

ข้อเสนอใหม่ของการออกแบบอย่างผสมผสานบนพื้นที่สาธารณะ: กรณีศึกษาจากถนนช้างเผือกถึงมูลเมืองช้อย 7 จังหวัดเชียงใหม่ ประเทศไทย

New Feature of Mixed-use Design on Public Area: Case Studies from Chang Phuak Road to Moon Muang Soi 7, Chiang Mai Thailand

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Abstract

Mixed-use design is the design integration on urban development which provides flexibility program and manages diversity usage. By location based learning, mixed-use design feature is to converge physical design with fostering social on specific location. The aim of this article is to characterize mixed-use design on Thai urban context and summarize as the new design feature. On the area of study, researcher chooses Changpuank and Lamchang communities where both connect with Changphuak rd., Phrapokkloa rd. and Moonmuang soi 7. These areas belong to main North-south axis of the old city and have appeared diversity contemporary lifestyle on Chiang Mai public area. Besides, there have adjusted many conflicts between old communities, business-purpose activities and also local government by individual adjustments and community network. With these potentials, this research is set to reclaim the new understanding of public area design with the concept of mixed-use design. Furthermore, research finding is to analyze mixed-use design as new feature on public area in Chiang Mai. Research methodology is created by referring to spatial practice and neighborhood network concept theories. Each area usage reflects as spatial practicing which represents the relationship between government strategy and locals' tactic. Towards situation based design, researcher has to understand on-site situations and analyzes through conditions of physical design and social relations. The study process provides with 3 sessions; (A) Case study selection is to select potential areas where appear shared space characteristic by street photograph, (B) Flexible use is on-site observation to understand organizing public area usages by interviewing and data collecting, (C) Mixed-use characteristic, this session sets to record street films to characterize mixed-use design feature on those area usages. Towards analysis session, researcher finalized architectural design feature by finalizing isometric section drawing to understand relations of physical design and social relations. These features aim to compromise conflicts and also improve functional programming on Chiang Mai public area.

Keywords

Public Space

Mixed-use Design

Spatial Practice

Neighborhood Network

Community Based Design

การออกแบบอย่างผสมผสาน (Mix-use Design) เป็นการบูรณาการการออกแบบเพื่อการพัฒนาเมือง ซึ่งเป็นแนวคิดการสร้างพื้นที่สาธารณะใหม่ที่สามารถรองรับกิจกรรมของเมืองที่หลากหลายและมีคุณลักษณะการใช้พื้นที่ที่ยืดหยุ่นต่อผู้ใช้กิจกรรม โดยมีวิธีการศึกษาที่อิงตามพื้นที่ศึกษา เพื่อให้ได้คุณสมบัติการออกแบบเพื่อการใช้งานอย่างหลากหลายที่เป็นความสัมพันธ์เฉพาะตัวของการออกแบบทั้งทางกายภาพและปฏิสัมพันธ์ทางสังคม จุดประสงค์ของบทความนี้คือการนำเสนอแนวทางการออกแบบพื้นที่สาธารณะอย่างผสมผสานในบริบทของเมืองไทย โดยวิเคราะห์คุณลักษณะของการใช้พื้นที่และนำไปสู่การสร้างข้อเสนอใหม่ของการออกแบบพื้นสาธารณะของเมือง ผู้วิจัยเลือกชุมชนช้างเผือกและลั่นช้าง เป็นพื้นที่ศึกษาด้วยเหตุผลของความเชื่อมโยงทางพื้นที่ ชุมชนทั้งสองด้านตั้งอยู่ต่อเนื่องกันบนพื้นที่เมืองเก่าบนถนนช้างเผือก ถนนพระปกเกล้า และถนนมุลเมืองชอย 7 อีกทั้งพื้นที่เมืองในเขตชุมชนนี้มีความสำคัญทางประวัติศาสตร์ ในฐานะเป็นแกนหลักเหนือได้ของเมืองเก่า และสะท้อนวิถีชีวิตร่วมสมัยที่มีการใช้ประโยชน์ของพื้นที่ที่หลากหลาย ในจังหวัดเชียงใหม่ ที่ในปัจจุบันเกิดความขัดแย้งของการใช้พื้นที่สาธารณะของรัฐระหว่างคนในชุมชนและผู้ประกอบการธุรกิจ ซึ่งส่งผลทำให้เกิดการปรับตัวของชุมชนและปรากฏความสัมพันธ์ทางสังคมในรูปแบบเครือข่ายชุมชนใหม่ๆ ด้วยความน่าสนใจและศักยภาพที่กล่าวมานี้ งานวิจัยชิ้นนี้จึงต้องการนำเสนอแนวคิดและกระบวนการออกแบบพื้นที่สาธารณะใหม่ ที่เน้นผลประโยชน์ร่วมกันของคนในพื้นที่ที่ตามแนวคิดการออกแบบอย่างผสมผสาน วิถีวิจัยของงานถูกสร้างขึ้นจาก การอ้างถึงทฤษฎีปฏิบัติการเชิงพื้นที่ (spatial practice) และโครงข่ายเพื่อนบ้าน (neighborhood network) เพื่อใช้สะท้อนให้เห็นถึงปฏิบัติการที่เกิดขึ้นในพื้นที่ที่เป็นการจัดการพื้นที่ร่วมกันจากความเข้าใจยุทธศาสตร์ของรัฐบาลและกลุ่มธุรกิจของคนท้องถิ่น ซึ่งเป็นการออกแบบตามสถานการณ์ (situation based design) ดังนั้นผู้วิจัยจึงจำเป็นจะต้องเข้าใจสถานการณ์ของกรณีศึกษา และวิเคราะห์ผ่านเงื่อนไขของการออกแบบทางกายภาพและความสัมพันธ์ทางสังคม ซึ่งกระบวนการศึกษาประกอบด้วย 3 ขั้นตอน; ขั้นตอน (A) การเลือกรถศึกษา ด้วยการเลือกพื้นที่ที่มีศักยภาพ โดยใช้เครื่องมือเป็นภาพถ่ายท้องถนน (street photograph) เพื่อคัดเลือกรถศึกษาที่ปรากฏคุณลักษณะพื้นที่ที่ใช้ร่วมกัน (shared space) ซึ่งเป็นคุณลักษณะของการออกแบบอย่างหลากหลาย ขั้นตอน (B) การวิเคราะห์การใช้งานบนพื้นที่อย่างยืดหยุ่น คือการสังเกตการณ์การใช้พื้นที่ในกรณีศึกษาเพื่อทำความเข้าใจเกี่ยวกับกลไกปฏิบัติการเชิงพื้นที่ที่ทั้งอีกประโยชน์ส่วนบุคคลและการใช้ประโยชน์ทางสาธารณะ ด้วยเครื่องมือการสัมภาษณ์และรวบรวมข้อมูลจากการสังเกตการณ์ ขั้นตอน (C) การบันทึกวิดีโอภาพเคลื่อนไหว (street film) เพื่อชิบายคุณลักษณะการออกแบบอย่างผสมผสานที่เกิดขึ้น ในขั้นตอนการวิเคราะห์ข้อมูลนั้น นักวิจัยได้สรุปคุณสมบัติการออกแบบทางสถาปัตยกรรมด้วยเครื่องมือการวาดภาพโดยการใช้พื้นที่สามมิติ หรือ ไอโซเมต릭 (isometric drawing) เพื่อวิเคราะห์ความสัมพันธ์ของการออกแบบทางกายภาพและความสัมพันธ์ทางสังคม ซึ่งผลของการวิเคราะห์คุณสมบัติเหล่านี้จะนำไปสู่ข้อเสนอใหม่ของการออกแบบอย่างผสมผสานบนพื้นที่สาธารณะของเมือง ที่มีจุดมุ่งหมายเพื่อการประสานมุมลดความขัดแย้งของการใช้พื้นที่ในเมืองระหว่างรัฐผู้ประกอบการ และ คนในชุมชน รวมไปถึงการนำเสนอแนวคิดใหม่ในการออกแบบปรับปรุงพื้นที่สาธารณะของจังหวัดเชียงใหม่ในปัจจุบัน

คำสำคัญ

พื้นที่สาธารณะ

การออกแบบอย่างผสมผสาน

ปฏิบัติการเชิงพื้นที่

โครงข่ายเพื่อนบ้าน

การออกแบบเพื่อชุมชน

1. Introduction

This article is a study of mixed-use architectural design which existed on urban area in Asian cities. Since Modern city planning have been strategically used on urban development during the 1970s, many cities was managed without community based study. Local had to adapt their lifestyle into Modern city planning and real-estate where are organized by government and business purpose (Baum & Valin, 1978). To understand the contradiction and complexity between Government strategy and local's tactic on those areas, this study posits to understand people centered design where be seen as mixed-use area usages on urban public area through the city. Mixed-use design is urban development strategy for living spaces where blends diversity purposes with multipurpose uses. The development provides flexibility and combines various functions more than just single function; residential, commercial, cultural, institutional or entertainment. The design is to be physically and functionally integrated with urban connections. This development efforts idea of shared space which provides and fosters for 3 purposes; economic vitality, social equity, and environmental quality. (Grant, 2002) Even more, researcher referred to social-science analysis with "Neighborhood network" conceptual design. A method is to analyze area usage and improve community by physical designing and supporting social relations between urban community and residential building. This community network concerns with 2 theories; Spatial Practice and Neighborhood network

Spatial Practice, is alternative social-science conceptual method to analyze politically social scape by the relationship between social structure and agency. De Certeau describes as 2 types of spatial practicing on specific area, which are strategic and tactic. "Strategy" which is a practice to strict main function on an area as a place by government or investigator organizing. And, "Tactic" which is a practice to negotiate with strategy and foster to

diverse uses and flexible characteristic as space. Tactic is adaptive developed by agency who understand gap in the social structure on each specific area. (De Certeau, 1992) This article focuses on tactic by local. Learning in phenomenon on site is existed and not related to main strategy, those locals' tactic is a way to understand the relations between social structure and agency. (Lefebvre, 2000) Neighborhood network is supportive theory to describe the relations on urban public area which developed from Patricios.' Neighborhood concept is an integration to improve existing community with 2 concerns; physical design and social interaction (Patricios, 2001). Also "Neighborhood network" aims to converge social relationship types into community. Especially in this research, neighborhood network is an analysis of integrated public feature designs, which provides the combination of physical design and social relations (Figure 1) (Kitika, 2016)

Area of study locates on North-eastern area of Chiang Mai Old city. There are various extending areas from the old city to suburb, business, residential and where includes; Chang Phuak, Lamchang communities. Those areas was originally local communities and was rapidly developed towards modern city planning since The 1995 Southeast Asian Games and following to the seventh National Economic and Social Development Plan during 1992-1996. This area was set as a connected route from Chang phuak rd. to Moonmuang rd. where appears contemporary lifestyle on North-western area of Chiang Mai Old city (Figure 2). Thai community is originally grouped areas nearby and communed with residents near the temple. Temple is reasonably the center of the community where all residents are bounded with Buddhist activities and Traditional events. Through this area, village communities are originally planted with Temple-centered community. (Niramon, 2008) Because of modern city planning, city is plant for infrastructure & public transportation which connects other districts with street network. Until now, temple is still maintained as the community

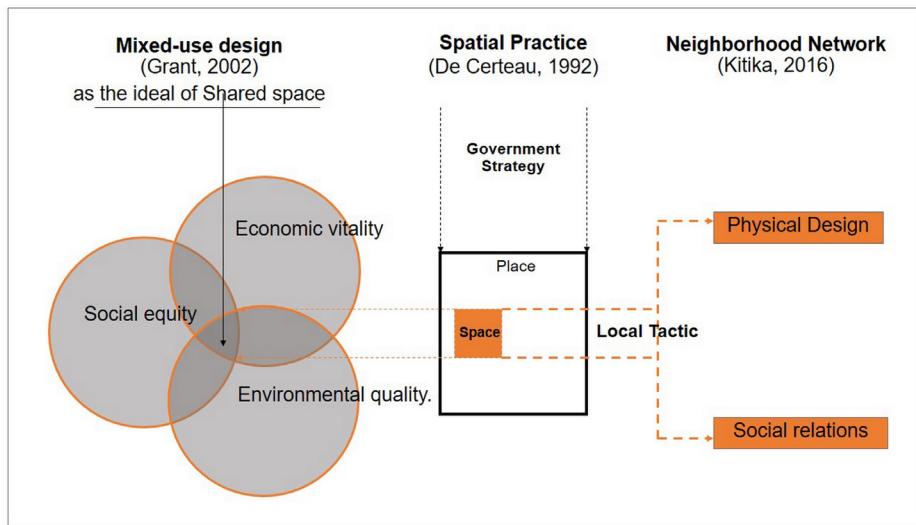


Figure 1. Theories relations diagram Source: Kitika 2019

Terminology

Since wording in this research is based on Thai context and also socio-science theories. There is definition of specific words in this research;

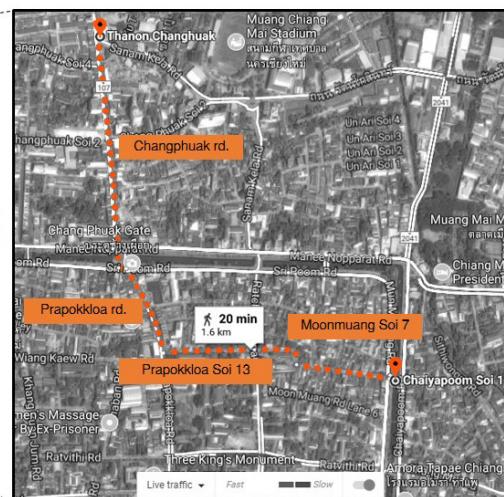
Mixed-use design	: An integrated design to effort urban development toward an idea of Shared space which supports 3 purposes; economic vitality, social equity, and environmental quality.
Neighborhood network	: A network which converged social relationship types into community. This network connects between tangible urban community and reformative social interaction. The network combines with 2 integrations; physical design and social relations
Spatial practice	: Socio-science theory is to analyze area usage from Michel De Certeau (1992) which explains type of practices for 2 kinds; strategy and tactic
Strategy	: Spatial practice is to assent and grant area usages for subjectivity structure. A person who is in this area is controlled by subjectivity which appears as rules, conditions and norms. Strategy practices an area to be strict as place.
Tactic	: Spatial practice is a flexible way to have another activities and attentions from subjectivity structure. Then, character of area usage belongs to space which is flexible and multipurpose function by users' perceptions.
Area usage	: A specific way of using or activity on particular area
Community grouping	: An existing community by several social relations such as commercial purpose, coffee shop group, single house village etc.
Physical design	: An architectural design on geography and residential area which relates to human behavior.
Social interaction	: Interactions between residents inside residential building and also connect to community.

AREA OF STUDY



Routes from Arcade I Bus station to Chamni Norakan market

STREETS



Chang Phuak rd. → Prapokkloa rd. → Prapokkloa soi 13 → Moonmuang Soi 7

(Source: Kitika 2018)

Figure 2. Area of Study, a route from Chang phuak rd. to Moonmuang Soi 7, is on North-western area in Old city

center for present activities such as election, funeral ceremony and Buddhist events. Nowadays these street networks are provided for even and odd numbers on soi system which related to grid system for modern urban management. (Soi in Thai means a narrow street which connected to the main one).

Many developing cities around Asian countries, most controversies between residential and commercials cause by the contrast of old inflexible strategy and existing communities. Previously top down styled methodology, which be used for urban area management by government or investigators, this constructs single area usages and never adapts into communities' change. Then locals have to adapt their own buildings through governments' constructed environment. And, they also settle and manage new kind of community grouping which is not certainly related to grid system from the influence of modern city planning. Following to Chiang Mai creative city concept, collaborative design is to develop the creative economy on the strengths of communities in Chiang Mai. (US Consulate General in Chiang Mai, 2013). Therefore research objection is to understand new feature of mixed-use design towards the better urban development.

2. Methodology

This article summarizes new feature for mixed-use design where compromises local area usages and negotiates existing modernity constructed environment towards Livable city. To understand how existing mixed-use design which adapted urban public area, researcher provides 8-weeks working process which follows to methodology, this process is set from understand raw area usages which appears on street scene in Chiang Mai city to analyze mixed-use architectural design for Chiang Mai public area.

2.1 Research tools

Researcher provides 3 research tools: First, street photography is taken from daily-life street

scenes along the site. These photographs are selected for case studies as selective shared-spaces. Second, street film is to record raw physical and social relations on urban area. And third, isometric sketching is an analyzed graphic to describe environmental design. From analysis session, these pavement area usages have appeared characteristic of mixed-use design feature which exclusively support the community network.

2.2 Methodology sessions

To specify the term of mixed-use design on this study, researcher refers The understand of Space by the learning process which have to mediate through each experience due to time and space and also a phenomenological interrogation into the meaning of spaces which preoccupy poetry, intimate spaces (Bachelard, 1964) Regarding to urban phenomenon, The measurement of urban area is very challenge and hardly to characterize any area with the following of existing physical design. The study of urban area is meaningfully to explode environmental design and on-site reality data with diversity perspectives such as visual methods, image ability, environmental mapping (Sanoff, 1991)

2.2.1 Session (A) Case study selection

Researcher has provided site surveying and collecting on-site data with smartphones which can capture the moment of phenomenological study as street photograph. These photograph set no compositions and took from raw situations which appears Shared space characteristic following mixed-use design theory. This process, as called as Session (A) Case study selection is to select potential areas with street photograph. Street Photograph sets as research tool to select potential urban area for settling case studies.

2.2.2 Session (B) Flexible use (on-site observation)

Forwarding to a process to mediate through each experience due to time and space, Session (B) flexible use is a study with on-site observation to understand area usages organizing by interviews and

data collecting, these collective data is to be arranged for categorizing common issues; main Activity, mixed-use activity, type of area usage, mixed-use activity, and time duration.

2.2.3 Session (C) Mixed-use characteristic

Street film to understand flexibility on area usage. Street film, is another research tool to observe on-site data and describe the condition of multiple activities, activities duration, date & time. Following spatial practice theory, relative data from session (B) and (C) leads us to understand spatial practice as tactic from local and also relationship between existing physical and social contexts.

2.2.4 Mixed-use conceptual design - analysis session

Final session, this session is to summarize these collective data and analyzed for Features of mixed-use conceptual design, Street film is a session to present the raw collective data for mediated experience and also mixed-use self-practicing on each case.

To conceptualize mixed-use design, each case study is selected with shared space characteristic (Grant, 2002) and explained each area usage to flexible use operation (Kronenburg, 2004) by on-site observation. Then each case study's operation is analyzed to mixed-use conceptual design by street film (See figure 3)

The research findings is an analysis of neighborhood network which appears on the relations between physical design and social interaction. (Figure 4) (Kitika, 2018) Researcher analyzed design feature which based on urban phenomenon. Each case have each own community network which are fostering mixed-use design for many purposes. Expectation is to learn mixed-use design which represents the integration vision and action lead to the resolution of urban problems and bring about a lasting improvement in the economic, physical and environmental condition of an area. (SOSNA, 2014)

3. Field work & Analysis

3.1 Session (A) Case study selection

Researcher scopes on "Shared space" which is an ideal space referring mixed-use conceptual design. By studying from actual local's spatial practicing on streets and alleys inside those community groupings (Figure 5), this study firstly started from surveying on public area and collect street photographs to analyze spatial practice on each. From street photographs, this move forward to describe mixed-use design efforts on each cases which supports 3 purposes; economic vitality, social equity, and environmental quality. After a week of site surveying, researcher selects 10 street photographs with condition of shared-space characteristic which an area is flexibly used and adjusted to change situations in their use, operation, or location (Kronenburg, 2004). 10 selective street photographs have represented mixed-use characters which are spatial practicing on the site. Following on shared space, researcher chose them as 10 case studies;

Case 1: Chang Phuak bus station

Case 2: Front area on Bangkok bank Chang Phuak branch

Case 3: Umbrella morning market next to Chang Phuak market

Case 4: Local transit node in the corner of Chang Phuak market

Case 5: Pedestrian area on jazz bar

Case 6: Pedestrian area on noodle shop, Phrapokploa road

Case 7: Parasite shop on Phrapokploa soi 13

Case 8: Lam Chang temple community

Case 9: Community area in salon, Moonmuang soi 7

Case 10: Night district inside Chiang Mai old city

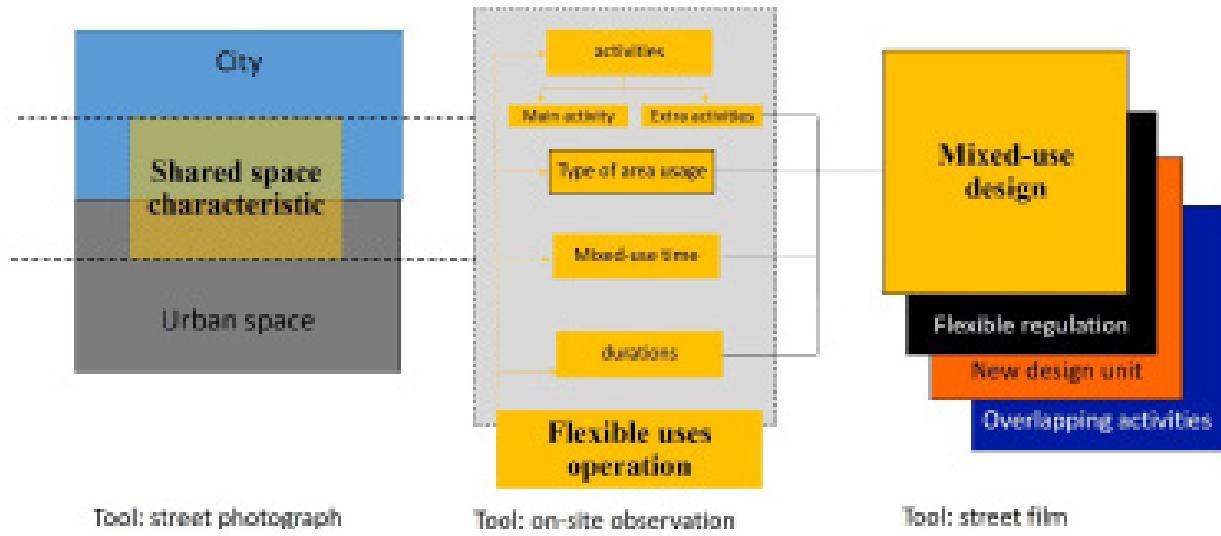
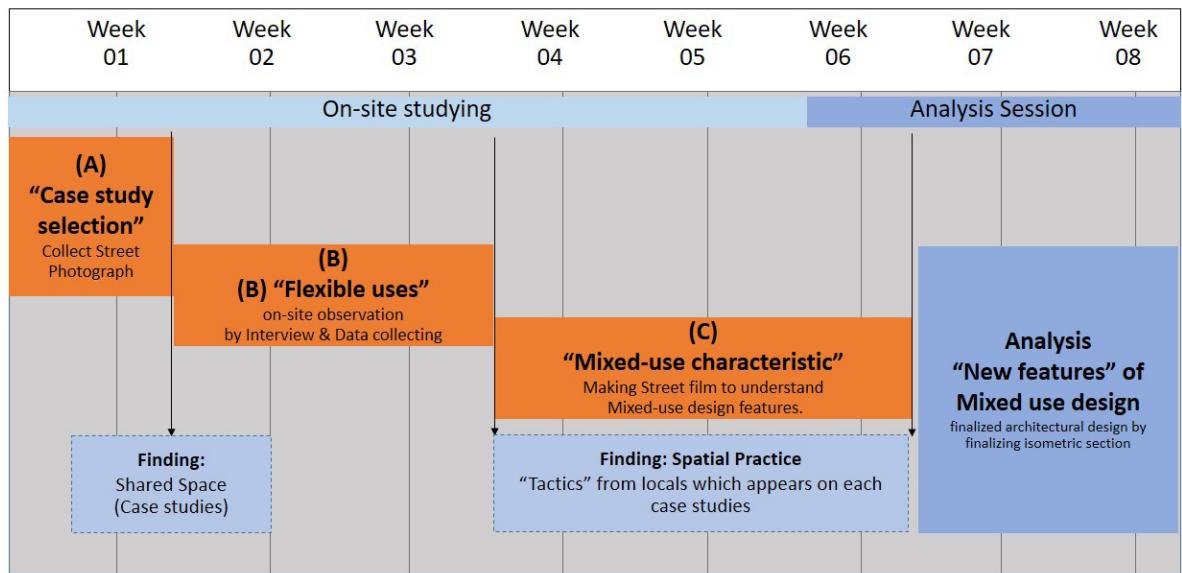


Figure 3. Relative diagram for studying on mixed-use design Source Kitika 2019



(Source Kitika 2019)

Figure 4. 8-weeks working process.

These 10 selective street photographers appear the diversity of shared spaces. Researcher notices common issue that these shared spaces are caused the relations between urban space and local activities which are not just various activities but flexible uses. Then researcher continues to understand tactics on each area with on-site observation in the next session.

3.2 Session (B) Flexible use (on-site observation)

From 10 street photographs, researcher scoped on each area usage and learn their physical design by area observation. The data has shown that 10 case studies have appeared mixed-use activities which combine with both main and flexible activities. These mixed-use characters are related to physical design and social interaction following to Types of area usages on Table 1.



(Source: Kitika 2018)

Figure 5. 10 street photographs on sitemaps.

Table 1. Mixed-use activity on 10 case studies observation

Case study	Strategy	Tactic on flexible use analysis			
	Main Activity	Extra activities	Type of area usage	Mixed-use Activity Time	Duration (Avg.)
(1) Chang Phuak bus station	Bus terminal	Red truck & tourist node	Flexible activity with regulation	07:00-20:00	13 hours
(2) Front area on Bangkok Bank	Parking	waiting area for students after school	Flexible activity with regulation	15:30-18:30	3 hours
(3) Umbrella morning market next to Chang Phuak market	Pedestrian	Morning fresh market	Umbrella covered selling unit	06:00-11:00	5 hours
(4) Local transit node in the corner of Chang Phuak market	No land use	Red truck stop	Chair and Panel Instauration	08:30-16:00	7.5 hours
(5) Pedestrian area on jazz bar	Pedestrian	Hanging out and extending shop area	Dual/complex activities in an area	19:30-00:30	5 hours
(6) Pedestrian area on noodle shop, Phrapokploa road	Pedestrian	Extending shop area	Dual/complex activities in an area	17:30-04:30	11 hours
(7) Parasite shop on Phrapokploa soi 13	Pedestrian	Shop area (Sewing shop)	Hanging structure & mobile unit	08:30-16:30	8 hours
(8) Lam Chang temple Community	Temple centered Community	Local and foreigner residential commitment	Flexible activities with regulation	-	-
(9) Community area in salon, Moonmuang soi 7	Front area from setback regulation	Meeting area	Dual/complex activities in an area	17:30-23:30	5 hours
(10) Night district inside Chiang Mai old city	Private street	extending shop area	Dual/complex activities in an area	20:00-01:00	5 hours

From this analysis, researcher found out that each case has its own operation to adjust and foster diverse agendas. These 10 flexible uses appear as extra activities which are operated with types of area usage, time and duration. Researcher analyzes these 10 case studies and found that these cases provides 3 common characters; special regulations, specific unit design, and various activities organizing. Then research needs to understand these operations by recording the transformation of each area. And, recording film is a tool to show how mixed-use characteristic appears and also flexible use operation.

3.3 Session (C) Mixed-use characteristic

Regarding to research objection, Street film has reflective explain mixed-use characteristic through area adjusting and activating on everyday life scene. Each film collected raw activities on each site and is analyzed to explain tactics which appears on street film. These 10 street films are made by on-site observations which includes;

Street film 01: time travel, this film is recorded at Chang Phuak bus station and presented particular routes for red truck, yellow trucks and also Tuk tuk between 3-4 pm during the weekdays. (Figure 6)

Street film 02: After hour, this film is recorded at front area on Bangkok Bank Chang Phuak Branch and presented adjective activities from parking lot to students' waiting area between 3-5 pm during the weekdays. (Figure 7)

Street film 03: under umbrella, this film is recorded at umbrella morning market where located next to Chang phuak market between 5-11 am daily. (Figure 8)

Street film 04: waiting point, this film is recorded at Local transit node in the corner of Chang phuak market during the daytime. (Figure 9)

Street film 05: crescendo, this film is recorded at jazz bar called "North gate" and focused on customers' activities between jazz bar and pedestrian area. (Figure 10)

Street film 06: walk-through, this film is recorded at pedestrian area on noodle shop, Phrapokploa road which presented the contradiction between day and night activates. (Figure 11)

Street film 07: parasite, this film is recorded at parasite shop on Phrapokploa soi 13. The shop is an adjustable sewing shop by hanging with urban landscape during the day. (Figure 12)

Street film 08: agreement, this film is recorded from Lam Chang temple Community and collected data by interviewing community leader and urban architect about informal urban management with an idea of temple centered community. (Figure 13)

Street film 09: possession, this film is recorded from the front area of salon on Moonmuang soi 7. There appeared raw community area where daily uses for gathering people and neighbors during the evening. (Figure 14)

Street film 10: zoe in/out yellow, this film is recorded from night district inside Chiang Mai old city. There appeared extended activities between buildings in the nighttime. (Figure 15)

These 10 street films explain various activities which appears on one area. 1S0 cases explain flexible activities and also appear temporary uses which depend on difference environment, time and users. Researcher analyzed those 10 cases to divide to 3 common area usages by tactic on design features; (Table 2)

- First feature, Adjustable unit design, is an additional design to adjust multiple uses which are including with case 3, 4, and 7.
- Second feature is re-managing urban area, is urban management to compromise multiple activities which is including with case 1, 2 and 8.
- Third feature, flexible area usage, is an organizing of multiple functions as an area, which is including with case 5, 6, 9, 10.

CASE (1) Chang Phuak Bus station



(Source: Kitika 2018)

Figure 6. Screenshots from Time travel - street film

CASE (2) Front area on Bangkok Bank Chang Phuak Branch



(Source: Kitika 2018)

Figure 7. Screenshots from After hour - street film

CASE (3) Umbrella morning market next to Chang phuak market



(Source: Kitikka, 2018)

Figure 8. Screenshots from Under umbrella – street film

CASE (4) Local transit node in the corner of Chang phuak market



(S) (KUW) 2212

Figure 8. Screenshots from Waiting point – street film

SAGE (5) North, www.sagepub.com



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Figure 12. Comparison of σ_{tot} and $\sigma_{\text{tot}}/\sigma_{\text{inel}}$ for the $\pi^- p$ reaction.

CASE (6) Pathway on Noodle shop, Phrapokploa road



(Source: Kitika 2018)

Figure 11. Screenshots from Walk through Street film

CASE (7) Parasite shop on Phrapokploa soi 13



(Source: Kitika 2018)

Figure 12. Screenshots from Parasite - street film

CASE (8) Lam Chang Temple Community



(Source: Kitika 2018)

Figure 13. Screenshots from Agreement - street film

CASE (9) Community area in Salon, Moonmuang soi 7



(Source: Kitika 2018)

Figure 14. Screenshots from Possession - street film

CASE (10) Night district inside Chiang Mai old city



(Source: Kitika 2018)

Figure 15. Screenshots from Zoe in/out yellow - street film

Table 2. Analysis on mixed-use characteristic

Case Study	Tactic on design features.	Mixed-use characteristic – shared space		
		economic vitality	social equity	environmental quality
Case 1: Chang Phuak bus station	Re-managing urban area	City & suburban public transportation	Public transit and private truck organization	Managing areas, particular route & time schedule
Case 2: Front area on Chang Phuak bank	Re-managing urban area	Private parking & public school bus	Bank officer and customers & students	Managing areas, particular route & time schedule
Case 3: Umbrella morning market	Adjustable unit design	Adding value on area as morning market	Business and public area purpose	Setting up unit and activity due time schedule
Case 4: Local transit node	Adjustable unit design	Adding value on area as day-time transit node	Business and public area purpose	Setting up unit and activity due time schedule
Case 5: Pedestrian area on jazz bar	Flexible area usage	Extending business area and support tourism	Community & tourists	Allowance for providing multiple activities
Case 6: Pedestrian area on noodle shop	Flexible area usage	Extending business area and support tourism	Community & tourists	Allowance for providing multiple activities
Case 7: Parasite shop	Adjustable unit design	Adding value on area as daytime shops	Business and public area purpose	Setting up unit and activity due time schedule
Case 8: Lam Chang temple	Re-managing urban area	Cultural tourism (Community & investigators)	Community & tourists	Managing areas, particular norm and agreement.
Case 9: Community area in salon	Flexible area usage	Extending business area and support community	Community relations	Allowance for providing multiple activities
Case 10: Night district inside old city	Flexible area usage	Extending business area and support tourism	Tourism (Accommodations and recreation spots)	Allowance for providing multiple activities

From this analysis, 10 case studies has commonly got mixed-use characteristic as shared-space which elevates area usage to gain various economic vitality, social equity and also environmental quality. Interestingly, this analysis has shown 3 tactics on design features which include; adjustable unit design, flexible area usage and re-managing urban area. These 3 tactics is to analyze in terms of architectural design on next session with isometric studying.

3.4 Analysis Session: New features for mixed-use design

To understand architectural design on each case, researcher analyzed 10 case studies on mixed-use characteristic with isometric study. Isometric drawing is to represent how architectural design operates to mixed use characteristics. After understanding architectural design by isometric study, these common designs are developed to new features. Researcher provides 3 new features for design following 3 kinds of isometric studying and they provide as adjustable unit design, flexible schematic and overlapped area.

3.4.1 *Adjustable unit design* is a mixed-use design feature to not only create its own unit but also, the design can adjustable while other public uses happen. This unit design locates on potential urban area and adjusts environment for private and public purposes. This feature includes; Case 3: Umbrella market, Case 4: Local transit node and Case 7: Parasite shop. (Figure 16)

On case 7: Parasite shop, this sewing shop hang itself on School wall and tree. Besides, its area is within drainage pathway. This unit design is represented mixed-use activities which adapted into urban scape. From understanding these mixed-use area usages on urban area. (Figure 17)

On Case 4: Local transit node, this case study appears activities adjustment on urban gap. This area is originally set-back area for intersection. This gap area is covered with big tree and located behind police booth. With these existing environment, this area have managed for red truck waiting node and attract to tourists. (Figure 18)

On case 3: Umbrella morning market, an important element is locating umbrella for setting shop in Changphuak morning fresh market. Bending umbrella is related to sun shading during morning time. Those shading has covered selling area and making localness atmosphere. But residents who live in opposite shophouses cannot use front area of their own house until market is over around 11 am. (Figure 19)

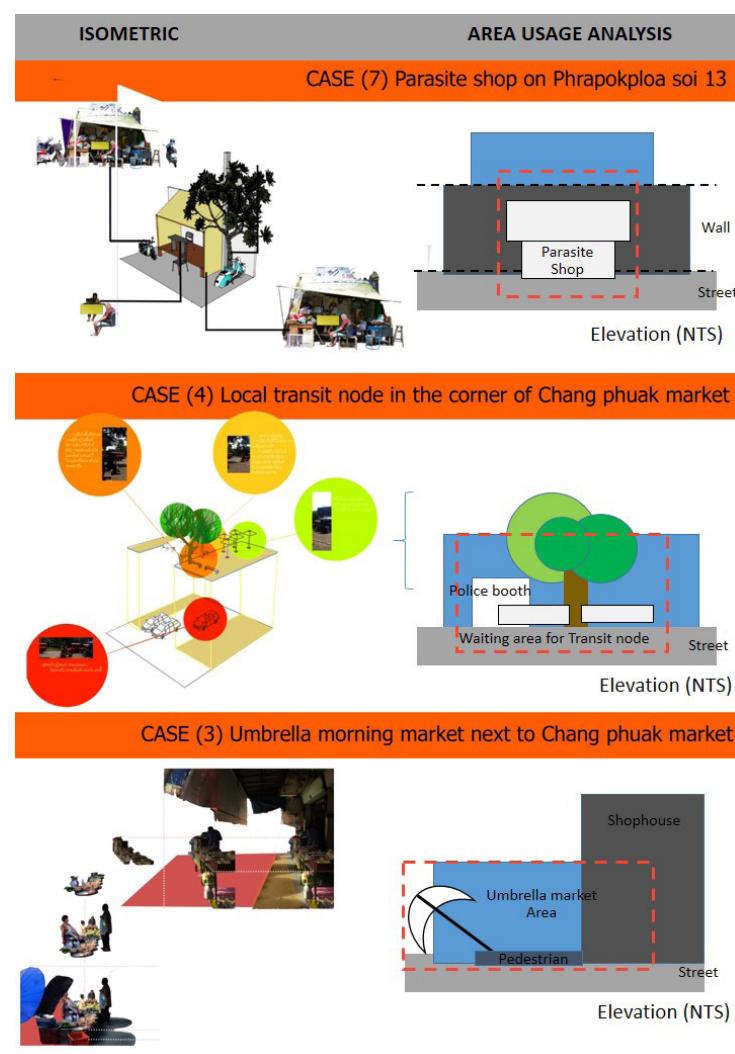


Figure 16. Adjustable unit design - isometric drawin

(Source: Kitika 2018)

ARCHITECTURAL DESIGN PROCESS

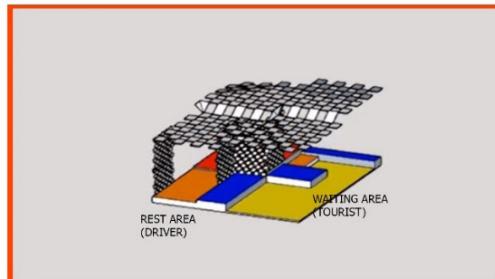


"UNIT DESIGN" DESIGN PROCESS TOWARDS MIXED-USE BUILDING

(Source: Kitika 2018)

Figure 17. Adjustable unit design on case 7

ARCHITECTURAL DESIGN PROCESS

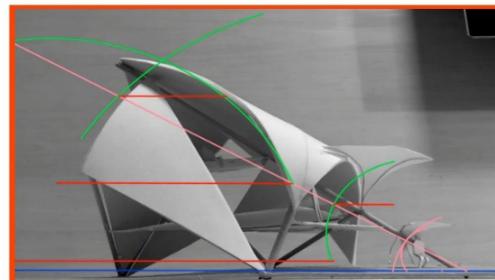


"UNIT DESIGN" DESIGN PROCESS TOWARDS CONCEPTUAL AREA USAGE

(Source: Kitika 2018)

Figure 18. Adjustable unit design on case 4

ARCHITECTURAL DESIGN PROCESS



"UNIT DESIGN" DESIGN PROCESS TOWARDS CONCEPTUAL MASS

(Source: Kitika 2018)

Figure 19. Adjustable unit design on case 3

3.4.2 Flexible schematic is a mixed-use design feature to re-management urban area for organizing multiple purposes on an area. This schematic has been diverse organized due time and users. This feature includes; Case 1: Chang Phuak bus station, Front area on Bangkok bank Chang Phuak branch and, Case 8: Lam Chang temple Community. (Figure 20)

On case 1: Chang Phuak bus station, main public transportation in Chiang Mai is red truck which is organized by local organization. Red truck transportation system has organized with 2 main routes; city route and suburb area route. Both routes have uncertain time schedule and unidentifiable stop. Besides, local has to wait and spend waiting time on commercial shops where spread following to red truck waiting node. (Figure 21)

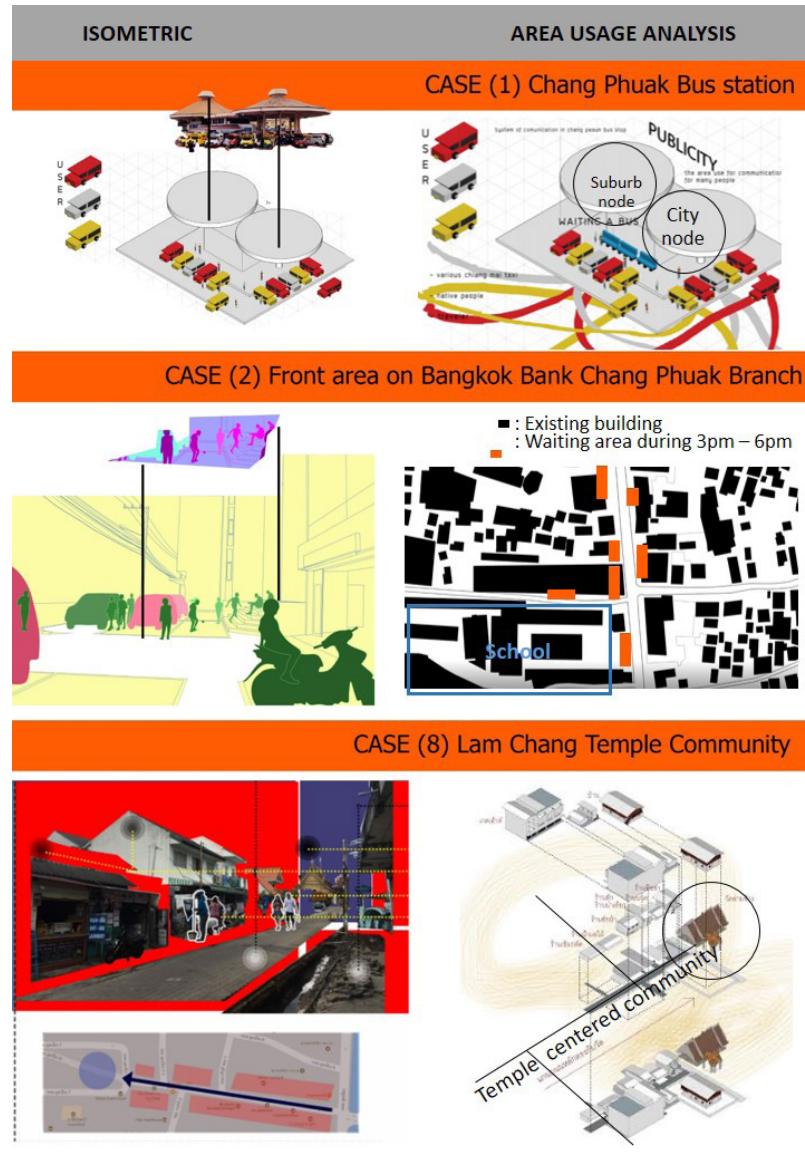
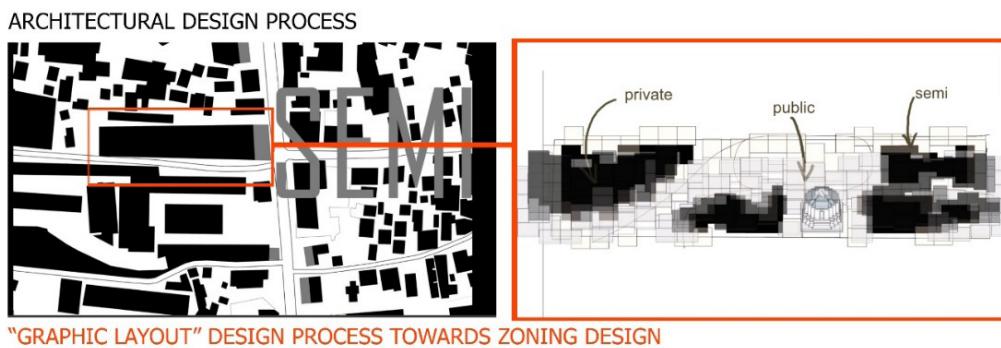


Figure 20. Flexible schematic - isometric drawing

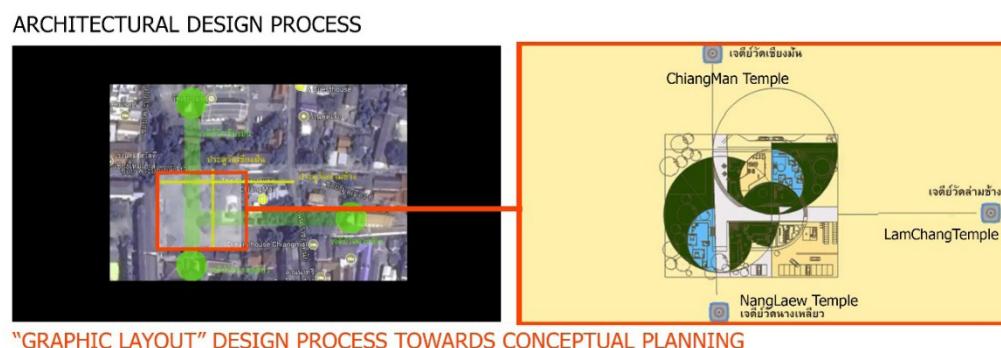


Figure 21. Flexible schematic on case 1



(Source: Kitika 2018)

Figure 22. Flexible schematic on case 2



(Source: Kitika 2018)

Figure 23. Flexible schematic on case 8

On case 2: Front area on Bangkok bank Chang Phuak branch, there are surrounding with universities and schools. Mixed-use activities on the site are seen as various students waiting area after school hour. Students always select and wait on public area where closed and easy to pick-up. (Figure 22)

On case 8: Lam Chang community, temple centered community is main idea for local community origin. Since many areas in old city were developed with modern city planning thought. Temple centered community has appears on social network which controls residents and new business owners. On architectural design, there has been lacking of temple centered community characters visually. (Figure 23)

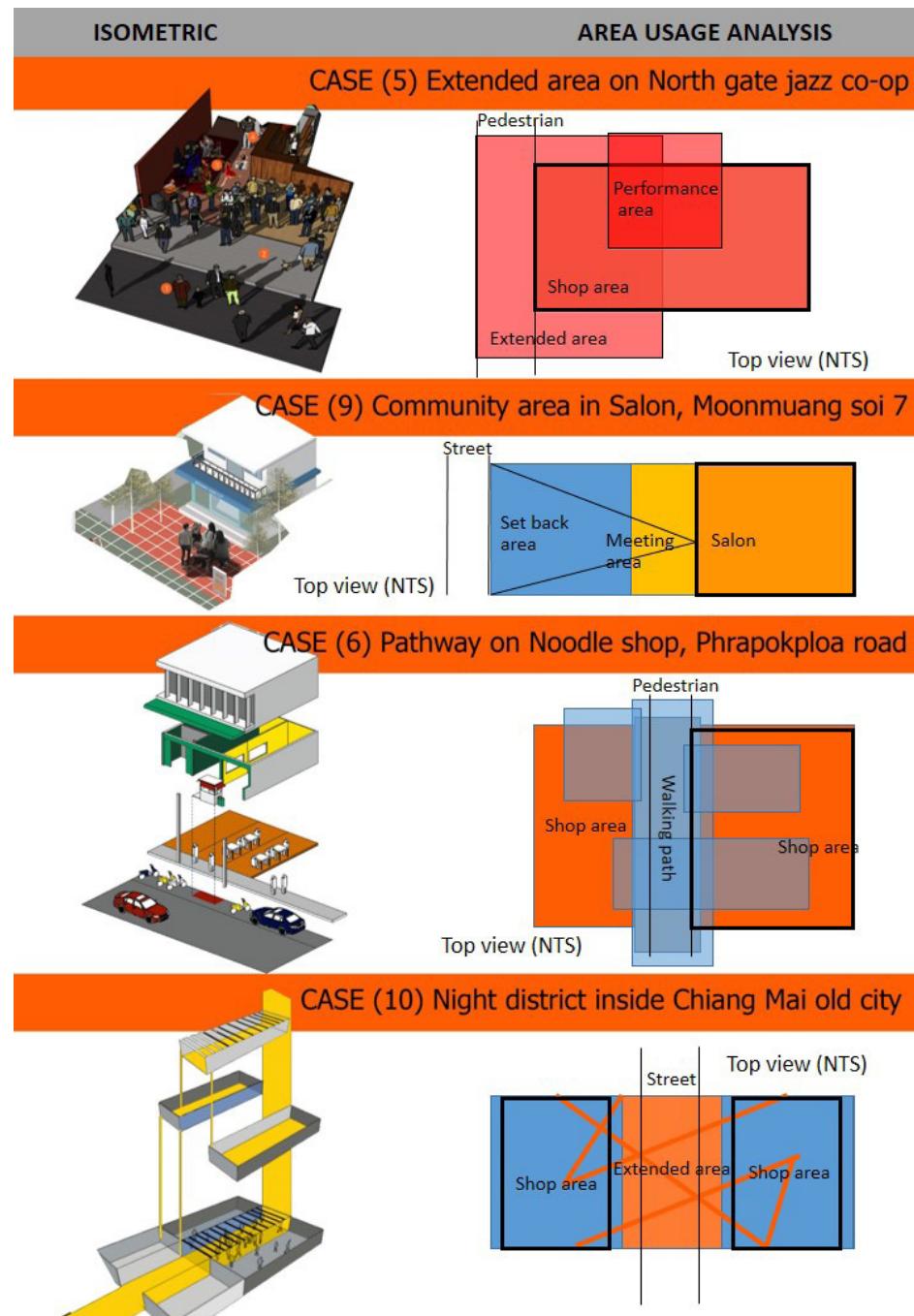
3.4.3 *Overlapped area* is a mixed-use design feature to organize complexity functions which are overlapped on one specific area. Each function has its own area usage and allow other functions to happen. Most of functions are fostering each other, this feature includes; Case 5: Pedestrian area on jazz bar, Case 6: Pedestrian area on noodle shop, Case

9: Community area in salon, and Case 10: Night district inside Chiang Mai old city. (Figure 24)

On case 06: Pedestrian area on noodle shop, this feature provides an extending business area to public pavement, this shop area has covered pedestrian area and but also has managed visible walking through area for people. This mixed-use area has always been seen around Thailand. (Figure 25)

On case 9 Community area in salon, this feature provides a gathering area, where is publicity area and concerns to physical design and also social interaction. This case study represents mixed-use area where naturally gathers group of people and connects publicity to privacy area usages. (Figure 26)

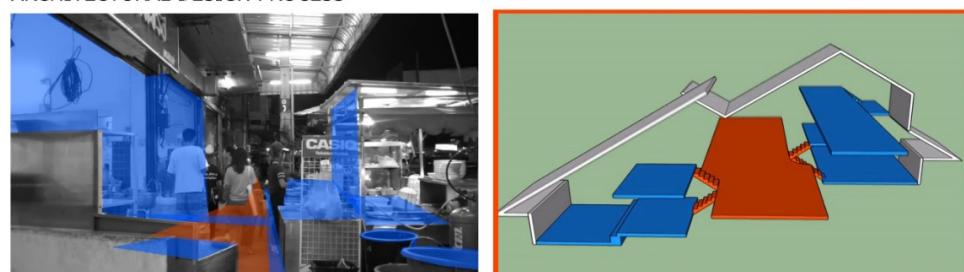
On Case 5: Pedestrian area on jazz bar, this feature design provides diversity extending areas for commercial purpose is appeared on public pavement around Chiang Mai old city. This case has shown the relationship between activity and extending areas. Sounds from music/art performance has controlled people direction and area usages. (Figure 27)



(Source: Kitika 2018)

Figure 24. Overlapped area - isometric drawing

ARCHITECTURAL DESIGN PROCESS



"COLLAGED LAYER" DESIGN PROCESS TOWARDS CONCEPTUAL AREA USAGE

(Source: Kitika 2018)

Figure 25. Overlapped area analysis on case 6

ARCHITECTURAL DESIGN PROCESS

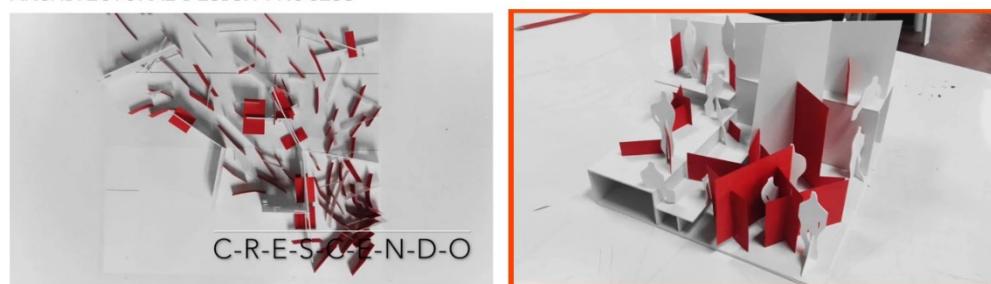


"COLLAGED LAYER" DESIGN PROCESS TOWARDS CONCEPTUAL ARCHITECTURAL PLANNING

(Source: Kitika 2018)

Figure 26. Overlapped area analysis on case 9

ARCHITECTURAL DESIGN PROCESS

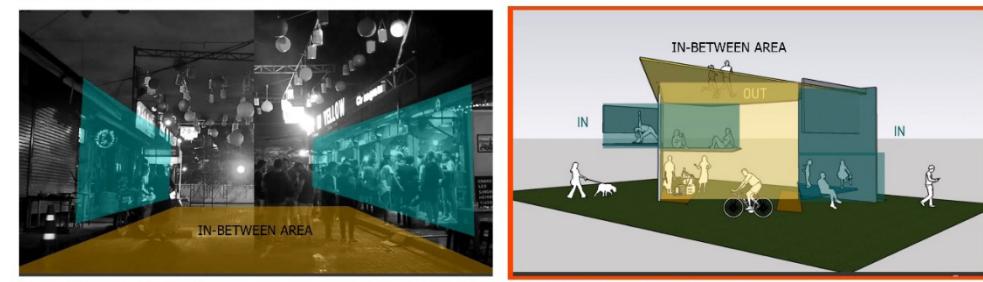


"COLLAGED LAYER" DESIGN PROCESS TOWARDS CONCEPTUAL MASS

(Source: Kitika 2018)

Figure 27. Overlapped area analysis on case 5

ARCHITECTURAL DESIGN PROCESS



"COLLAGED LAYER" DESIGN PROCESS TOWARDS CONCEPTUAL AREA USAGE

(Source: Kitika 2018)

Figure 28. Overlapped area analysis on case 10

On case 10: Night district inside Chiang Mai old city, this design feature has shown the conversation between 2 building where flexibly have extended and connected activity. This in-between area has tactically gained commercial purpose for expanding area wider and more profit. (Figure 28)

4. Conclusion

Researcher scopes on understanding of mixed-use design feature which is a study from actual local's spatial practicing as bottom-up studying. These tactics represent mixed-use characteristic among Chiang Mai old city context. This statement contrasts to modern

city planning and determines new mixed-use design feature from people centered design through Asian developing city. The findings in this studying provide for 2 stages; mixed-use design feature and academic contribution.

First stage, mixed-use design feature which has studies on case studies in Chiang Mai old city. This study has appeared the narration of new mixed-use design feature s which Government's top-down strategy doesn't related to the diversity of local purposes. Without on-site studying, these areas couldn't belong to Chiang Mai's Creative city urban development plan which mainly forces with understanding community network as Community based design (Climate change and infrastructure research unit of Chiang Mai University, 2014). This study gives an alternative way to re-design public area usages by following with the definition of mixed-use design. The outcome is a proposal of re-design urban area usage following the diversity purposes which related to community network on each case. And finally this study has found the determinations of mixed-use design for 3 kind of new design features;

I.) Adjustable unit design, this feature is a unit design which can adaptive adjust into urban surroundings.

II.)Flexible schematic, this feature is schematic design for organizing diversity urban area usages with community network and urban scape.

III.) Overlapped area, this feature is a design for providing the mixture of multiply functions on potential urban area.

Second stage: Academic Contribution, this study is also to reinforce the conceptual idea of Spatial Practice and Neighborhood network. Spatial practice is a socio-cultural approached learning in on-site

phenomenon which is existed and negotiates to main strategy. Then analysis for 2 Spatial practices, strategy which is strictly main function by government or investigators and, tactics which is flexible and negotiate with strategy. Those tactics are naturally developed by residents and users in those areas. So, the understanding of publicity architectural design on difference context is a study on focusing in Local tactics because those tactic are potential relations and appear as spatial practice between the combination of physical design and social relations. The relation between Physical design and Social interaction, considering to Neighborhood network concept, there provides 2 components to maintain and improve the relations between residents inside community; Physical design and Social relation. Physical design is to consider on architectural elements and planning where appear flexible tactics. And social relation is to have observation on local's behaviors. Those components are suitable environments for maintaining those tactics. From those fostering, the relation is assumed as neighborhood network in Thai context.

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