



# Evaluating Improvements of the Public Library in Reading Environment and Facility

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# Outline

- ▶ Introduction
- ▶ Research methodology
- ▶ Findings – interview
- ▶ Findings – questionnaire
- ▶ Conclusions and suggestions



# INTRODUCTION



# Project for Public Library Innovation

- ▶ Subsidized by Ministry of Education (MOE)
- ▶ Project Duration: 2009-2012
- ▶ Subprojects
  - ✱ *Project for Improving Reading Environment and Facilities of Public Libraries in Taiwan (**the Project**)*
    - ✓ Renovate space and facility **Focus of this study**
    - ✓ Coordinated by National Taichung Library
  - ✱ *Project for Reading Promotion and Collection Improvement of Public Libraries in Taiwan*
    - ✓ Strengthen public libraries' collections / foster reading by activities and cooperation
    - ✓ Coordinated by National Taiwan Library

# Renovation Achievements





# Renovation Achievements



# Renovation Achievements





# Renovation Achievements





# Renovation Achievements



# Renovation Achievements







# Research Goals

- ▶ From 2009 to 2010, a total of 83 public libraries in Taiwan received subsidies from MOE to execute *the Project*
- ▶ Research Goals
  - ✱ Patrons from 77 of the 83 libraries were investigated to understand their satisfaction about the improvement of libraries
  - ✱ Directors/librarians of these were interviewed to understand their opinions about the Project
- ▶ This presentation only shows portions of the whole research





# RESEARCH METHODOLOGY



# Research Methodology

## ▶ Directors/librarians

- ✿ 76 directors/librarians were interviewed

## ▶ Patrons

- ✿ Questionnaire
- ✿ A total of 5,369 effective samples were gathered during the period from 10 August to 7 October, 2011
- ✿ Only the patrons who had visited the libraries before and after the improvement were investigated



# Questionnaire Design

- ▶ Five constructs – each construct has several questions
  - ✱ Librarians, Services, Collections, Facilities, and Environment
- ▶ For each question in the five constructs
  - ✱ Perception on the importance
  - ✱ Satisfaction level before the improvement
  - ✱ Satisfaction level after the improvement
- ✱ Use 5-point Likert Scale to measure





# FINDINGS – INTERVIEW

# Renovated Space – the Outdoor Library

Outdoor Library	Libraries	Percentage (%)
Entrance imagery	36	47.37
Barrier-free access for the disabled	20	26.32
Outdoor reading area	12	15.79
Others	29	38.16

# Outdoor Library



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# Renovated Space – the Library Interior

<b>Library Interior</b>	<b>Libraries</b>	<b>Percentage (%)</b>
<b>Children reading area</b>	65	85.53
<b>Book-stack area</b>	55	72.37
<b>Network information center</b>	51	67.11
<b>Restroom</b>	50	65.79
<b>Journal 、 newspaper 、 magazine area</b>	49	64.47
<b>New book display</b>	48	63.16
<b>Self-study room</b>	45	59.21
<b>Bookstart area</b>	41	53.95
<b>Office</b>	40	52.63
<b>Multi-purpose instruction room</b>	32	42.11
<b>Audio-visual area</b>	24	31.58
<b>Teen reading room</b>	20	26.32
<b>Breastfeeding room</b>	17	22.37
<b>Elderly-patron reading room</b>	14	18.42
<b>Exhibition space</b>	13	17.11
<b>Others</b>	20	26.32

# Library Interior



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# Renovated Facilities

Renovated Facility	Libraries	Percentage(%)
Book shelves	63	82.89
Information desk / Service counter	59	77.63
Reading desks/chairs	55	72.37
Way-finding facility	45	59.21
Computer equipment	37	48.68
Others	23	30.26



# Renovated Facilities





# Effects after Improvement

- ▶ Improvement of reading atmosphere
  - ✱ Lighting, landscape, partition, allocation of reading desks and chairs, the installation of air conditioners
- ▶ Improvement of way-finding strategy
  - ✱ Layout redesign, direction indicators
- ▶ Easiness to organize activities
- ▶ Increasing the library visits of children
- ▶ Improvement of restrooms



# Service Renovation

## ▶ Space and facility improvement leads to service renovation

### ⚙ Service policy

- ✓ Extend service hours
- ✓ Amend loan rule
- ✓ Draw up rules for space and facility utilization

### ⚙ Administration and patron service

- ✓ Single service point
- ✓ Organize more activities (41.2% increase)
- ✓ Increase service items and manpower (volunteers)





# FINDINGS -- QUESTIONNAIRE

# Sample Backgrounds

- ▶ Sex: male (41.2%), female (58.8%)
- ▶ Geographic location: north (30.9%), east (26.5%), middle (22.4%), south (20.3%)
- ▶ Age

Ages	Sample	Percentage (%)
<b>&lt;= 12</b>	403	7.5
<b>13 – 19</b>	1,652	30.8
<b>20 – 29</b>	1,013	18.9
<b>30 – 39</b>	938	17.5
<b>40 – 49</b>	818	15.3
<b>50 – 59</b>	384	7.2
<b>60 – 69</b>	117	2.2
<b>&gt;= 70</b>	28	0.5

# Sample Backgrounds (Cont.)

## ▶ Education

Education	Samples	Percentage (%)
Primary school	440	8.5
Middle school	762	14.8
High school	1,505	29.2
University	2,255	43.7
Graduate	200	3.9

## ▶ Occupation

- ✱ Students (46.5%), military personnel/government employee/teacher (12.5%), housewife /househusband (9.6%), un-employed (5.8%)



# Visit Frequency per Month

Frequency	Before improvement		After improvement	
	Samples	%	Samples	%
< 1 time	792	14.8	280	5.2
1 – 5 times	2935	54.7	2383	44.4
6 – 10 times	788	14.7	940	17.5
11 – 15 times	359	6.7	599	11.2
16 – 20 times	344	6.4	814	15.2
> 21 times	151	2.7	353	6.5

	Mean		t	p
	Before	After		
Frequency	1.44	2.06	-39.114	0.000***

# Duration of Each Library Visit

Duration	Before Improvement		After Improvement	
	Samples	%	Samples	%
< 1 hour	1389	26.1	451	8.4
1 – 2 hours	1737	32.7	1390	26.0
2 – 3 hours	1131	21.3	1513	28.3
3 – 5 hours	605	11.4	1094	20.5
> 5 hours	455	8.5	900	16.8

	Mean		t	p
	Before	After		
Duration	2.44	3.11	-47.969	0.000***

# Most Frequently-Used Areas

Areas	Samples	Percentages (%)
Book-stack area	3550	26.1
Self-study room	2363	17.4
Journal 、 newspaper 、 magazine area	1765	13.0
Network information center	1267	9.3
Children reading area	1036	7.6
Restroom	943	6.9
New book display	899	6.6
Teen reading room	495	3.6
Exhibition space	383	2.8
Bookstart area	342	2.5
Audio-visual area	227	1.7
Multi-purpose instruction room	131	1.0
Elderly-patron reading room	93	0.7
Meeting room	53	0.4
Breastfeeding room	12	0.1
Others	38	0.3

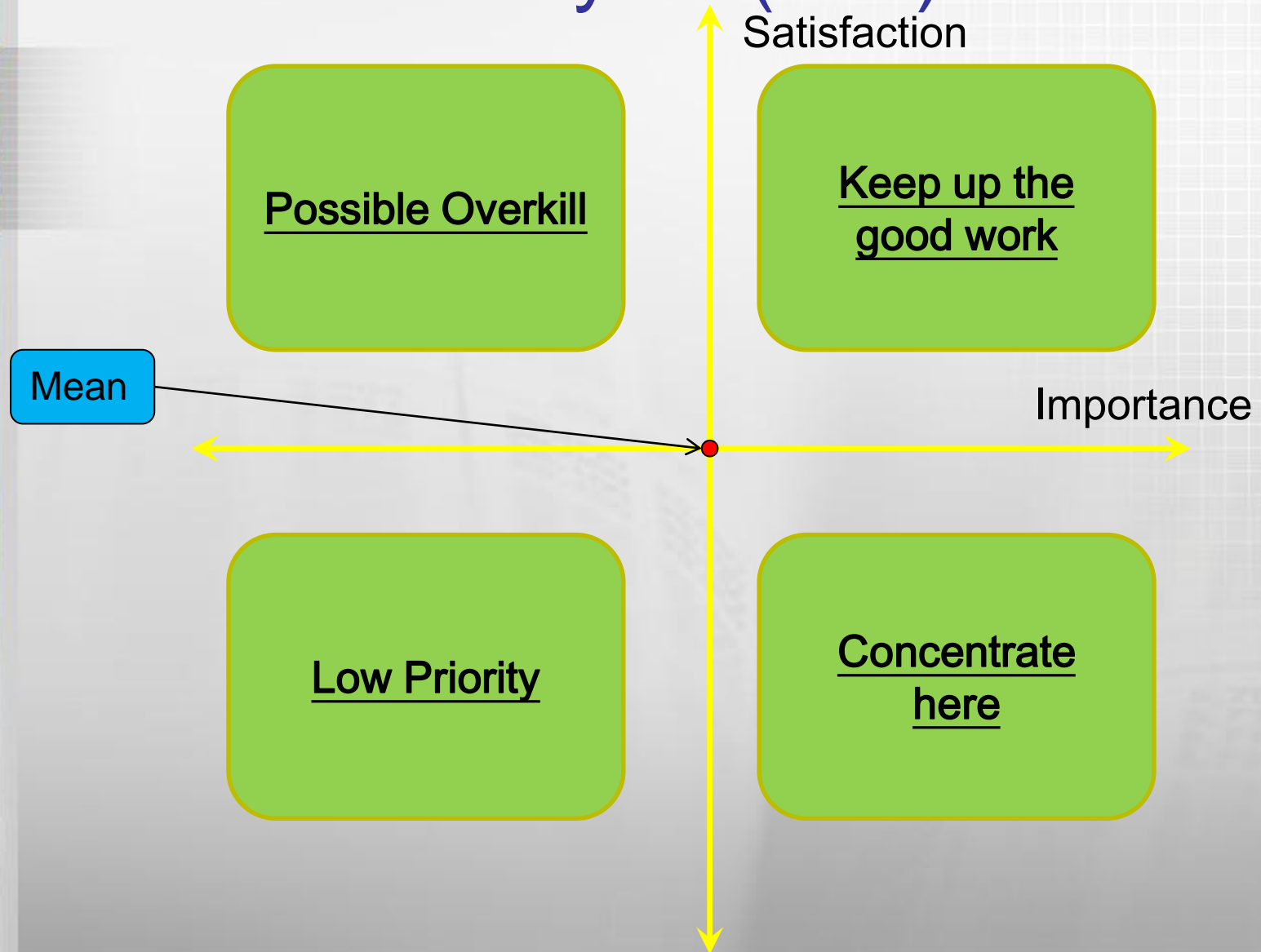


# Librarians

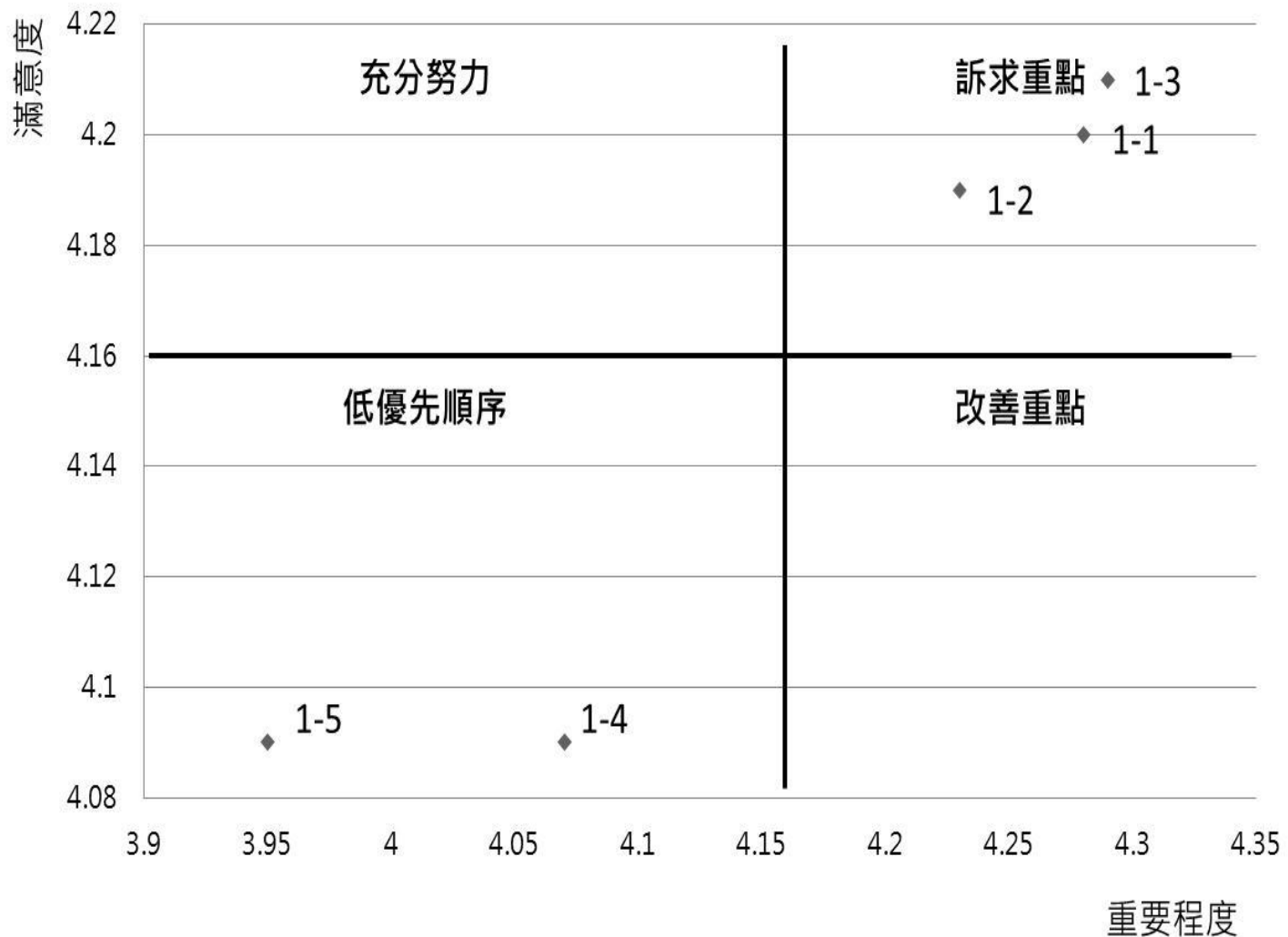
Librarians	Importance	Satisfaction	
		Before	After
1-1 are consistently courteous	4.28	3.65	4.20
1-2 have good service efficiency	4.23	3.67	4.19
1-3 are willing to help users	4.29	3.70	4.21
1-4 understand the user needs	4.07	3.56	4.09
1-5 have the knowledge to answer question	3.95	3.58	4.09
Overall	4.16	3.63	4.16

A paired t-test shows significant difference before and after improvement

# Importance-Performance Analysis (IPA)



# IPA for Librarian Construct



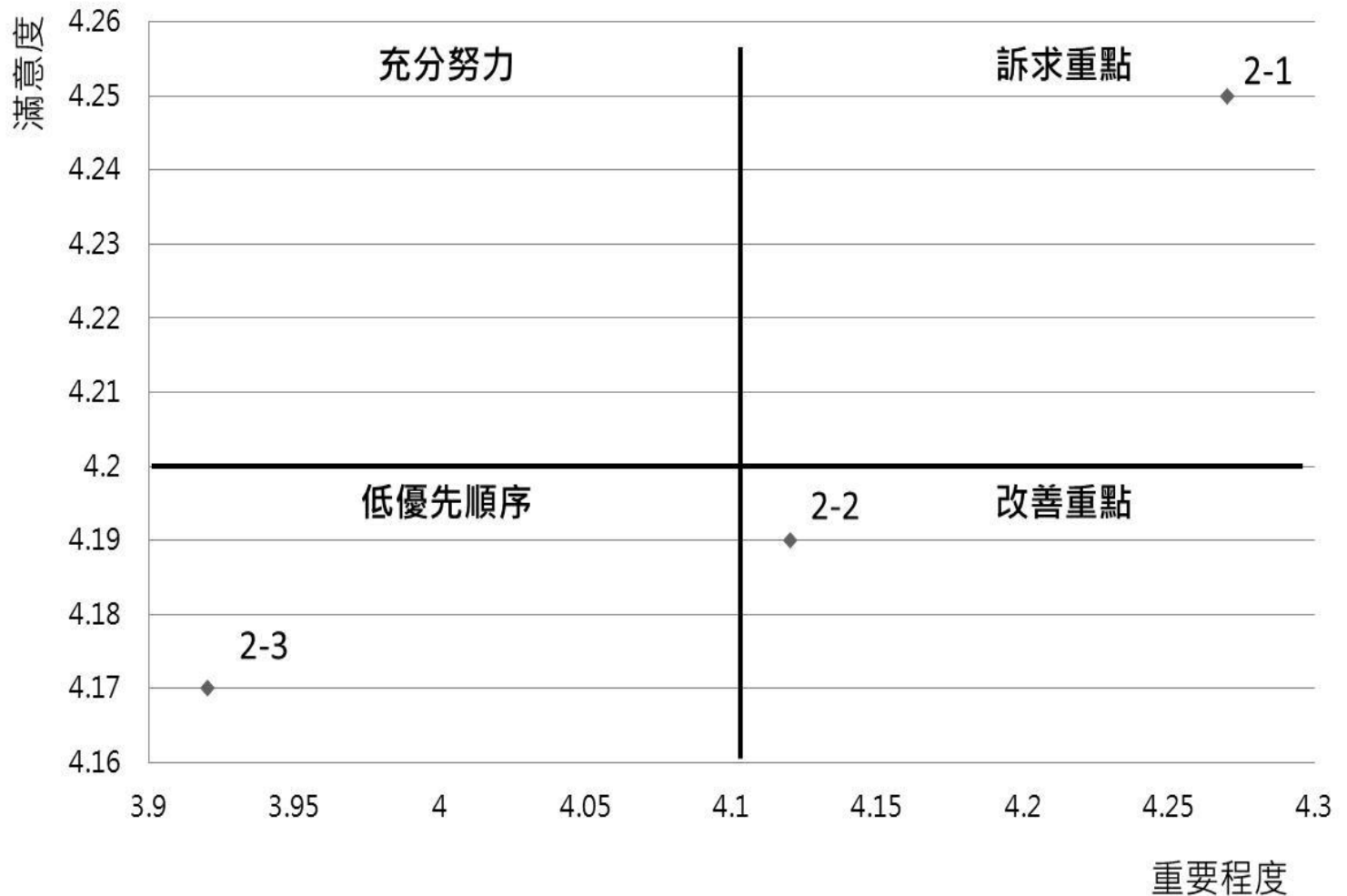
# Services

Services	Importance	Satisfaction	
		Before	After
2-1 circulation rules/policies	4.27	3.67	4.25
2-2 reference service	4.12	3.66	4.19
2-3 activities	3.92	3.56	4.17
Overall	4.10	3.63	4.20

A paired t-test shows significant difference before and after improvement



# IPA for Service Construct

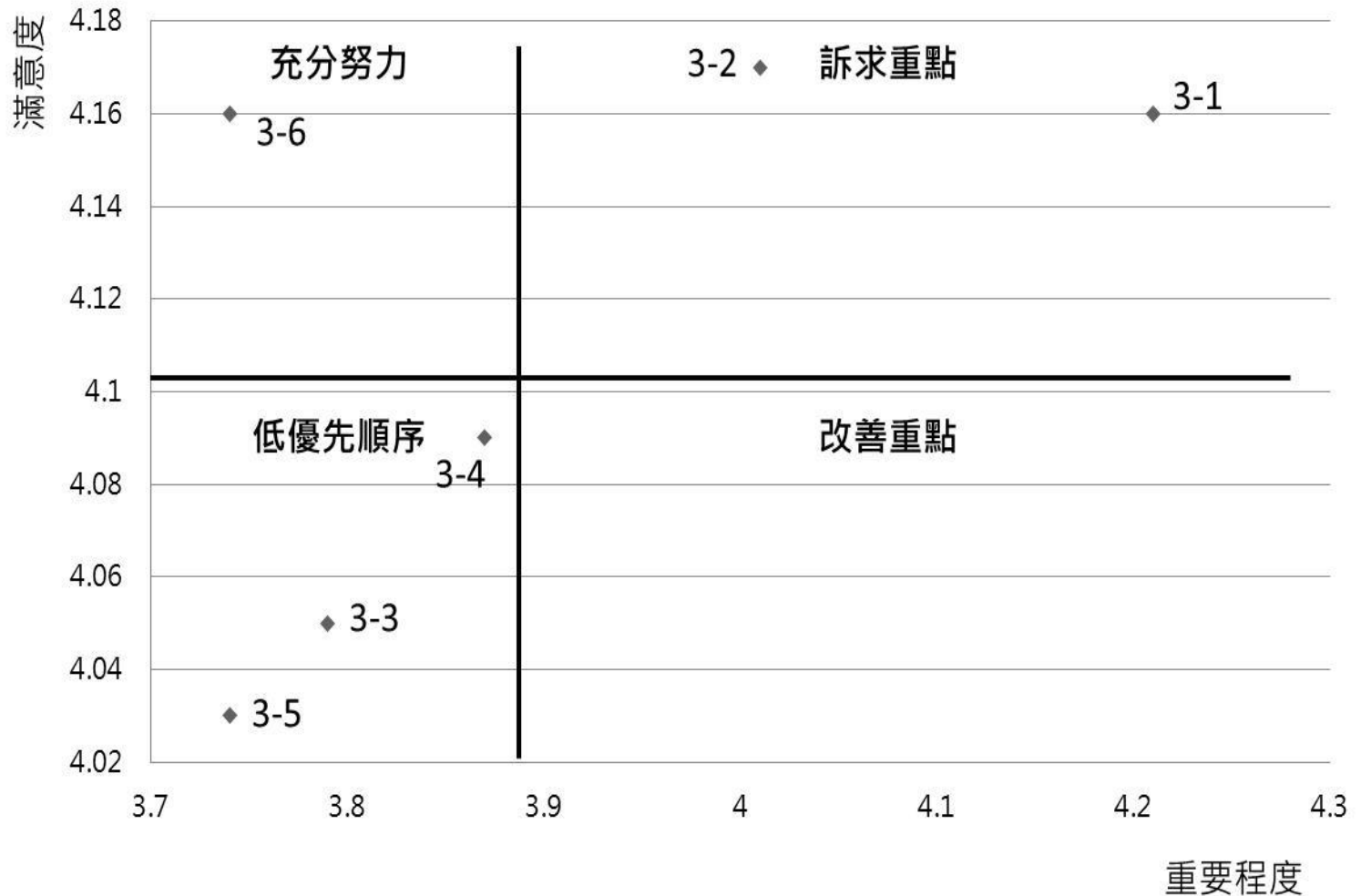


# Collections

Collections meet my need	Importance	Satisfaction	
		Before	After
3-1 Books	4.21	3.58	4.16
3-2 Newspapers and magazines	4.01	3.63	4.17
3-3 Audio-visual materials	3.79	3.46	4.05
3-4 Electronic resources	3.87	3.48	4.09
3-5 Local archives	3.74	3.50	4.03
3-6 Children collection	3.74	3.59	4.16
Overall	3.89	3.54	4.11

A paired t-test shows significant difference before and after improvement

# IPA for Collection Construct



# Facilities

Facility meets my need	Importance	Satisfaction	
		Before	After
4-1 Reading desks/chairs	4.23	3.49	4.23
4-2 Computer equipment	4.02	3.44	4.16
4-3 Photocopy and print	3.83	3.44	4.05
4-4 Temperature	4.32	3.59	4.22
4-5 Lighting	4.42	3.67	4.34
4-6 Way-finding facility	4.18	3.61	4.22
4-7 Information desk / Service counter	4.11	3.65	4.24
4-8 Book shelves	4.07	3.59	4.20
Overall	4.15	3.56	4.21

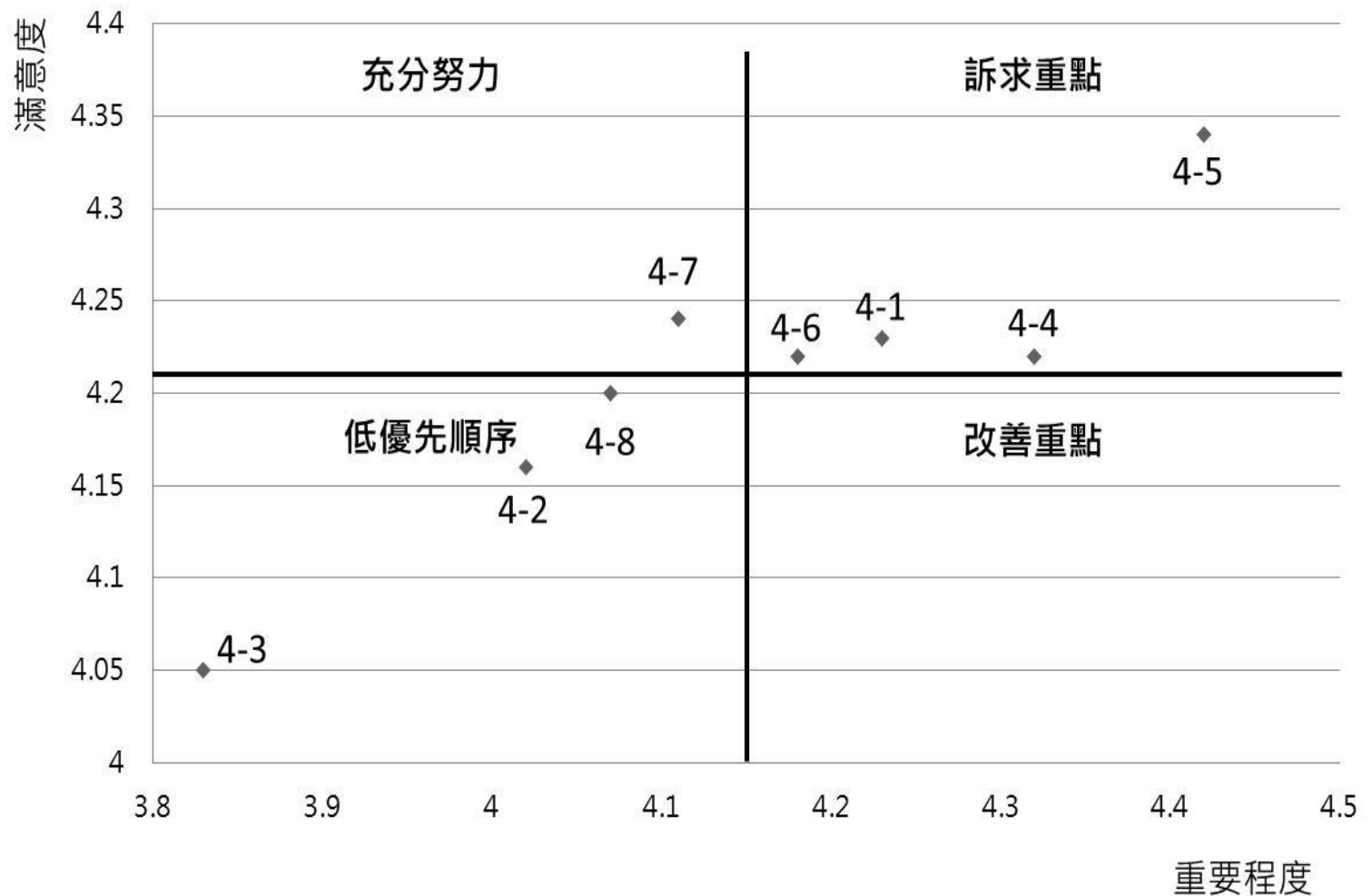
A paired t-test shows significant difference before and after improvement



# Renovated Facilities, Importance, Satisfaction

Renovated facility	Libraries (%)	Importance	Satisfaction after
Book shelves	63(82.89%)	4.07	4.20
Information desk / Service counter	59(77.63%)	4.11	4.24
Reading desks/chairs	55(72.37%)	4.23	4.23
Way-finding facility	45(59.21%)	4.18	4.22
Computer equipment	37(48.68%)	4.02	4.16

# IPA for Facility Construct



# Environment

Environment	Importance	Satisfaction	
		Before	After
5-1 Proper routing	4.12	3.49	4.20
5-2 Quiet reading environment	4.44	3.53	4.13
5-3 Clean and cozy	4.46	3.59	4.37
5-4 Ordered shelves	4.33	3.56	4.22
5-5 Barrier-free access for the disabled	4.21	3.48	4.17
5-6 Book-stack area	4.33	3.57	4.19
5-7 Network information center	4.12	3.45	4.16
5-8 Journal 、 newspaper 、 magazine area	4.11	3.55	4.20
5-9 Self-study room	4.29	3.53	4.23
5-10 Audio-visual area	3.91	3.46	4.10

A paired t-test shows significant difference before and after improvement

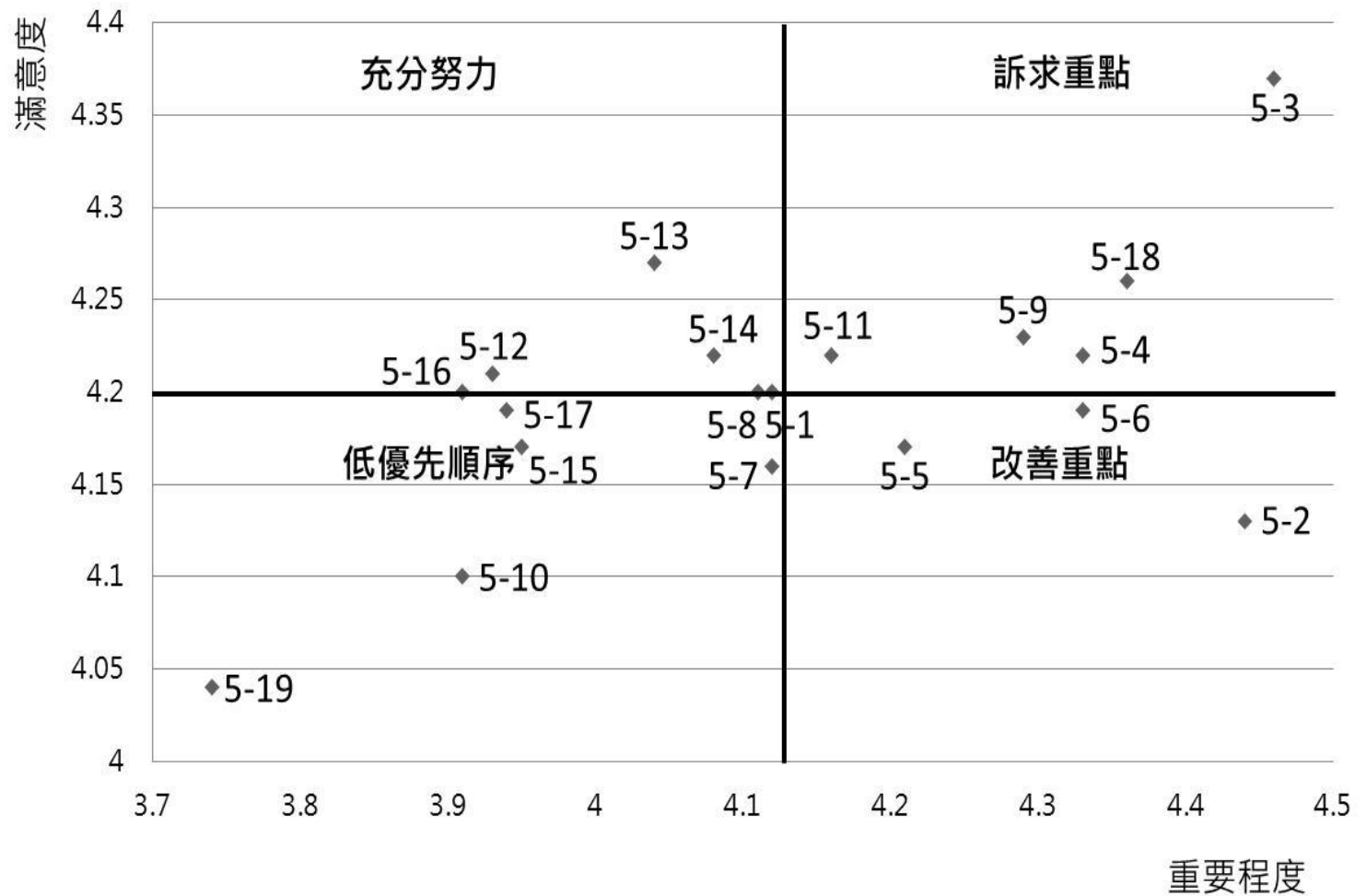
# Environment (Cont.)

Environment	Importance	Satisfaction	
		Before	After
5-11 New book display	4.16	3.49	4.22
5-12 Bookstart area	3.93	3.46	4.21
5-13 Children reading area	4.04	3.53	4.27
5-14 Teen reading room	4.08	3.55	4.22
5-15 Elderly-patron reading room	3.95	3.51	4.17
5-16 Exhibition space	3.91	3.52	4.20
5-17 Multi-purpose instruction room	3.94	3.50	4.19
5-18 Restroom	4.36	3.42	4.26
5-19 Breastfeeding room	3.74	3.29	4.04
Overall	4.13	3.50	4.20

A paired t-test shows significant difference before and after improvement



# IPA for Environment Construct





# CONCLUSIONS AND SUGGESTIONS



# Conclusion

- ▶ Library patrons were more satisfied with five aspects of the public library, including librarians, services, collections, facilities, and space and environment, **after the improvements than before**
- ▶ The frequency of library visit and the duration of each visit were **increased significantly after the improvement**
- ▶ Concerning improvements made to the public library, patrons were more satisfied with the following three areas than others: **children reading area, the restrooms, and self-study room**

# Conclusion (Cont.)

- ▶ The practical effects of the improvement project, mainly on the renovation to the exterior, the entrance, and the children's reading area, **matched the needs of library patrons**
- ▶ **"Improvement of reading atmosphere"** elicited positive comments after the Project was implemented
- ▶ After the improvement of the reading environment and the facilities, the library made appropriate changes to its **"service policy"** and **"administration and patron services"**.





# Suggestions for MOE

- ▶ The MOE should continue supporting the Project and other projects related to the development of public libraries (**Phase two from 2013**).
- ▶ The MOE should set up the **overall strategy (according to the IPA analysis)** for the development of public libraries.
- ▶ When the MOE attempts to initiate new projects, the MOE should ask public libraries to conduct user satisfaction survey **before and after** the conduction of the new projects.
- ▶ The MOE should put into effect the **evaluation** of public libraries gradually.



## Suggestions for National Taichung Library and Cultural Affairs Department of counties and cities

- ▶ The NTL should conduct the **training courses on core competence** relative to the Project (such as procurement law and knowledge on construction) for libraries.
- ▶ The NTL and Cultural Affairs Department of counties and cities should organize **benchmark library visiting and related training courses**.
- ▶ The NTL and Cultural Affairs Department of counties and cities should discussion with MOE on library **evaluation**.



# Suggestions for public libraries and local governments

- ▶ **Local governments** should exert their strength to support the development of public libraries.
- ▶ Public libraries should **continuously improve** reading environment, equipment and services.
- ▶ Public libraries should use other libraries' experience as **reference** to upgrade reading environment, equipment and services.
- ▶ Public libraries should conduct **SWOT and IPA analysis** and set up the strategy for the development.



**A FINAL NOTE...**



# Facebook Page for a **BIG** Reading Room in a **SMALL** Village/Town

facebook 搜尋人、地標和事物

小地方大書房 首頁

小地方大書房 動態時報 現在

近況更新 相片/影片 活動、里程碑, 更多

建立粉絲專頁

現在  
10月  
9月  
成立時間

 小地方大書房  
859人說讚 · 735人正在討論這專頁

加入有關小地方大書房的資訊

關於

Reading is so Delicious!

859

NaNoWriMo @ y library (II)  
上次說到老美發起個NaNoWriMo活動

相片 說讚的粉絲 網誌 49

重點動態

近況更新 相片/影片 優惠、活動, 更多

在想什麼嗎?

小地方大書房 分享了一條連結。  
12小時前

發生在巴西, 給遊民的單車圖書館

 巴西: 給遊民的單車圖書館 | This Big City 城事  
thisbigcity.net  
若好構想能跨越疆界, Bicicloteca這個點子即是用單車寄書, 改裝單車為小

在小地方大書房上其他人的最新貼文 顯示全部

 Yichun Tsai  
@ Boston Public Library  
1 · 10月18日17:02

 Yi-Jiun Jeng  
@ 別錯過——一年只開一月的最美的圖書館  
2 · 10月17日18:51

 Yichun Tsai  
@ Yichun 貼了張相片。  
1 · 10月17日10:14

 Yichun Tsai  
@ Yichun 貼了張相片。  
10月17日10:12

 Yichun Tsai  
@ Yichun 貼了張相片。

在此查看您的廣告  
小地方大書房

 小地方大書房  
讚 · 小地方大書房覺得這個很讚。  
取得更多的「讚」

# Acknowledgement

- ▶ 本論文為國立臺中圖書館委託執行之「公共圖書館閱讀環境與設備升級計畫成效評估及讀者滿意度調查」計畫案部分成果。
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**THANK YOU FOR LISTENING**