Report One:  
Context, History and Organization of Collection  
The Potential of ‘Spaces of collection’ in Delft
1. Discovery of TU Delft’s Collections

The question started with the visiting of spaces of collection in studio excursion. In the first month’s investigation, I have visited the Delft archive, The collections in library’s basement, Science Centre and Botanical garden of TU Delft, etc.. The spaces of collection are various: some of the collections were closed or with limited accessing, which were more like conventional means of the archive. While others are more open to the public, like museum and exhibition, even more natural like the plants in the botanical garden and conservatory. Based on the TU Delft’s collection, there are 5 different types of collections which I classify as ‘Old TU Delft’s education’, ‘Student works’, ‘Books and papers’, ‘Plants’ and ‘Contemporary TU Delft’s education’.

The spaces of collections include the following places: archive, library, museum and botanical garden, which are actually quite mixed. For instance archive and library whose collections are books and documents are hard to distinguish and define and also archive was one part of the earliest library in 2600 B.C.\(^1\). The differences between a merely defined archive and library are listed below\(^2\):

<table>
<thead>
<tr>
<th>Method of Receipt</th>
<th>Archive</th>
<th>Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection</td>
<td>Appraised in aggregate</td>
<td>Selected as single items</td>
</tr>
<tr>
<td></td>
<td>Unpublished</td>
<td>Published,</td>
</tr>
<tr>
<td></td>
<td>Unique</td>
<td>Available elsewhere</td>
</tr>
<tr>
<td>Arrangement</td>
<td>Subject classification</td>
<td>Original order</td>
</tr>
<tr>
<td>Access</td>
<td>Closed stacks</td>
<td>Open stacks</td>
</tr>
</tbody>
</table>

According to table above, the collections in the basement of TU Delft library was quite like an archival collection but stored in the library; however they would become museum collection if they open to the public. It is an example that the archive, library as well as museum functions usually mixed in one architecture and sometimes they can interchange their definitions with the changing properties of the collections.

As a result, to classify a space of collection as archive or library or even a botanical garden is not that meaningful to give a design idea of collection’s space in Delft context. What is interesting is I noticed that some of the places inherit from its former professional function space, like the Mineralogical and geological Museum and Botanical Garden, while others are a space merely for storage and exhibition, like the basement of the TU Delft library. As a result, collections in such a context of professional function are quite distinctive and special from the rest of the storage and exhibition spaces, which indicate more information of how the collections work within a specific organization not only by

\(^1\) https://en.wikipedia.org/
\(^2\) https://www.lsus.edu
classifying collections like in archival science. So the collection stored in the Central Library’s underground should be in my proposal, finding its former place like 19th Century’s treasure room or its working place.

2. Behavior of Collection and Its Reflection in Space

In order to understand further about how the ‘specific organization’ originate and organize collections, it’s quite interesting to find what is the common motivation of collecting things through my own experience of collection in my childhood. It started when I entered primary school. This was the time internet has not invading a pupil’s spare time so that collecting natural elements such as stones and leaves was an interesting activity during those very limited spare time between and after classes. And also sometimes these kind of collection become an assignment of science class for educational and practical meaning. For us at that time, the charm of collecting is on one hand, the surprise of finding something unusual, on the other hand, the confidence when you displayed better or bigger or more collections, which was the ‘specific organization’ of the childhood’s collections.

The behavior of childhood is in some way showing the origin of one’s future hobby of collection where reflected the understanding of collecting. Some researches argue that the collecting behavior of children is purely interest-oriented. Through my experience, the behavior is not only an interest, but also kind of following the trend and compete with others, with very practical purpose in the position of a child. Better collection means to a child that he has more time to collect, has better luck to find a unique piece and maybe has more support from his friends and parents, all of which manifest the ‘success’ of a child owning what other children lack.

This kind of satisfactory of ‘success’ reflects the motivation of 16th-17th Century’s private collection, which was the foundation of modern museum space. The motivation of European upper class’s enthusiasm of collection since 16th-17th Century was a reflection of gathering fortune and fame, including competing with rivals, trying to get funds and supports and doing one’s utmost effort to get a unique collection. Started in Italy, the behavior of collection resulted in new attitudes toward nature, as a collectible entity, and generating new techniques of investigation that subsequently transformed natural history. We call the private spaces of collections as ‘cabinet of curiosity’. In one of the earliest cabinets of curiosity, Ferrante Imperato’s Dell’Historia Naturale, the collections are displayed as a morphological ways, indicating the ‘specific organization’ people understanding the world at that time.

3 Fang 2013: 48
4 Xue 2010 9
5 Xue 2010 9
Then the private ‘cabinet of curiosity’ gradually became ‘Museum’, with the development of classification of collections. In a sense, the creation of the ‘museum’ was an attempt to manage the empirical explosion of collections. While all of these factors contributed to the increased curiosity of the Europeans toward other cultures, and ultimately redefined the European world view as a relative rather than an absolute measure of ‘civilization,’ they also produced new attitudes toward nature and the discipline of natural history. Of course the word ‘Museum’ here had slightly different feature and meaning from the museum today. In fact, museum was slowly evolved into a deliberate practice of collecting from practical quest for novelty and utility in agriculture and medicine rather than from the realm of philosophy or natural philosophy, which was ‘specific organization’ in 18th Century’s space of collections.

As a result, ‘museum’ at that time had tighter connection to the university and had the covering of institute, archive and botanic garden. Furthermore, some of the researchers at that time were new mid-class, having climbed the social ladder by running these gardens and learn from them. That means these kind of collection had broader social meaning of broadening universal education and creating larger group of intellectual. And the collections had also been as a tool for research and education. Then the former private collections had been accessible to the upper and mid class, students and the public since 18th Century.

There are three important points connecting with the university: first one is the enthusiasm of collecting or research unique things, second one is educating...
people, third one is culture influence when the collection of knowledge open to the public. To a new space of collection of university, the potential value of new type or arrangement of collection would encourage new improvement of practical fields and social aspects. So learning from different ‘specific organizations’ with different purpose helps to be benefit to the public who can hardly be in a certain context of unfamiliar reality and history. Among all the types of collections, ‘old TU Delft’s education collection’ such as geology & mineralogy collection and the tropical plants collections mostly reflects the essence of collection and the history of university education. But it is not easy to put them in the proposal without context. So they would be in my proposal if I can find a similar space to its own context.

3. Spontaneous arrangement of collection’s organization

Not only collections could indicate ‘organization’, but each of them is also an expressing of spontaneity. The relationship between ‘spontaneity’ and ‘organization’ here is like the relationship between the ‘freedom of people’ and ‘laws and regulations’. The ‘spontaneity’ here means the equal individuality of each piece of collection.

I’d like to take a space of collection as an example, the conservatory space.

In the practice of garden’s conservatory arrangement, plants are generally arranged by their growing and flowering habits which are more scientific; or colours, figures of foliage and flowers which are more visualizing. Either which organization is adopted, each collection of plant express its unique and individuality as ‘spontaneity’. Of course, the ‘spontaneity’ of each plant is not enough. There should be a connection between ‘spontaneity’ and organization so that the organization forms from bottom-up. For instance, both in scientific and visualizing organization, two ends of aspects of organization, the visualizing of harmony of plants decides whether they would compete for the sunlight and space; but incoordination of colors may affect the insects’ pollination, which is the organization decided from the living habit of plants promising the health of the plant as a foundation of ‘spontaneity’.

That the reason why the collection of Botanical Garden, TU Delft is arranged by scientific name of species and family species, which is because of the original use of for scientific research and also a convenience of maintenance.

There is also an example of garden collection arranged in a more subjective way, in Conservatory of Kom in de kas, Keukenhof, by several copies of each variety, which seems only to be familiar by the gardeners who bring varieties in and out.
We cannot define which way of arrangement would be better. But it is true that the result of their layout of collection expresses an atmosphere of whether professional or practical without use a planed program or theme because every piece of collection is more spontaneous and equal under a simple organization.

The way of arrangement of conservatory had been adopted in the architecture fields, not only in the architectural qualities. The prototype of modern architecture was The famous ‘Crystal Palace’, the exhibition building of London’s Great Exhibition in 1851 also originated from that prototype so that its designer Joseph Paxton who was actually a gardener inspired by his conservatory for plants.

A large transparent arcade created a continuous interior space where all the collections exhibited. The scale of space under the arcade is nearly a courtyard between the buildings so that each equal element could be placed inside, owing to iron and glass materials of arcade which is like an arbor covering the whole field creating a feeling of garden or boulevard space where public events happened.\(^\text{13}\) The openness and transparency is one aspect as culture influence, on the other hand, the value of spontaneous arrangement of exhibits within a organization, like the way a conservatory of botanical garden arranging its

\(^{13}\) Pimlott 2015
collection, which can also be an inspiration of collections in Delft.

It is not wise to build a real conservatory for typical plants in the site because of the practical technical problems like scale, temperature and moisture. But inspired by the Crystal Palace, an exhibition could happen together with the various events. So the ‘student work collection’ will be an important collection at the mean time engaging with the student events, improving the urban vitality.

4. Conclusion

Nowadays, the space of collection are varied because not only the functions are mixed, but also there is a profession of dealing with the interface between collection and the public that transforming the space with different open collections. In the book of ‘Museum making’, the key words is ‘narrative’, happened in the title of each section\textsuperscript{14}, which means museum should be a story teller, not a neutral collection. Maybe It would be more attractive when there is an overall story of all the collections, but it may more or less weaken the equal value of every piece of collection, like what I have seen in Science hall that some of the collections become decorative elements rendering the feeling of future or high-tech sense.

As results, there are some suggestions according to the research:

First, the space of collection is a space contains more than one single function, so in my proposal there would be various spaces providing suitable space for different collections.

Secondly, context is important for one specific collection. So the collection stored in the Central Library’s underground should be in my proposal, finding its former place or re-organizing its layout.

Thirdly, a organization of arrangement of collections is important, which would be better to respect the original logic of research or producing program that contain more knowledge and background of the collection. And also the spatial quality was a reflection of the organization. So the ‘old TU Delft’s education collection’ is welcomed in my proposal.

Finally, the organization should be a bottom-up one to keep the ‘spontaneity’ of each collection and its equal value, which is also an influence of university’s cultural value to the public. So the ‘student work collection’ will be an important collection at the mean time engaging with the student events, improving the urban vitality.

\textsuperscript{14} MacLeod, Suzanne 2012
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1. https://www.google.nl/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjkdL6gYXQAhXIXBoKHTViB4QQFggcMAA&url=http%3A%2F%2Fwww.lsus.edu%2FDocuments%2FOffices%2520and%2520Services%2FLibrary%2FArchieves%2FComparison.pdf&usg=AFQjCNEHwzdBcI276amu8IBhFcOZEWGtXw&sig2=G3dxJtiVAqDk-kyQf0_KAQ&cad=rja (31-10-2016)
Report Two:
Cooperation Between Groups
Spontaneous and Diversified Culture Influence

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i. Introduction

The report will start with the questions: What is the relationship between the space of collections and city? Who would be the role of the visitor and organizers of the collection? How to make the collection open and attractive?

To answer these questions, I would like to start with the definition of urban institution and the relationship among groups of people who would be potential user groups of the urban institutions; then evaluate the situation of their way of using urban institution or other public spaces; finally, try to summarize ways of the feasibility on both spatial and social aspects through the study of urban presence so as to find out the function of my proposal.

ii. Type and function of Urban institution

First of all, it is important to figure out what type and function of the urban institution that I would design in general.

In the European history, the rise of cities has been with the improvement of human right and equality. So I’d like to introduce what a city and its institutions offering to the citizen with more equal rights to make city open and smart. Generally, five main aspects includes: Safety and health care, Education and jobs, Religion, Law and politics, cultural industry\(^1\). So these 5 aspects can be 5 types of urban institution, different from other public spaces like shops and restaurants, which not only offer service, but also offer more or less equality beyond each individual people or class.

The ‘safety and health care’ aspect is what a city provided to its citizens fundamentally when city start to develop. The ‘religion’ aspect is a spiritual attraction in the medieval time and the former religious institutions were the foundation of the educational and political institutions. The ‘Education and jobs’ aspect indicates that the city offered opportunities of education and training to the uneducated immigrants and help immigrants find jobs related to the training. So gradually the level of education had been improved and labor power had prospered the city. ‘Law and politic’ aspect indicates equality and executive of the citizens. And ‘cultural industry’ aspect indicates an influence of people’s cognition could have been without teaching knowledge since 20\(^{th}\) century.

In my case, the space of collection, what the institution could offer to Delft City was quite clearly 2 aspects, education & jobs and cultural industry. Here although the cultural industry is with the educational purpose, I define it as an education without a strong purpose of teaching knowledge but influencing people’s cognition.

The purpose for my proposal is of course contain the practical function of university, educating people and helping talent exchange. But the more

\(^1\) Lucassen 2012: 46-168
important aspect is culture influence, which express the not only the identity of a technology university, but also an implication that the high-end knowledge and the way of learning it can be widespread among the public. So the aspects of the ‘cultural industry’ in the city would be further studied, but also the special group of ‘student’ influenced by both aspects, education & jobs and cultural industry.

**iii. The division of TU Delft student and local resident.**

It is quite interesting that there are a contrast between the slogans of TU Delft and Delft City, which are ‘Challenge Future’ and ‘Creating history’ respectively. That represents two different values between the urban development and growth of university. Of course, it just indicates 2 different main directions of each unit’s development. But inevitably, it more or less implies that residents would contribute more to the Delft’s heritage and culture, while student should pursue to the excellence and challenge the future.

![Figure 1: Slogan of TU Delft (left) Slogan of Delft City (right)](image)

Besides the differences of both identities, the 2 groups of people, ‘student’ and ‘resident’, which respectively represent both collectives, are definitely different because of their different ways of life. In this section, I would compare the differences of using the city by between 2 groups of people through studies of urban presence and try to find links of 2 groups of people or their behaviors.

Actually, these two groups of people are containing with role of each other. The definition of ‘student’ indicates that the interchange of the roles of resident to student. ‘A student or pupil is a learner, or someone who attends an educational institution.’, ‘In Britain those attending university are termed “students”’, ‘In its widest use, student is used for anyone who is learning, including mid-career adults’ ² It means that a student is one attending university education, which is the same understanding as ‘student’ in our urban research. It also means a resident can be one of a student, if he or she attend an educational institution temporarily, so that there is a potential that university also can bring knowledge to the ordinary people.

On the other hand, the group of student is also a special group of resident, who shares the same public space with ordinary residents but has different

² [https://en.wikipedia.org/wiki/Student (2016-12-1)]
living habits from them. And actually, the population of students is about 19,000, taking up about 16% of the Delft’s population in 2015, so that the group of student is one of the most important characters being the bridge between university and Delft City.

I try to superimpose the layer of what space student are using (shaded) on the layer of maps of the urban presence (function) without housing function, shown as *Figure 2* on page 4. And I find that the functions of the most attractive public spaces among student group in old Delft City area are shops and restaurants. According to the definition of ‘urban institution’ that I mentioned, the most attractive spaces are not included in 5 types of urban institution, so that in most situation, the relationship between City of Delft and students is only providing services and consuming, without further interaction.

Furthermore, on the position of residents, their engagement on educational and cultural institution are quite rare. Figure 3 on page 5 is the superimposing of the layer that space residents are using (shaded) on the layer of maps of the urban institutional presence (with the functions of culture, religion, education and municipality). Most of the educational institutions that local residents visted are primary school and local education centre like training centres and library, so that they seldom visit higher educational institution. And the local resident are more fond of cultural institution like cinemas and theatres rather than museums.

Although there are 52.3% of the residents have received high level of education (HBO or WO, 2013), with higher proportion comparing to the average in the Netherlands, there is no-doubt a division between local residents and students because of different ways of life. On one hand, university always represents profession and knowledge that university produces and spreads is hard to be accepted by ordinary people who don’t have the capability of learning high-level of knowledge or are no longer willing to; On the other hand, the way that student’s consuming and related resident’s providing service of making economic growth has not been enough to arouse the higher value that an urban institution offers and draws a big part of the local resident to the side of logistics and services.

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3 Winden 2015: 17
4 https://www.delft.nl/
Figure 2: Superimposing of the layer that space *students’ using* (shaded) on the layer of maps of the *urban presence without housing function*
Figure 3: Superimposing of the layer that space *residents’ using* (shaded) on the layer of maps of the *urban institutional presence*
iv. The Potential sets and spaces for combining groups

I’d like to divided the topic into 2 parts: one is about the potential of educational and cultural institutions; the other is the potential of institutional space learning from other spaces of urban presence which is public, with vitality, but not defined as an ‘institution’.

Figure 4 on page 8 is the superimposing of the layer that space residents as well as students are using simultaneously (shaded) on the layer of maps of the urban presence (functions) without function of housing. The majority of functions of the spaces that are popular among the group of student and group of resident are shops and restaurant. Same as the results of residents’ and students’ favourite public spaces respectively, which means a relationship with city by activities of consuming.

I also find a consumption of cultural industry in the same urban presence that the spaces of cultural function where both students and residents go are usually cinemas and theatres. Different from other media of culture centres, cinemas and theatres are very special that their expressions are dynamic and multi-sensory, which means they can be more attractive comparing with other media. And films and dramas are with various topics and updating frequently so that consumers can more easier choose one’s favourites. As a contrast, museums are one of the cultural functions that less popular especially among residents. So it is a challenge that residents less and less participate in museum which is one of the involving roles of ‘space of collection’.

The only few of educational functions where both students and residents go except schools is the City Library, which is also a culture building. It is open and free-accessing, both practically and symbolically. That indicates that there still has been someone who wants knowledge and would like to visit a place which is almost for spreading knowledge. The value of city library is what I defined as the value of urban institution, spread by both library's identities of formality and modesty.

These two examples of educational and cultural institutions are the reflections of the new space of collections. One is cinema and theatre. If we update the collections likes as frequently as the updating of films, it would be more choices for people to see their favourite collection, which is also the reason why all groups of people enjoy their favourite films. Although the ‘consumption of culture’ indicates more ‘consumption’ than ‘culture’, which means people can spontaneously decide what knowledge or information he or she would receive, there is a potential opportunity that people feel happy and relaxed to receive the information besides the problem that a medium only need to be popular to attract people to pay for it. I think it would be more good than harm based on TU Delft collection, if it is feasible by taking advantage of the collective effort of students, so that it is an opportunity to let some of the resident know what the students of TU Delft

And it would also be more attractive if there are interactions between the
collections and visitors, for instance media as film or presentation of a cicerone. Although I have mentioned in report 1 that it would be better that collection itself tells more story, it is also possible to talk more background stories about one or a few piece of collections so that it emphasizes more than distracts, like the TED Talk, also as a more directly way to bring students and residents (including other groups) closer.

The other reflection is city library, which is no more than simple question of make the institution open and free-accessing. However the number of registered readers of the City Library was declining about 30% from the year 2011 to 2014. We can believe the library is declining because of more ways to achieve knowledge (internet) for the time being. But there have still been 18,605 members and 461,386 loans in the library, which means people come to the library not only for knowledge, but also probably for social interaction, for special environment for study or other purposes. Previously, the balance of the preciousness of the knowledge and the free-access of the knowledge decides the quality of urban institutional space. But now, in my point of view, the unique of the library is a rather quiet cafe with a lot of books and free-accessibility.

https://www.delft.nl/
Figure 4: Superimposing of the layer that space *simultaneous residents’ and students’ using* (shaded) on the layer of maps of the *urban presence without housing function*
Besides urban institution in Delft, other types of open spaces can also be references or prototypes for design of institutions. There are 2 types of open spaces used, one is squares, the other is street with shops, restaurants and open market.

Squares are open public spaces for community gatherings in the city. There are 3 of the squares particularly active in old city of Delft, the surrounding buildings of which are often visited by both students and residents. Now one of the function of squares is an extension of the surrounding buildings, like more seats and tables for cafe and restaurants or more shelves for shops. Together with the open markets, as the former function the Delft’s squares, these temporary attractions become a prosperous space even after the open markets quit the daily life of the people.

Figure 5: The active squares where residents and students using simultaneously

Figure 6 open markets and extensions of the surrounding buildings in the Markt Square

6 https://en.wikipedia.org/
Figure 7: The active streets where residents and students using simultaneously

The streets with urban vitality are reduced-scale square in some way, with the actively-used shops and restaurants on both side. There are also some similarities between function of these streets and the mentioned squares that their function is open market when it is a market day or an extension of the shops and restaurant in ordinary time. The scale of the streets is relatively larger then others, with trees or temporary sheds in middle of the street to define an area for staying.

Figure 8: the open market on Burgwal, on market day (left)
the cafe chairs and tables on Burgwal, on ordinary day (right)\(^7\)

The important identity of both spaces is its containing of spontaneity of events, which is also a collections of Delft City, including foods, flowers and antiques, etc. And both groups of seller and consumer keep a not-too-strong

\(^7\) https://www.google.nl/maps
connection because it is no longer necessary to shop in the open market, but both of the groups benefit from the event which is also a cultural expression of the city. If it is possible to stimulate of potential ‘selling/exposing of collection’ among students or other groups, it would be not only another attractive space of collection, but also a space with quality where events arranged spontaneously and equally as I mentioned in report 1.

V. Conclusion

Although there is a division of relationships between residents and students as a situation, for instance their different preference of educational and cultural institution so that the university has quite weak cultural and educational influences on residents, both groups can interchange from one another and share some common habits of using the city and urban institutions like shops, restaurants, libraries, theatres and cinemas.

In order to build a bridge on the division of groups, I try to learn from the successful urban institutions and public open spaces in Delft and bring them to my proposal.

The urban institution in my proposal would be a cultural centre where collections are expressed in a multimedia way. And there would be a space where collections gather spontaneously, like Delft’s open market, which is an interesting prototype as a spontaneous space of collections and local cultural expression so that it is a set and space to organize the interactions among groups in the new space of collections. The increasing of updating the collections would be more choices for people to see their favourite collection. And the multi-expressions of a few of very important collection would be more acceptable by people. Their combination is the opportunity of the co-operations between students and residents so that students (including some residents) have opportunities to expose their works by different ways and residents (including students) have opportunities to choose their favourite topics.

And there would be a space for visitors’ stay in my proposal, like a cafe, which is the attraction of the building. Like the City Library of Delft which now is a place first of all for relax, and with modest appearance and knowledge, is one successful example of cultural and educational urban institution.
Reference


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Report Three:
Collections and Events

The possibility of ‘Spaces of collection’ in Delft

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# Contents

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1. Introduction

In report 3, I’d like to discuss the suitable exhibition space for students’ works and how they work with other old TU Delft’s collections. 

As a research topic, it covers the researches of students’ potential needs and desires to expose their works to the public; the layout, spatial quality and identity of the exhibition space; and interaction with the old TU Delft’s collections, Delft City and citizens.

2. Background and Methods

In the first month’s investigation, I have visited the Delft Archive, the collections in library’s basement, Science Centre and Botanical garden of TU Delft, etc.. According to the statistic on ‘Visitor attractions in Delft from 2010-2014’, the overall trend of visitor attraction fluctuated within 10% from year to year.¹ The statistic includes Delft Archive, Science Centre and Botanical garden, whose trend of attraction partly follow the overall trends. The attraction in Science Centre and Botanical garden remained more or less same in 2013-2014, but Delft archive had increased 12% of attraction since its opening in 2013. Among other tourist attractions, those attractions which can provide unique experience to the visitors had the increasing trend of number of visitors, such as the tower of Old and New Church offering the highest view point and Royal Delft, combining with the display and participation of hand-making porcelain interacting with visitors.

The statistic of visitor attraction manifests a relatively steady trends of museums (even a bit declining) whose exhibition are relatively still and stationary, but owns more value of learning and preserving. So there should be an attraction in my proposal to not only attract people into the building, but also become a showcase of the institution expressing the culture and value of the university. So there would be a space where a collection is not only a collection for spread knowledge, but also an attraction and interaction among different groups.

Based on the TU Delft’s collection, there are 5 different types of collections which I classify as ‘Old TU Delft’s education’, ‘Student works’, ‘Books and papers’, ‘Plants’ and ‘Contemporary TU Delft’s education’. Among these types, the ‘student works’ is the most special, various and dynamic collection so that it would have the potential to be an ‘attraction’, taking advantage of students’ talent and creativity. Other types of collections, like ‘Old TU Delft’s education’, ‘Books and papers’ and ‘Contemporary TU Delft’s education’ would play their premier role of spread knowledge and benefit people who are attracted here and

¹ https://www.delft.nl
interested in the fields.

The method used for the report is interview with the potential users, observation of the TU Delft’s exhibition spaces and soft-mapping with some of those valuable themes.

3. Students’ Exhibition Spaces

In this chapter, I investigated the exhibition spaces of the faculties in TU Delft and interviewed the about 30 students and teachers from different faculties in order to discover the students’ requirement of exhibit their works and the suitable layout and spatial qualities for the events.

The Faculty of Architecture and the Faculty of Industrial Design and Engineering (the faculties of design) are 2 of the faculties with most various exhibition spaces in the faculty buildings. And their students are more familiar with learning from these fixed or frequently updated exhibitions, whose work would even be a collection of the exhibitions.

Others faculties of engineering like the Faculty of Civil Engineering and Geo-sciences and the Faculty of Aerospace Engineering have specific exhibition spaces, like the ‘The Aeroplane Hall’ in the Faculty of Aerospace Engineering, where models and fragments of aircraft are placed there for student to intuitively learn from these collections. But comparing to the way of using exhibition spaces by students from the faculties of design, there are less interaction between students and collections because most of the students’ works are not good enough to be one of the collections.

Figure 1: ‘The Aeroplane Hall’ in the Faculty of Aerospace Engineering

We can imagine that the different quantities of exhibition spaces and frequency of using exhibition spaces is due to the different setup of the subjects between design and engineering and the the interviews to the students supports the my hypothesis. For the question ‘the needs of exhibition and space’, all the
student from the Faculty of Architecture and the Faculty of Industrial Design and Engineering agree that the exhibition space plays a significant role in their daily life. The exhibition space provide not only a space for showing students’ works, but also an opportunity to see and discuss what their peers or elders are working, so as to create an atmosphere of ‘living with the design’.

By contrast, if one feels hard to express the essence of one’s work to more ordinary people because of the difficulty of his project which for instance is about theoretical research or a research, not about application, he will not believe that the exhibition space or requirements are connecting to his study and research. In the interview, most of the students from the Faculties of Engineering do not agree that the exhibition space has intimate connection with their study because of their major and ways of working on computer. According to their words, their researches do not have any value for exhibition in their opinion, and there would hardly be any exhibition on their fields in their faculties. But there is also some dissents from the group of student that there would be some opportunities to show their works if their research is related to application fields or it is valuable and outstanding. And probably, the works for exhibition do not include in the whole research procedure. Because of the relative longer research and design cycle of an engineering product and more people working in a team, the students from faculties of engineering are less ‘productive’ in converting their works to a series of collections for an exhibition with one theme. As a result, they usually exhibit their works with all the selected works from all the faculties in the ‘TU Delft Research Exhibition’ or Science Centre, Delft.

**Figure 2: TU Delft Research Exhibition**

The aim of Research Exhibition is to bring TU Delft’s knowledge to society. The exhibition is located on the ground floor of the TU Delft Central Library, covering all the fields that TU Delft involving, which is 175 projects and 11 themes (plan in 2017). The collections are scattered on the big hall of the library building, occupying an area of about 300 m². Although it seems each of the collection do not definitely have connections with one another and their layout of randomness, the exhibition is never felt abrupt and uncoordinated.

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2 [http://www.tudelft.nl](http://www.tudelft.nl)
3 Ibid.
because of big quantity of the collection and visitors making the theme like a big party. One big space could be a container to hold the different situations of using the exhibition space and different understanding of exhibition events, but never messing up their own identities, so there would be a big exhibition space in my proposal to meet all the requirement of exhibition.

But there would also be more small and intimate spaces of collections for daily exhibition or other related events because of the small-scaled urban fabric and the requirement of various as well as exact spaces for different collections. Through observation of each faculty’s exhibition spaces, I would like to start from studying the spatial setting of collections by researching the exhibition spaces in the Faculty of Architecture and the Faculty of Industrial Design and Engineering where the most various exhibition spaces are. The reasons are that firstly, students from both design faculties manifest high satisfaction with the exhibition space in the faculties according to the interview; Secondly, the exhibition spaces in both faculties are intimately connecting to the students’ daily study so that student would be more likely to use the new space for collection as an expansion of their studies and the process of organizing an exhibition would also be an expression of university’s value.

In the Faculty of Architecture, the exhibition spaces distribute to each floor of the building. Most of the spaces are set near the entrances and passed by main flows so that they have rather good accessibility. And there are mainly 2 types of the spaces, one is linear exhibition space, the other is exhibition hall.

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4 Collective work of ‘Delft Collection’
In the faculty of Industrial Design Engineering (IDE), the exhibition spaces are distributed in or around a centralized 2-storey high hall space where students enter the building, take a coffee break or study and discuss. In the open space where public events happens, half of the area can be used as a big and integral exhibition space when there is an exhibition of all the students’ design project. By contrast, ordinarily, small-scaled exhibition spaces are the major layouts of the exhibition in the faculty, most of which are linear spaces or even smaller showcases in front of each individual studio to show the products of them.
Figure 6: Plan of the ground floor, Faculty of IDE

Figure 7: Plan of the 1st floor, Faculty of IDE
Since most of the exhibition spaces in the Faculty of Architecture and IDE are linear space with the most significance, which are usually set together with circulation spaces and engaging with the events. There are some more research about linear exhibition space by study of their prototype, users’ feedback through interview and soft-mapping by my observation and feeling.

One of the prototypes of the linear exhibition space is ‘long gallery’, which is a long, narrow room, often with a high ceiling in Britain in 16th - 17th Century. A long gallery has the appearance of a spacious corridor, but it was designed as a room to be used in its own right, not as a means of passing from one room to another, which were used for entertaining guests, for taking exercise in the form of walking when the weather was inclement, and for displaying art collections.\(^5\) It is a relatively informal space for exhibition so that the visitors watched the collection while they were walking. And because some collections were placed rather high, it is hard to take a careful view on them. The long gallery in ‘Hardwick Hall’ (54m/162ft) and ‘Syon House’ (41.4m/136ft) are 2 examples of the space in 16th Century in England. The long gallery space has 2 different interface for both sides, one side is more open to an outdoor space like garden or field, the other side is an uninterrupted wall where most of the collections are placed with only a few openings to the inner rooms. Chairs, sofas and tables are placed on both sides from one end to another for a stop, break or conversation.

\[\text{Figure 8: (Left) Hardwick Hall, 16th Century, Derbyshire (54m/162ft)\(^6\) (right) Syon House, London, 16th Century (41.4m/136ft)\(^7\)}\]

From the example of ‘long gallery’, I have learnt that a linear exhibition space is not a pure exhibition space and usually has more collections than a typical exhibition room so that it may distract people’s attention and makes the collections become ‘decoration’, which should be avoided as I mentioned in report 1. However, the linear exhibition spaces are quite welcomed among

\(^5\) The ‘Long Gallery’: Its Origins, Development, Use and Decoration pp. 43–72+74-84
\(^6\) https://en.wikipedia.org (3-Jan-2017)
\(^7\) http://www.syonpark.co.uk (3-Jan-2017)
students from the faculties of design according to the interview. The reason is that the way students visit these kind of exhibition is more purposeless and informal, which actually makes the exhibition more efficient because it filters those who are not interested in the exhibition. And of course, most students mentioned that they would not ignore a newly-updated exhibition when they pass by a corridor as the sensibility of designers. Another reason is that collections are not only exhibits, but also decorations, if they are not in a specific exhibition space. It is a complement of my point of view in report 1, which means the decorative character of the collection is also an important aspect to build the identity of faculty or university besides the essence of collection.

There is also some concerns about accessibility of the linear exhibition space from students because accessibility decides the efficiency of a linear exhibition space. Actually, according to the student, if one’s studio is on 2nd floor of the west wing of building, he may not have opportunity to see the exhibition in one corridor of the east wing, unless the exhibition is very important. On this aspect, the most successful linear exhibition spaces are the exhibition space in the model hall, because it connects 3 major functions of the faculty. By my observation, during the lunch time, more student would visit this exhibition space when they pass-by there. Most of the passing-by students watch the collections, but 2/3 of them do not stop.

![Figure 9: Exhibition Space in the Model Hall](image)

If the purpose of one exhibition is to let as many visitors as possible to see the collections in a short period, there is no-doubt that the exhibition in a formal exhibition hall publicizing by poster would have better effect. By contrast, different exhibitions have different purpose. Apart from their own function of exhibition, the purposes include decoration, attraction for potential visitors and interaction with users.

By method of soft mapping, I extract 5 themes from the Faculties of Architecture and IDE, which are the most interesting and representative linear spaces not only connecting the users’ daily life, but also responding the expression of the collections.
First, the regular layout of the collection express more content of the collection itself, while an irregular layout of the collection are more decorative. (Models in right showcase in Theme 1 are more decorative than array of models in Theme2)

Secondly, for the graphic collection, a showcase or other ways of supporters would strengthen the content of the collection. (Graphic works in right showcase in Theme 3 express more content than the pictures above it because of the emphasis by the showcase.) And a horizontally placed graphic work more likely attract people to concentrate on its contents because people need to stop and lower his head. But it occupies more space than it vertically placed (Books on the left booth in Theme 3)

Thirdly, there is more or less decorative properties of whatever the collection is. A single dominating piece of collection in a space might be decorative because of its own charm, while repetition of the same level of collections might be decorative of the spatial atmosphere, if the quantity of pieces of collection is ‘countless’ at the first glance (more than 20 pieces). The collection express its maximum contents when the quantity of pieces of collections is about 6-15. (Models/industrial design in Theme 2 and motorbike collection in Theme 4 express more content than Models/industrial design in right showcases in Theme 5, but the latter more strengthen the atmosphere of a design faculty)

Figure 9: Soft-mapping of the Theme 1, Corridor, Ground Floor, BK City
Figure 10: Soft-mapping of the Theme 2, The Model Hall, BK City

Figure 11: Soft-mapping of the Theme 3, Corridor, 1st Floor, BK City
Figure 12: Soft-mapping of the Theme 4, Corridor, 1st Floor, The Faculty IDE

Figure 13: Soft-mapping of the Theme 5, Corridor, 1st Floor, The Faculty IDE
The ‘long gallery’ in my proposal is an urban showcase of the university, so it express not only content of the exhibition, but also the atmosphere of the university and knowledge. So the student work would be exhibited as groups, including 10-20 pieces of collections per group. The layout would be horizontal exhibition booth to slow the pace of the visitors.

Furthermore, the old collections of TU Delft can be used as decorative elements in the gallery space, neatly exhibited on the wall, as an introduction of the inside archival collections which mainly express knowledge. And the long gallery would go through the cafe area where is the attraction of building, providing the maximum flows of visitors and their relaxed visiting.

4. Organization of Students’ Exhibitions and Events

After study the initial requirement and spatial quality of the exhibition space, there is certainly some requirement of exhibition among students. But there has still been questions like ‘would student really like to expose their work to the public?’ or ‘would it be possible for our education to be more open to the society? ’, in order to realize the spontaneity of the events of collection and exhibition, which is the way I mentioned in the Report 2 to make the exhibition attract visitors and interact with them.

So the chapter is divided into 2 parts, one is about the students’ opinions of exposing works and interacting with the public through the study of the interview results, the other is the teacher’s opinion of connecting education with the society and the practice of the the presentation which have potential of the public engagement.

4.1 Students’ opinions of exposing works and interacting with the public

For the question ‘Whether to expose the work to the public outside faculty’, all the students from the faculties of design agreed because they would like to share their works so as to enable the public to see what they have done and accept the public’s reflections from different positions. While more than half of the students from the faculties of engineering actually would not quite like to expose their works to the public. Besides those whose works don’t have exhibition value, other student’ reasons are mainly about concerns of few audiences to visit his own exhibition in a very specific field or without motivation of making exhibition. Rest of them would like to expose their work because they also agree that if the research is about application, listening to the sounds of the potential user is helpful and even full of opportunity of investment.

For the question ‘Preferred way of interaction with the public’. Most of the student choose presentation and questioning in a formal occasion so that they are fully regarded and respected. Others prefer relatively informal way like
conversation with those who have questions because sometimes the questioning after the presentation is kind of formality which is not always efficient to really answer the questions. And there are also some idea of an electronic system for interaction.

Since most of student would like to expose their work to the public, the idea of a spontaneous exhibition space is supported. Together with the students’ exhibition space, there would be an auditorium (or space for presentation) for the needs of interaction in an attractive and active way. For conversation, the space would be varied, from a simple seats for sitting to an open cafe serving the whole building even the surrounding area.

4.2 Teacher’s opinion of attempt of education with the society

There has been a lot of attempt on openness of university’s education, not only on the internet, but also in all kinds of exhibitions that the university holds. But these collections are ‘image projects’ of the university in my point of view. They are excellent but there would be more ignored project from those works which are underestimated and don’t have opportunities to expose. So there might be possible that some part of university’s result which might be attractive to the public could be an interactive project in a proper way.

In order to find a organization of these kind of exhibition, I interviewed Ass. Professor of Heritage & Architecture Studio, Lidy Meijers who try using undergoing realistic project as the theme of design tutorial and interacting with the the related people. She totally agreed that architecture design should be exposed to the public and even criticized by them. She mentioned that in her experience, actually, people quite like to see and discuss a student project which is about improving the living environment and quality of where they live. The sorts of collections also had better be closer to the public’s life. So design collection would be a good choice because it is more acceptable and also could be a invention on engineering in the fields which people are concerning about like environment protection or connecting with people’s daily life like transport or digital products.

There are some practice, for example, in a design studio of transformation of vacant churches which is a problem in Limburg Province. They cooperate with the local government and makes the student’s idea as a part of section of collecting ideas for urban development. After the design studio, there would be an exhibition of students’ proposal in the local cultural centre, which would be welcomed by local government, urban planners and local residents. There would be some symbolic meaning in it, such as ‘public participation’, but also expressing the urban renewal is valued because the participation of the university.

Other practice is making an exhibition instead of a presentation. Students transformed the classroom into an exhibition room by moving all the tables to
the sides of the room and using them as exhibition booth. The organization of the presentation is also changed that instead of making presentation, students visited others’ design proposal and wrote comments on the stickers placing on one’s poster. Students were more proactive to see their peers results and think more about the proposal he/she liked.

![Image of the 'Exhibiting Presentation']

**Figure 14: The ‘Exhibiting Presentation’**

Lidy suggested that the organization of the ‘exhibiting presentation’ could be a way to interact with the public on the position of a teacher. On one hand, students would get more comments and critics not only from one’s tutors; on the other hand, it is happy to see something happened unexpectedly from the interaction with the society as a teacher. She agreed the positive meaning of a space of collection, which could be for university educational uses besides its exhibition function. And it would be great that there is a specific room for an ‘exhibiting presentation’ so students would no longer have to transform a temporary exhibition room. That is the reason why I would add some rooms for educational exhibition near the most public space in my proposal.

5. Conclusions

In order to attract more visitors in the situation of declining tourism, there would be a space where a collection is not only a collection for spread knowledge, but also an attraction and interaction among different groups. Students and local residents would be the major potential users of my proposal.

In order to balance different exhibition requirements among students majoring in different specialized fields, a big exhibition space like the free-plan of the Central Library of TU Delft (more than 200m²) in my proposal to meet all the requirement of exhibition as the Research Exhibition of TU Delft.

The linear exhibition space is one of the most important types of exhibition
space in my proposal. It originated from the ‘long gallery’ and can be found as an intimate exhibition spaces in the faculty of Architecture and IDE and welcomed by their students. Students’ daily life is connected with the ‘long gallery’ which is a spontaneous filter of visitors’ interests in high-efficiency. The ‘long gallery’ in my proposal is an urban showcase of the university, so it express not only content of the exhibition, but also the atmosphere of the university and knowledge. In order to emphasize the content of the student work and make it more efficient and readable, the organization of the exhibition would be exhibited by groups, limiting 10-20 pieces of collections per group. There are horizontal exhibition booth as the platform of the collection so that visitors would pay more time on their interested collection. While the old collections of TU Delft can be used as decorative elements for atmosphere in the gallery space, neatly exhibited on the wall, as an introduction of the inside archival collections which mainly express knowledge.

Most of students would like to expose their work to the public, so the idea of a spontaneous exhibition space is supported. Students’ favourite way of interacting with people is presentation and questioning. So together with the students’ exhibition space, there would be an auditorium (or space for presentation) for the needs of interaction in an attractive and active way. For the second choice of interaction, conversation, the space would be varied, from a simple seats for sitting to an open cafe serving the whole building even the surrounding area.

There are some practices of connecting university education to the society, proving there is a possibility that a educational institution could spread culture besides its own function, which is also welcomed by teachers. So there would be some rooms for educational exhibition near the most public space in my proposal, where educational event would interact with the public by listening, commenting, questioning or voting.
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