure		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 Charlie McHardt and the case of the missing pizza slice		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	512	1 Erno's E the search for the Sigma Code		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Triangles		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 GfE+CVf+VC+idE Escher Bach an eternal golden braid		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 Drawing curves (Fibonacci numbers) in nature		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 great math mystery		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Patterns in the desert		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	517	1 How not to be wrong the power of mathematical thinking		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 Outdoor math fun activities for every season		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	519	1 How to live with statistics		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 New York Times book of mathematics more than 100 years of s		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	516	1 Calculus II for dummies		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	512	1 cartoon guide to algebra		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	513	1 Mathematics handbook of formulas and tables		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 Worksheet Statistics worksheet numbers		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 Love and math the heart of hidden reality		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 GfE+CVf+VC+idE Escher Bach an eternal golden braid		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	510	1 Barrows pre-algebra		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

second query

I expanded the second query to the school week of September 5th, 2016 to September 9th, 2016.

```
END) AS 9pm,  
SUM(CASE  
  WHEN (HOUR(cout) = 22) THEN 1  
  ELSE 0  
END) AS 10pm,  
SUM(CASE  
  WHEN (HOUR(cout) = 23) THEN 1  
  ELSE 0  
END) AS 11pm  
FROM  
  spl_2016.outraw  
WHERE  
  (DATE(cout) = '2016-09-05' or DATE(cout) = '2016-09-06' or DATE(cout) = '2016-09-07' or  
  DATE(cout) = '2016-09-08' or DATE(cout) = '2016-09-09' or DATE(cout) = '2016-09-10' or DATE(cout)  
  = '2016-09-11')  
  AND (SUBSTRING(deweyClass, 1, 3) = 109  
  OR SUBSTRING(deweyClass, 1, 3) = 150  
  OR SUBSTRING(deweyClass, 1, 3) = 190  
  OR SUBSTRING(deweyClass, 1, 3) = 300  
  OR SUBSTRING(deweyClass, 1, 3) = 310  
  OR SUBSTRING(deweyClass, 1, 3) = 320  
  OR SUBSTRING(deweyClass, 1, 3) = 330  
  OR SUBSTRING(deweyClass, 1, 3) = 342  
  OR SUBSTRING(deweyClass, 1, 3) = 378  
  OR SUBSTRING(deweyClass, 1, 3) BETWEEN 400 AND 499  
  OR SUBSTRING(deweyClass, 1, 3) BETWEEN 500 AND 509  
  OR SUBSTRING(deweyClass, 1, 3) BETWEEN 510 AND 519  
  OR SUBSTRING(deweyClass, 1, 3) BETWEEN 530 AND 539  
  OR SUBSTRING(deweyClass, 1, 3) = 540  
  OR SUBSTRING(deweyClass, 1, 3) = 570  
  OR SUBSTRING(deweyClass, 1, 3) BETWEEN 810 AND 820
```

dewey class 378 | second query result

the results show that during the school week of 2016/09/05-2016/09/11, materials related to college admissions were checked out evenly throughout the day (29 total) , with 9/29 checked out after school hours (4pm-7pm), and 7/29 checked out from 12pm-1pm.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
	HOUR(count)	SUBSTRAC-T	COUNT(SUB)title		12am	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am	12pm
41	10	378	1 GRE 2016 Graduate Record Examination strategies practice and review		0	0	0	0	0	0	0	0	0	0	0	1	0
51	10	378	1 Barrons ACT 36 aiming for the perfect score		0	0	0	0	0	0	0	0	0	0	0	1	0
71	10	378	1 Cracking the PSAT		0	0	0	0	0	0	0	0	0	0	0	1	0
125	10	378	1 GRE verbal workbook		0	0	0	0	0	0	0	0	0	0	0	1	0
151	11	378	1 Cracking the GRE		0	0	0	0	0	0	0	0	0	0	0	1	0
749	11	378	1 Petersons how to get money for college financing your future beyond fed		0	0	0	0	0	0	0	0	0	0	0	0	1
775	11	378	1 Scholarships grants prizes		0	0	0	0	0	0	0	0	0	0	0	0	1
301	11	378	1 Getting financial aid		0	0	0	0	0	0	0	0	0	0	0	0	1
308	12	378	2 UW Huskies from A to Z		0	0	0	0	0	0	0	0	0	0	0	0	2
384	12	378	1 WSU Cougars from A to Z		0	0	0	0	0	0	0	0	0	0	0	0	1
440	12	378	1 Writing a successful college application essay		0	0	0	0	0	0	0	0	0	0	0	0	1
450	12	378	1 Chart your success on the COMPASS test		0	0	0	0	0	0	0	0	0	0	0	0	1
326	13	378	1 College rules how to study survive and succeed in college		0	0	0	0	0	0	0	0	0	0	0	0	1
565	13	378	1 Make college yours how to leave home make your place and build relat		0	0	0	0	0	0	0	0	0	0	0	0	0
575	13	378	1 Master the GRE		0	0	0	0	0	0	0	0	0	0	0	0	0
604	13	378	1 67 shots Kent State and the end of American innocence		0	0	0	0	0	0	0	0	0	0	0	0	0
645	13	378	1 Uchic college girls real advice for your first year and beyond		0	0	0	0	0	0	0	0	0	0	0	0	0
646	13	378	1 Dont tell me what to do just send money the essential parenting guide to		0	0	0	0	0	0	0	0	0	0	0	0	0
373	13	378	1 Letting go a parents guide to understanding the college years		0	0	0	0	0	0	0	0	0	0	0	0	0
708	14	378	1 Petersons how to write the perfect personal statement		0	0	0	0	0	0	0	0	0	0	0	0	0
723	14	378	1 Fiske real college essays that work		0	0	0	0	0	0	0	0	0	0	0	0	0
758	14	378	1 COMPASS test study guide 2016 COMPASS test prep and practice questio		0	0	0	0	0	0	0	0	0	0	0	0	1
767	14	378	1 Cracking the new SAT		0	0	0	0	0	0	0	0	0	0	0	0	0
777	14	378	1 GRE strategies practice and review 2013		0	0	0	0	0	0	0	0	0	0	0	0	0
794	14	378	1 Financial aid for Asian Americans		0	0	0	0	0	0	0	0	0	0	0	0	0
798	14	378	1 Barrons new SAT		0	0	0	0	0	0	0	0	0	0	0	0	0
824	14	378	1 Ivory tower		0	0	0	0	0	0	0	0	0	0	0	0	0
845	14	378	1 gatekeepers inside the admissions process of a premier college		0	0	0	0	0	0	0	0	0	0	0	0	0
909	15	378	1 GRE 2016 Graduate Record Examination strategies practice and review		0	0	0	0	0	0	0	0	0	0	0	0	0
966	15	378	1 Campus visits college interviews a complete guide for college bound stud		0	0	0	0	0	0	0	0	0	0	0	0	0
998	15	378	1 College admission from application to acceptance step by step		0	0	0	0	0	0	0	0	0	0	0	0	0
1047	15	378	1 GRE strategies practice and review 2013		0	0	0	0	0	0	0	0	0	0	0	0	0
1090	15	378	1 How to write a thesis		0	0	0	0	0	0	0	0	0	0	0	0	0
1197	16	378	1 Cracking the GRE		0	0	0	0	0	0	0	0	0	0	0	0	0
1220	16	378	1 Petersons how to get money for college financing your future beyond fed		0	0	0	0	0	0	0	0	0	0	0	0	0
1256	16	378	1 community college career track how to achieve the American Dream with		0	0	0	0	0	0	0	0	0	0	0	0	0
1298	17	378	2 Barrons new GRE Graduate Record Examination		0	0	0	0	0	0	0	0	0	0	0	0	0
1300	17	378	2 GRE strategies practice and review 2013		0	0	0	0	0	0	0	0	0	0	0	0	0
1360	17	378	1 College Board scholarship handbook		0	0	0	0	0	0	0	0	0	0	0	0	0
1380	17	378	1 Essential words for the GRE		0	0	0	0	0	0	0	0	0	0	0	0	0
1408	17	378	1 COMPASS test study guide 2016 COMPASS test prep and practice questio		0	0	0	0	0	0	0	0	0	0	0	0	0
1432	17	378	1 Open the gates to the Ivy League a plan B for getting into the top college		0	0	0	0	0	0	0	0	0	0	0	0	0
1452	17	378	1 Cracking the GRE		0	0	0	0	0	0	0	0	0	0	0	0	0
1462	17	378	1 GRE 2016 Graduate Record Examination strategies practice and review		0	0	0	0	0	0	0	0	0	0	0	0	0
1519	17	378	1 Chart your success on the COMPASS test		0	0	0	0	0	0	0	0	0	0	0	0	0
1564	18	378	1 GRE 2016 Graduate Record Examination strategies practice and review		0	0	0	0	0	0	0	0	0	0	0	0	0
1572	18	378	1 Fail U the false promise of higher education		0	0	0	0	0	0	0	0	0	0	0	0	0
1672	19	378	2 GRE 2016 Graduate Record Examination strategies practice and review		0	0	0	0	0	0	0	0	0	0	0	0	0
1717	19	378	1 College essay essentials a step by step guide to writing a successful colle		0	0	0	0	0	0	0	0	0	0	0	0	0
1744	19	378	1 Essential words for the GRE		0	0	0	0	0	0	0	0	0	0	0	0	0
1748	19	378	1 How to prepare a standout college application expert advice that takes y		0	0	0	0	0	0	0	0	0	0	0	0	0
1789	19	378	1 Chart your success on the COMPASS test		0	0	0	0	0	0	0	0	0	0	0	0	0
1808	19	378	1 Where you go is not who you'll be an antidote to the college admissions r		0	0	0	0	0	0	0	0	0	0	0	0	0

dewey class 510-519 | second query result

[illegible]

similar to the initial query, more advanced topics such as “Calculus” first showed up in the afternoon (2pm)

third query

I deleted the “title” to get a glance of total check out activity for different dewey classes.

third query result

in total, dewey classes previously defined as related to high school studies are checked out more from 1pm-5pm, with highest activities from 5pm to 6pm

HOUR	SUBSTRING	COUNT(SUB	12am	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	
9	822	6	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	
9	320	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
9	818	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
9	812	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	428	14	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	811	12	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	822	9	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	812	9	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	468	7	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	909	7	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	818	7	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	814	6	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	320	6	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	448	6	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	510	5	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	378	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	813	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	530	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	458	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	508	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	512	3	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	500	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	513	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	821	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	570	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	507	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	433	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	427	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
10	492	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
total			/	/	/	/	/	/	/	/	/	/	10	128	182	178	217	236	224	196	254	154	147	0	0	0	0

conclusion

During the week of 2016/09-05-2016/09/09, checkout activities in dewey class 378 (Higher Education) and dewey class 510-519 (Mathematics) bear no obvious relation to high school bell schedule.

However, the majority of checked out dewey class 378 items are related to college admissions. For dewey class 510-519, more advanced topics (such as “Calculus”) are checked out after 2pm.

To verify any significance of those conclusions, one would have to compare the fluctuations in check-out activity of the selected dewey classes to those of all dewey-classified library materials.