XJTLU Physical Library Usage Report 2018

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Report Background

The report collects the whole year data from January 1, 2018 to December 31, 2018 in terms of book circulation, user traffic, usage of group discussion room, popular books ranking, and user with high borrowing. The report aims to provide a physical library usage statistic to comprehend the Library usage of XJTLU users in daily operation.

Report Content

1. Book Circulation Statistics

1.1 Total Circulation Amount and Self-checkout Circulation Ratio Statistics

Along with service desk, there are also self-borrowing and returning machines on three floors and 24-hours book-returning machines outside the entrance of XJTLU library and it is also available in the south campus. Through the collection of monthly circulation amount, we got to know the lending states and use ratio of self-borrowing and returning machines of the library. Statistical results are shown in Figure 1 and Figure 2 below:

2018 Book Circulation Statistics

Month	Borrow	Self-Borrow	Self-Borrow rate	Return	Self-Return	Self-Return rate	Circulation Sum
Jan	3381	1941	57.4%	3887	2196	56.4%	7268
Feb	2728	1593	58.4%	2871	2018	70.3%	5599
Mar	5645	3436	60.9%	3945	2012	51%	9590
Apr	4092	2516	61.5%	4843	2767	57.0%	8935
May	3625	2053	56.6%	4447	2529	56.9%	8072
Jun	2460	1428	58.0%	4246	2484	58.0%	6706
Jul	1262	649	51.4%	853	405	47.4%	2115
Aug	1485	871	58.7%	1123	731	64.7%	2608
Sep	12453	6191	49.7%	8722	3675	42.1%	21175
Oct	5483	3737	68.2%	6017	3859	64.0%	11500
Nov	4912	3317	67.5%	4503	2871	63.6%	9415
Dec	3897	2578	66.2%	4586	2869	62.3%	8483
Sum	51423	30310	58.9%	50043	28416	57%	101466

Figure 1: 2018 Book Circulation Statistics

58726 — Number of book circulated by Self borrowing and returning machine

42740 — Number of book circulated by Staff

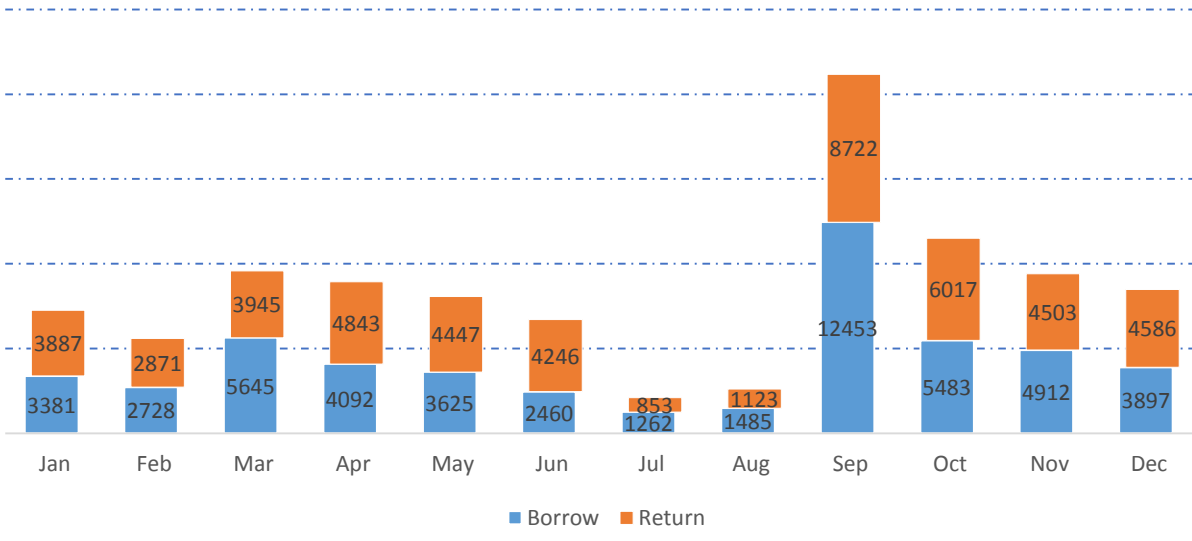57.9% — Proportion of books Circulated by Self Borrowing and Returning Maching

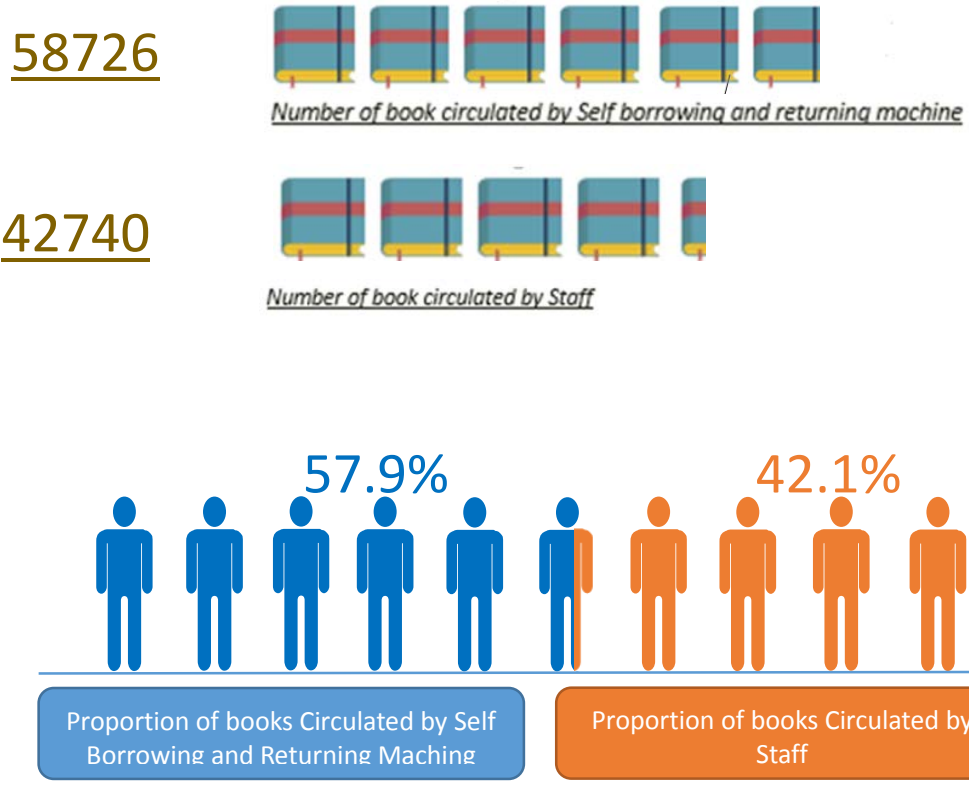42.1% — Proportion of books Circulated by Staff

Figure 2: 2018 Staff - assisted and self-checkout circulation ratio statistics

Book borrowing was basically corresponding to the beginning of semester and holidays of the school. Book borrowing reached at its peak in September and March when semesters starts. Then gradually decreased and reached its bottom during the holidays. The book borrowing amount reached to the lowest during summer vacation. The biggest amount of Book borrowing is in September, when it was nearly two and a half times as many as in March. Therefore, we can conclude that incoming freshmen in September were very passionate about borrowing books.

In 2018, our self-service circulation reached 58,726 books, accounting for 57.9% of the total circulation. Self-service circulation ratio reached the highest at 66.1% in October. Its' self-service borrowing ratio reached 68.2% and while its' self-service returning ratio reached 64.0%. Showing an increasing potential for the self-service machine. The results indicated that on one hand students had been accustomed to using the self-service machine. And on the other hand we need to run more promotions to improve the user satisfaction of self-borrowing and returning machines.

Additionally, we have collected the frequency of self-service machine usage (see Figure 3). The frequency of self- borrowing and returning machine usage on the 4th floor was the highest for book borrowing, and machine on the 8th floor was the lowest Furthermore, the use frequency of self-service machine on 1st floor was the highest for book returning, and machine on the 8th floor was the lowest. This can be the reference for the setting of quantities and placements of self-service machine in library.
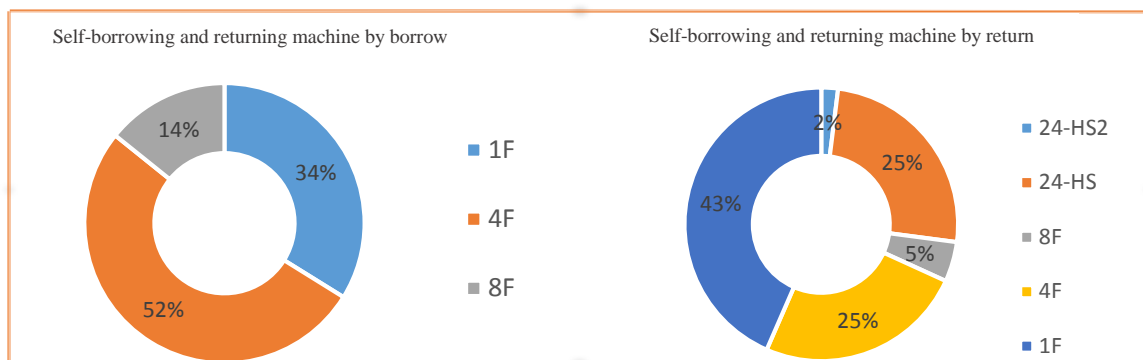

Figure 3: 2018 Usage frequency of self-borrowing and returning machine

1.2 Statistics of Book Borrowing Based on Library of Congress Classification
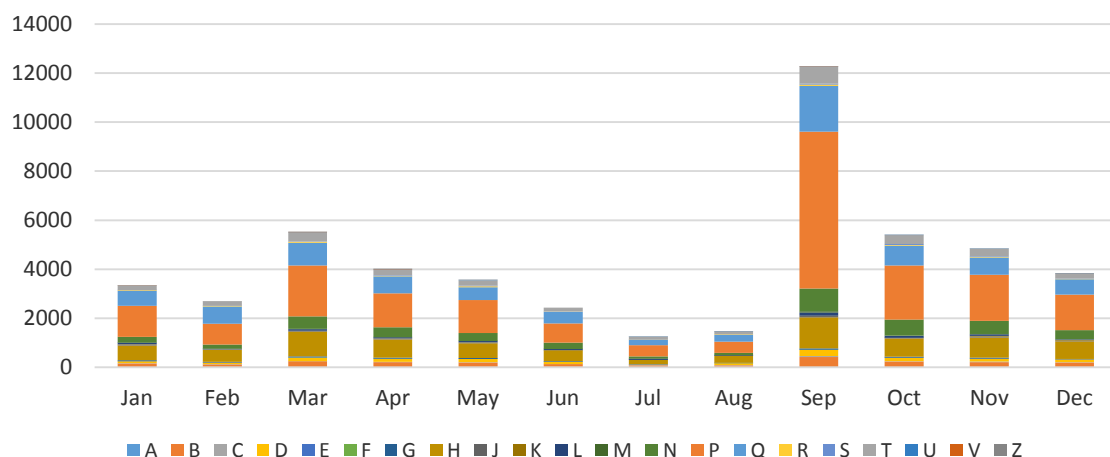
Library of Congress Classification divides books into 21 categories. Figure 4 shows that regardless of lending states, categories of large borrowing amounts include: P: Language and Literature, Q: science, H: Social Science, N: Arts and T: technology and engineering, because they are the teaching or language learning books of the university. This can be the basis for us to adjust the collection of library.

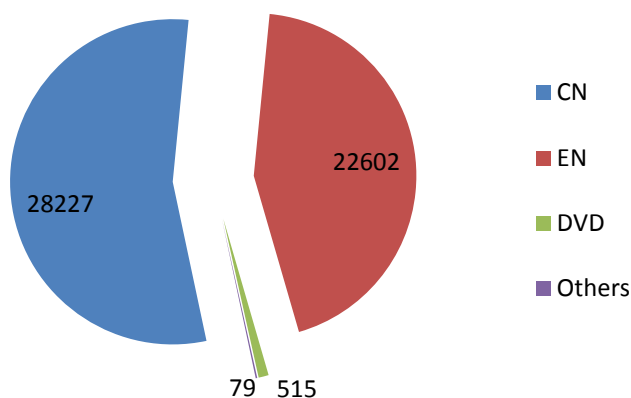## 1.3 Statistics of Book Borrowing Based on the Classification of Language

Figure 5: Statistics of Book Borrowing Based on the Classification of Language

According to the Figure 5, it can be seen that the borrowing number of Chinese books are more than English books. Currently, 80% of library collection in our library are fully in English. The pie chart can be used to comprehend the students' reading requirements and to analyze students' reading behavior pattern.

1.4 Statistics of Book Borrowing Based on Users' department (Take circulation data Sep-Dec 2018 as sample)

Top 4 Departments		Sum
BUS	International Business School	5,262
MTH	Mathematical Sciences	4,154
ARC	Architecture	2,520
CSE	Computer Science and Software Engineering	2,005

From the data of September to December, the book borrowing amounts of BUS, MTH, ARC, CSE are ranked as top four in the whole departments in XJTLU, where BUS (5,262), MTH (4,154), ARC (2,520), CSE (2,005) specifically, BUS (25.2%), MTH (19.9%), ARC (12.1%), CSE (9.6%)。

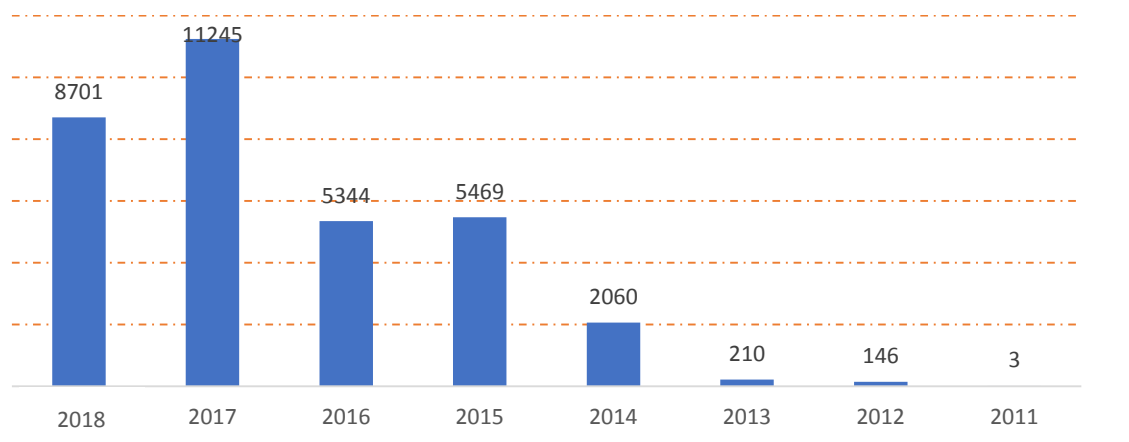## 1.5 Statistics of Book Borrowing Based on Users' Grade

Figure 6: Statistics of Book Borrowing Based on Users' Grade

From the Figure 6, it can be seen that the amount of books borrowed by the students in the first and second year are higher than others to some extent. It can be explained by the quantity of Year 1 and Year 2 students are more than Year 3 and Year 4, and it could be concluded as freshmen were very passionate about reading and borrowing books compare to senior students (Borrowed 8701 in just 4 months). Additionally, these data could be used to improve Users' book borrowing experiences for specific groups in order to enhance library's management ability.

1.6 Statistics of Book Borrowing Based on Time Quantum

Figure 7: Statistics of Book Borrowing Based on Time Quantum

16:00-18:00 and 21:00-22:00 are two peaks periods for book borrowing (Figure 7). Thus, we can focus on strengthening book circulation management for these two periods.

2 User Flowrate Statistic

2.1 Statistics of User Flowrate Based on Quantity of User

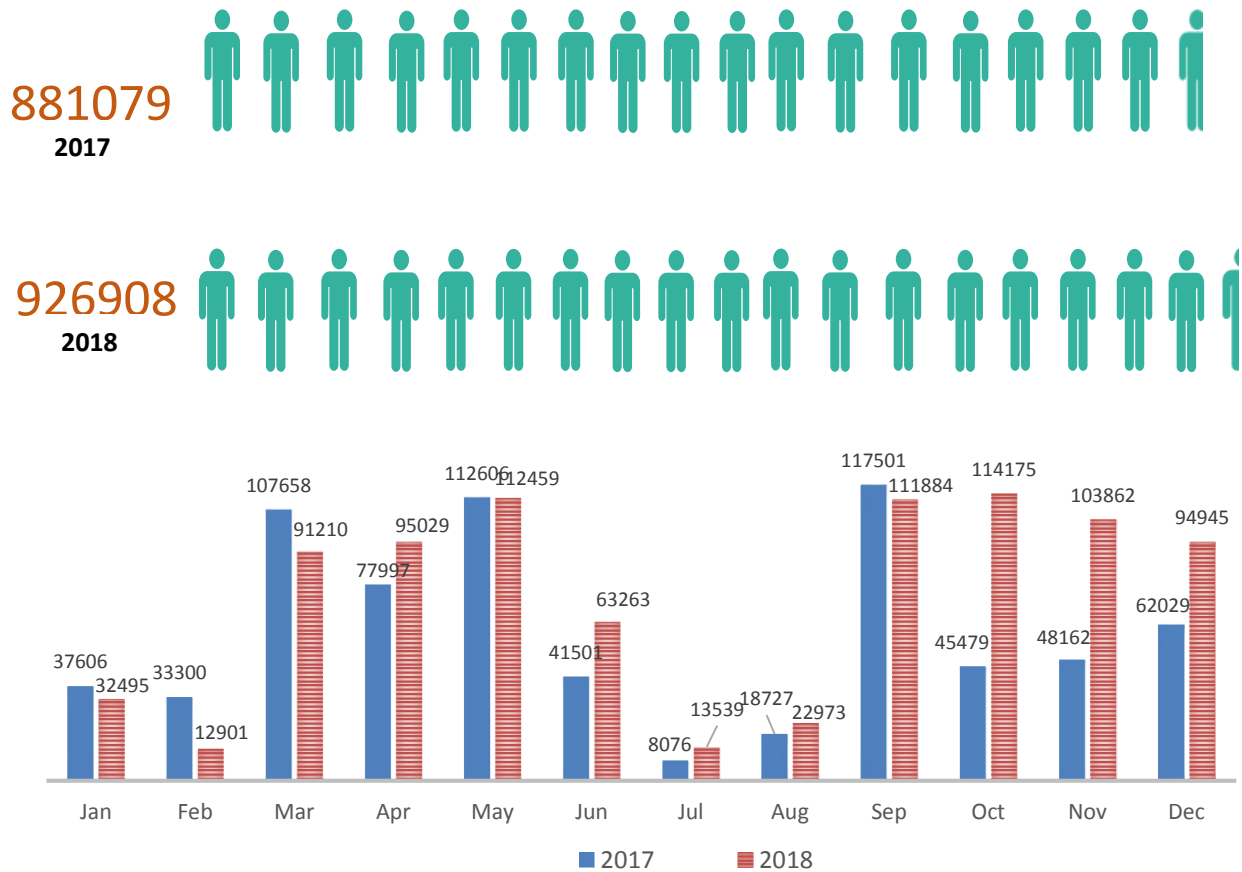**881079**
2017

926908
2018

Figure 8: User Flowrate Statistic

The Figure 8 reflects there were 926,908 Users entering the library in the year 2018, which increased by 45,829 people when compared to 2017 statistics.

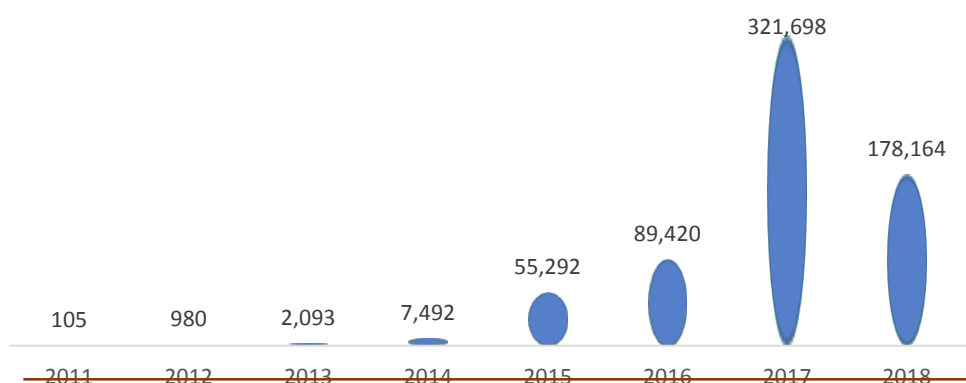## 2.2 Statistics of User Flowrate Based on Users' Grade

Similar to the book borrowing, the students who are in the Year 1 and Year 2 account for the biggest volumes of User flowrate.

2.3 Statistics of User Flowrate Based on Users' department (Take entry data Sep-Dec 2018 as sample)

Top 4 Department		Sum
BUS	International Business School	150,630
MTH	Mathematical Sciences	91,508
CSE	Computer Science and Software Engineering	44,216
EEE	Electrical and Electronic Engineering	30,772

From the data of September to December, the entry amounts of the students who are from BUS, MTH, CSE and EEE are higher than students in another Department.

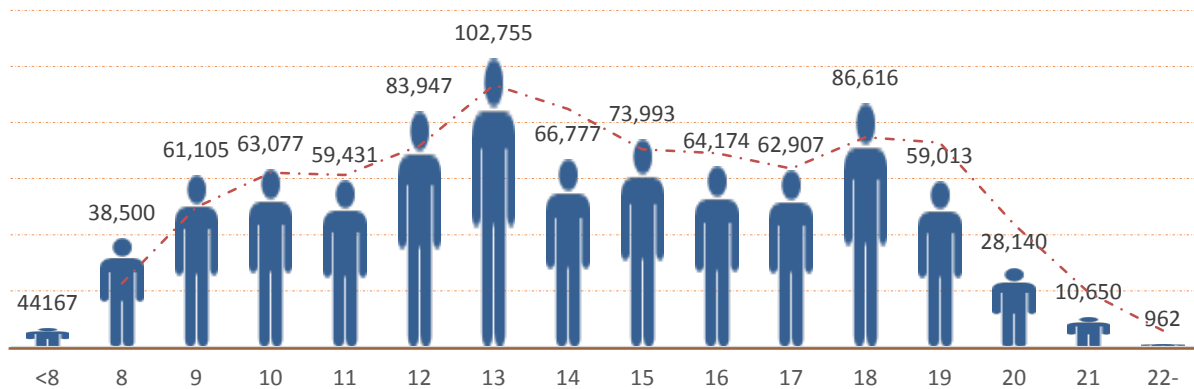## 2.4 Statistics of User Flowrate Based on Arrival Time

Figure 10: Statistics of User Flowrate Based on Arrival Time

The arrival time focuses on two time periods which are 12:00 to 14:00 and 18:00 to 19:00. Therefore, we can emphasize the management of User traffic within this two time periods.

3 The Usage of Group Discussion Room Statistics
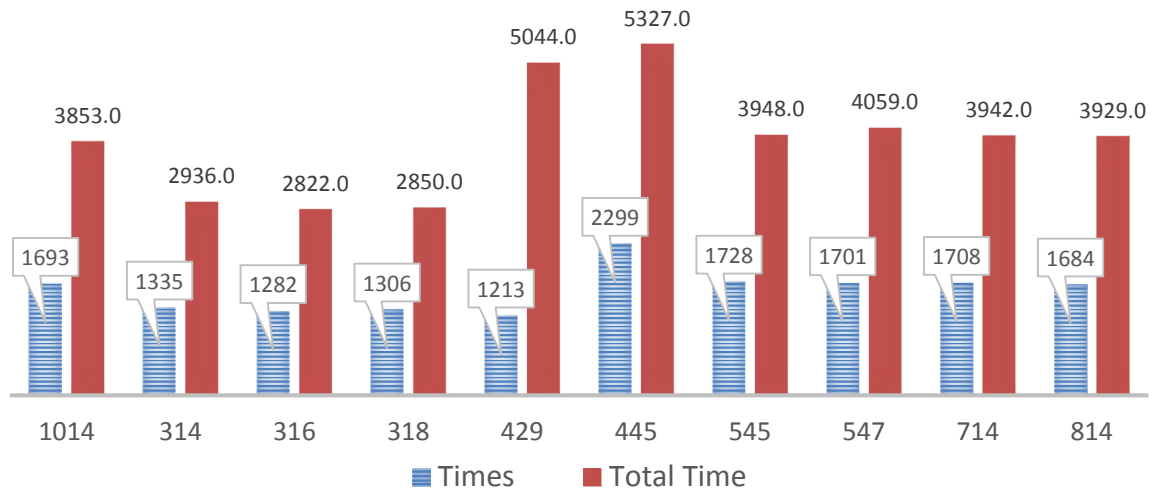Statistics Based On the Room Utilization Ratio

Figure 11: Statistics Based On the Room Utilization Ratio

In the whole year of 2018, the usage of group discussion room reached up to 14,464 times and the total usage time was 38739.6 hours, there are 9,409 people who used the group discussion room. The frequency of the group discussion room usage in the 4th Floor ranked as the highest than other floors.

3.1 Ranking List of Users Personal Usage Rate of Group Discussion Room

Xixian Ji
Using times: 164
Total time: 471Hrs 38mins

666

Xinyi Zhao
Using times: 143
Total time: 410Hrs 10mins

Haozhong Zheng
Using times: 122
Total time: 334Hrs 48mins

3.2 Statistics of Group Discussion Room Usage Rate Based on Users' Grade
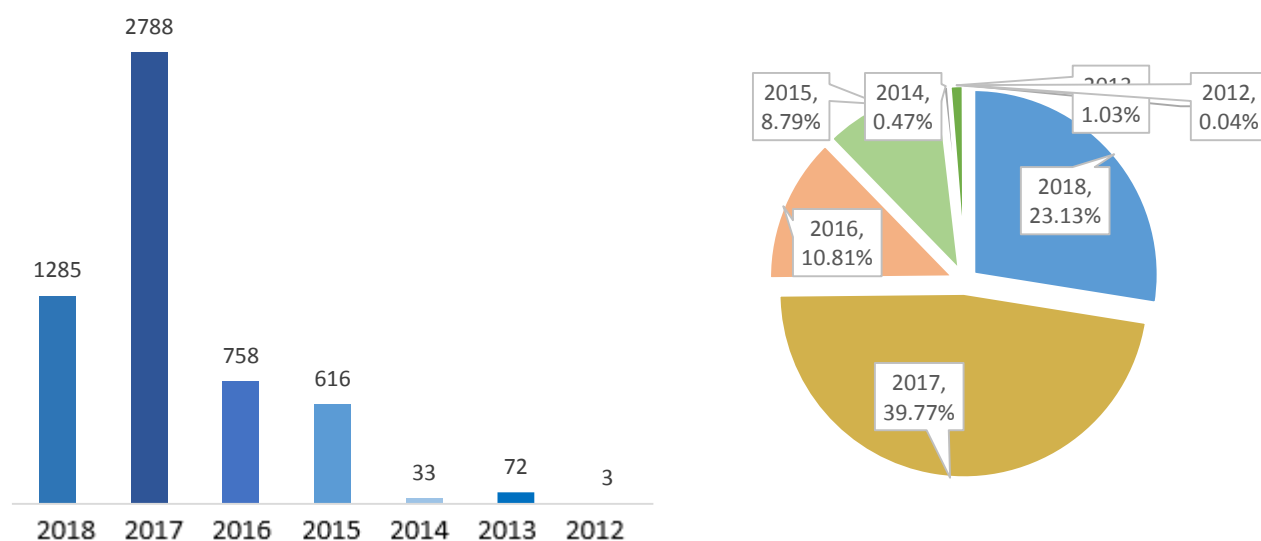

Figure 12: Statistics of Group Discussion Room Usage Rate Based on Users' Grade

According to Figure 12, freshman and sophomore's usage of group discussion room occupied large proportion with freshman (23.1%) and sophomore (39.8%) respectively.
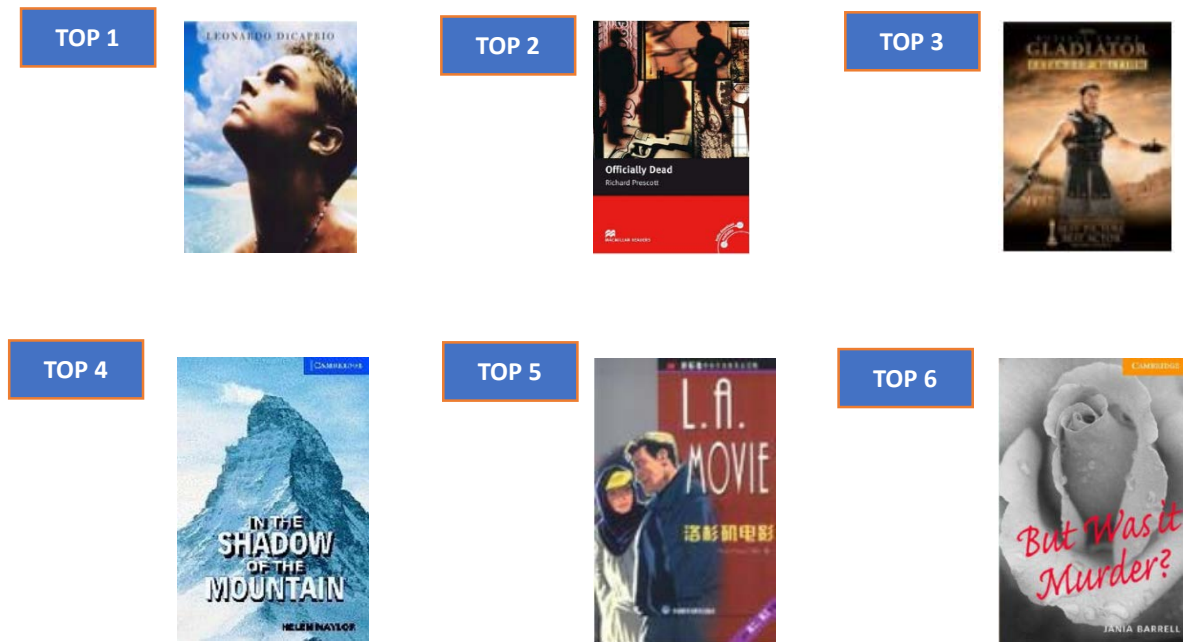
4 Statistics of Popular Book Ranking List

Statistics of popular borrows and popular borrowing in OPAC could help Users to find public demands as a reference for their own needs. Meanwhile, librarian can better understand Users' requirement and give direction for library collection.

4.1 Ranking List of Chinese Book Borrowing

4.2 Ranking List of English Book Borrowing

TOP 1

TOP 2

TOP 3

TOP 4

TOP 5

TOP 6

4.3 Ranking list of User with High Borrowing Demand

• SETH HARTIGAN	Academic Staff	395
• HAOZHE XU	Postgraduate Students	172
• JINYING MA	Academic Staff	170
• CHUN-FUNG CHEN	Academic Staff	166
• XIAOPU JIN	Administration	121
• DIANA GARRISI	Academic Staff	118
• ANDREW PANDOWO	Undergraduate	103
• JINGJING ZHANG	Administration	100