การออกแบบนิทรรศการการเรียนรู้อย่างมีปฏิสัมพันธ์ แนวทางเพื่อส่งเสริมการพัฒนาทักษะภาษาอังกฤษด้วยตนเองในพื้นที่สาธารณะ
Interactive Display Design: A Guide to Encourage Self-Access English Learning Skill in Public Space

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บทคัดย่อ

ปัญหาการขาดทักษะความรู้ภาษาอังกฤษของคนไทยเป็นสิ่งที่ต้องเร่งแก้ไข และการเป็นหนึ่งในประเทศสมาชิกอาเซียน ทำให้จำเป็นต้องมีการส่งเสริมการพัฒนาทักษะความรู้ด้านภาษาอังกฤษ แต่ความเป็นจริงคนไทยทั่วไปยังขาดการกระตุ้นการเรียนการสอนด้านภาษา อย่างไรก็ตามหลายหน่วยงานได้ตระหนักถึงความสำคัญของการออกแบบพื้นที่การเรียนรู้ภาษาด้วยตนเอง เพื่อส่งเสริมและแก้ปัญหาการขาดทักษะความรู้ภาษาอังกฤษของคนไทย จึงเกิดคำถามวิจัยว่า การออกแบบนิทรรศการการเรียนรู้ภาษาด้วยตนเอง สามารถส่งเสริมการพัฒนาทักษะภาษาอังกฤษได้อย่างไร การวิจัยนี้จึงมีวัตถุประสงค์เพื่อศึกษาแนวทางปัญหาการขาดทักษะความรู้ภาษา และทราบแนวทางแก้ไขโดยการออกแบบเพื่อนำไปสู่การส่งเสริมพัฒนาทักษะภาษาอังกฤษในพื้นที่สาธารณะ โดยมีวิธีเชิงคุณภาพ ด้วยการสัมภาษณ์อาจารย์ชาวต่างชาติที่มีประสบการณ์สอนภาษาอังกฤษในประเทศไทย และโดยมีวิธีเชิงปริมาณ ด้วยการทำแบบสอบถามออนไลน์จากโปรแกรม (Survey Monkey) จากคนไทยช่วงอายุ 18 ถึง 25 ปี จากการศึกษาพบว่าการเรียนการสอนในห้องเรียน ไม่สามารถกระตุ้นความสนใจของผู้เรียนได้ดี เมื่อเทียบกับการเรียนรู้จากภายนอกห้องเรียน การออกแบบนิทรรศการการเรียนรู้อย่างมีปฏิสัมพันธ์ สำหรับการทำกิจกรรมที่ส่งเสริมทักษะความรู้ด้านภาษาอังกฤษนั้น เป็นการกระตุ้นให้บุคคลมีความสนใจและมีปฏิสัมพันธ์ โดยมีปัจจัยที่เกื้อหนุนจาก สื่อ แหล่งความรู้ และบุคคล เพื่อส่งเสริมให้บุคคลได้เรียนรู้ตามความสนใจอย่างไม่มีที่สิ้นสุด

ABSTRACT

A lack of knowledge in English is a problem that needs to be rectified. Since Thailand is a member of ASEAN it is necessary to support the English language skills for Thai people. On the other hand, Thai people still lack the motivation to learn English. Efforts in helping to learn have started to realise the importance of space design for self-access learning to improve their skills and problem-solving on the lack of English skills of the Thai people. This lead to the research question is 'How does interactive display design for self-access language bring out the improvement on Thai

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people's proficiency in the public space?' The research objectives are to study the cause of over low English language skills among Thai learners and to find the solution to design space leads to improve and encourage Thai learners to learn English language in the public space. The interview was applied to collect a qualitative data of foreign teachers who had been teaching English in Thailand. A questionnaire was applied to collect a quantitative data of Thai people ages around 18 to 25 years. The study found that teaching in the classroom cannot stimulate the interest of students when compared to learning outside the classroom. The providing of interactive display design for self-access activities, skills and knowledge is the place for learners to be more interested and interact from the factor that contributes to the media, resources, and person for support self-access learning by their learning style for a lifelong study.

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Introduction

ASEAN charter article 34 states that "The working language of ASEAN shall be English", this is because AEC has used English as the official language to communicate (Nopporn, 2556). However, Little (2011) argued that the current situation of the Thais' English skills is below the standard of English education. There are some evidences of Thai students performing poorly in the English language when they are in comparison with ASEAN partners (TOEFL, 2010). There were several factors that affecting the low quality of English language, one has been a lack of support in teaching and learning approaches such as the study materials and environment that motivate the learners (Van Patten and William, 2007). A study by Permvongsenee (2012) stated that Thai students use English to communicate just in the English language class, after finishing class they preferred to use Thai rather than the English language because they never really paid attention to the lessons. On the other hand, it's because the learners don't really have a strong support to encourage their learning and develop their skills.

In modern educational learning there is a theory that describes the self-learning or learning from practice; with regards to the theory of constructionism or constructivism it is believed that knowledge and wisdom are inherent in all people. The suitable environment can help learners to become interested and influenced by the structure of knowledge (Connections Academy, 2013). "The self-access learning is the best process for the learner to follow their learning style (Somkid, 2538; 4)." Juruad (2548) described the teaching education as being focused on feeding knowledge, which is not the best process on self-access learning. That's because all the knowledge can be

discovered from technology. What the learners need is a learning space or an interactive space design instead of just being in the classroom. Thus, the learning space may provide learning that is based on the exchange of opinions, knowledge, activity and expression, which is the centre of a good atmosphere for personal access learning.

The design of interactive display for personal learning is the guideline to solve the lack of English skills of Thai people. The idea is on providing a good environment for self-access in the public space by interacting through a display of relationship between people, space and the environment. Learning from observation or imitation has influenced people to realize what's happening around them and to become highly interested in seeing another person or interact with them as well. Busakorn (2015) shows that the importance of design for self-access language learning in the public space is a good direction that can stimulate learning outside the classroom for motivating learners to develop their English skills and gain personal-benefit in society thoroughly (Nantipa, 2550).

Purpose of Research

1. To study self-access learning.

2. To investigate the cause of teaching that lead to a lack of English skills in Thailand.

3. To find the solution and to design a display that leads to improvement and encouragement for Thai learners to learn English language in the public space.

Research Instruments

This research is based on a study with a device that consists of the following 3 steps:

1) The study and understanding of English education in Thailand had been investigated, defined, and identified as the English learning problem. Perform literature research and review regarding the English language to demonstrate a solution. Next, the researcher studied the data of self-access learning to understand the way to support English learning so that the individual can improve his/her English proficiency. Moreover, the researcher also investigated the relationship between the environment & interactive display design, and self-access learning, which is based on the information related to the literature.

2) Next, strategies and approaches involved in the issues have been examined for clarification and on how the current appropriate approaches have looked at the problem. The research method was done in an 'interview and questionnaire' format. The interviews were done in an unstructured manner and were analysed. The interview was conducted with three foreign teachers who have been teaching English in Thailand: they have a minimum of 5 years teaching experience from various universities located in Chiang Mai. The study had discovered that Thai

students lack the necessary support to learn English language in the public. Their opinion was utilized as an important piece of information on the interactive display design for self-access language, which can help Thai people in learning and develop their English language proficiency.

Table 1 The suggesting interview questions below will be used to ask the interviewee.

RESEARCH QUESTION	SPECIFIC PURPOSE	BROAD AIM
Question 1 What is the difference between learning English in English class and outside the class room?	Would like to know if the environment of learning in class and outside can effect motivation of self-access learning.	This result can be utilised to focus the design for the environment, which can lead to motivation of self-access learning.
Question 2 How do you ensure that your students are motivated when they learn outside the class?	Would like to know the attention of students when they learn outside the class.	This result reminds the designer to create the design for supporting learners in an external environment and not only in the class room.
Question 4 Do the Thai learner's lack support in learning English language in the public?	Would like to know that this problem lead to a lack of opportunity to use English in their daily life.	This result remind the designer to design a space and display to support learning English in the public which is also important as if learning in the classroom.
Question 4 Do the Thai learner's lack support in learning English language in the public?	Would like to know that this problem lead to a lack of opportunity to use English in their daily life.	This result remind the designer to design a space and display to support learning English in the public which is also important as if learning in the classroom.
Question 5 What is the importance of interactive display design for self- access learning?	Would like to know that learning by using interactive display design for self-access learning could help Thai learners to develop and encourage English proficiency.	This result reminds the learner and the teacher about the way that they should learn and support English language learning in Thailand.
Question 6 What is the Thai learners learning style?	Would like to know that the learning style of Thai people.	This result is useful to understand about the learners and apply the information for design.

For the second method, the questionnaire survey was aimed at finding the learning styles for self-access learning language and designing interactive display for effective learning in the public space. There are 5 questions in the questionnaire survey; this was carried out through an online survey which surveyed 50 young Thai people aged 18 to 25 year olds, gender was not taken into consideration. Below is a sample of the questionnaire that will be used (Fig. 1, 2).

1. What is your age?

○ 18   ○ 21   ○ 24

○ 19   ○ 22   ○ 25

○ 20   ○ 23

2. What is your learning style? and why you think that learning style were effective tool in improving your English learning skills?

○ Lecture   ○ Reading   ○ Audio Visual   ○ Demonstration   ○ Discussion Group

○ Practice by doing

3. If in the public provide a space & interactive display for self-access learning language, do you think it will help to encourage and improve English among Thai people or not and why?

Fig. 1 Show the questionnaire which has five questions; questionnaire number 1 to 3.

4. Which factors influence your intention to enter a space & interactive display in the public?

This question allows the ranking of survey items, in this case ranking from 1-3 in order of preference (1 being the most preferred and 3 being the least preferred).

::	⬍	The function of space & display
::	⬍	The environment
::	⬍	The space & display design

5. In your opinion, what is making space & interactive display design for self-access learning language more effective?

Fig. 2 Show the questionnaire which has five questions; questionnaire number 4 to 5.

3.) Clarification will be derived from the English language learning issues relating to the design solution, which is derived from target users' experience. The selected analysed data are applied and the combined selected data are applied for the intended design, and the design project had been indicated. The outcomes of this project were evaluated to ascertain whether it is applicable or not.

Theoretical Framework

A study by Sorensen (1999) stated that the problem of low English proficiency perhaps is from not having a public space which focuses on learning a language in Thailand. Hutchinson (2006) noted the stage of the development in English skills: the government should provide an English display or exhibition which emphasise self-access learning. Moreover, Worapan, the president of the Publishers and Booksellers Association of Thailand (cited in Kaewmukda, 2010) in Thailand, stated that learning English vocabulary and reading should be promoted as part of the people's life and to support Thais' learning in the public instead of only in the classroom. Takac (2008) concluded that the importance of learning a language is through experience and having a supportive learning environment for the learners.

▪ **Kolb's Learning Styles Thoery**

This theory is the idea for people to understand the elements of personal learning style. It is useful for people to understand about their preferred style. Motivating the learners to practice English through learning styles is based on developing the methodologies and tools to achieve a knowledge-based experience. David Kolb in 1984 (cited in the Learning and Skills Improvement Service LSIS, 2012) suggested that the four stages to complete Cycle of learning are as followed:

1. Concrete Experience (CE)
2. Reflective Observation (RO)
3. Abstract Conceptualisation (AC)
4. Active Experimentation (AE)

There are several of intelligences or learning styles as illustrated by Gardner, the learner can try and apply to learn new thing and develop their weaknesses style to get learning much easier, quicker and effective which consist of interpersonal, intrapersonal, bodily/kinesthetic, musical, logical/mathematical, verbal/linguistic, naturalist and visual/special (Leonard, 2002).

▪ **Self-Access Language Learning in Public Space**

Self-access language learning in public space is the place achievement of learners in knowledge and culture by providing the resources for citizens in universal education as a continuing and lifelong process (Thompson, 1989). The Self-access language learning is to bridge the gap between the people who have low English proficiency and the limited opportunity to learn English. Arom (1998) claimed that in order to provide the high quality tools of learning English and to develop English skills, a plan should consist of Self access learning in the public space that is not only in school, thus leading to the development of learners skills for life-long education and quality of life among Thai learners. Gardner and Miller (1999) pointed out the method to apply at least initially to encourage more effective self-access learning in the public space with the following:

- Encourage Self-access learning in everyday life among learners not only in the school or university.

- The provider needs to work on their goals in the way to support self-access learning more widely.

- Find a good location of the self-access which the citizen can practise their English skills with foreigners.

- Find the weakness of users, to provide the suitable techniques and learning materials to support them.

- Understand users as if you're on a quest to find a better way for them to meet their needs in gaining more knowledge.

▪ **Interactive Display in Public Space**

From the last paragraph, it could be stated that the suitable techniques and learning materials, that can encourage self-access learning in everyday life in the public space, should be designed as an interactive space or display that a person can see while they walk pass and do not need to become too serious when learning. The design needs to understand and realise what is the basic of learning for people by linking the knowledge on the relationship between life and space. Multimedia and the interactive display were used in many places such as museums, exhibitions and public space. Interactive display is the new technology that motivates human behavior in the way of incentive for using them. This is necessary to invite user in the potential for interaction users in the public. Interactive display is the potential tool of learning for self-access (Muller et al., 2010).

Requirements and design space for interactive public display need to set up a space to motivate personal behavior in a way that is shown in Fig. 3 and Fig. 4.
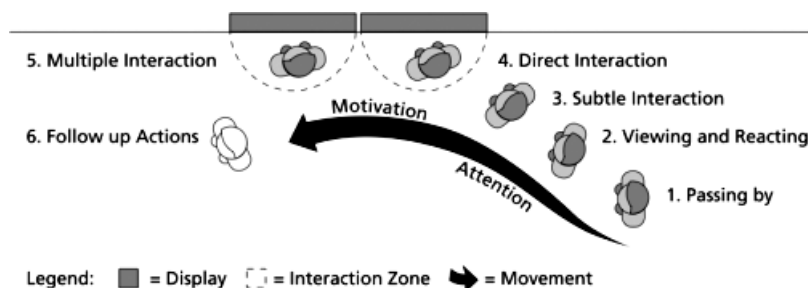

Fig. 3 This picture shows the audience funnel that they attend with the interactive display.

Effective learning through experience has become the key factors in today's global competition. Thus, developing tools to motivate Thai people interested in learning English language, Star (1994) pointed out that the learning tool through interactive display for self-access refer to lifelong learning. In general, for design processes, learning through experiences helps develop self-improving skills.
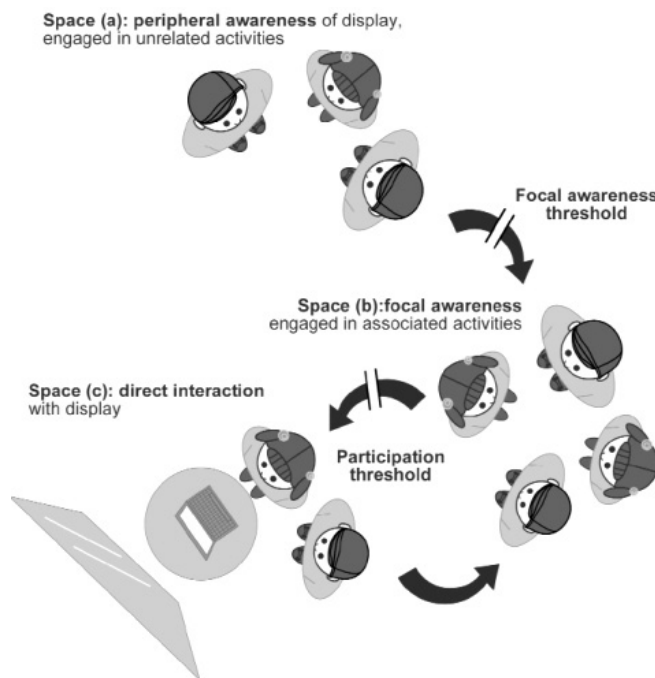
Fig. 4 This picture indicates the analysis of interactive displays by Harry, 2008
(cited in Michelis, 2012) "divided the process from perception to direct interaction with the
featured content into three general phases, as shown in the figure: a) peripheral awareness
activities, b) focal awareness activities and c) direct interaction."

The Suggestion from Theory and Data Analysis

Star (1994) stated that the strategies for interior designers in designing to solve the study's
problem such as language learning or other learning are through the consideration of behaviour
theory. The understanding of users is based on the learning styles of each person and the
application on the designing interior is the effective depth for the design solution. "For designing
of learning through interactive design the focus is on providing a revolutionary new learning
experience that makes learning much more efficient" (Connolly, 2011: 148). Mean and Tims, 2005
(cited in the JRF's research and development programme, 2010: 9) suggested the following 'rules
of engagement' were important in creating successful social spaces:

     - Access and availability–good physical access, welcoming spaces.

     - Invitations by peers and others–embedded in social networks to encourage use.

     - Exchange-based relationships.

     - Moving beyond mono-cultures–encouraging diverse groups and activities to share
common spaces.

▪ **Key Findings and Guideline**

The study has investigated specific aspects of low English proficiency among Thai people, which inevitably had some influences for the design solution. The best solution for the learners has been illustrated. This is the research results for the English learning development such as personal motivation on language learning through interactive display. Table 2 had concluded the requirements of designs by the teacher and expectations of behaviour that need to take place or encourage the design for self-access in the public. Moreover, table 3 demonstrated the guideline conclusion for design to support cognitive effectiveness and social support which is derived from the interview.

Table 2 The requirements of designs by concerning the behaviour of the user

Finding	1. Thai people have limited English skills.
	2. Thai people do not have an English leaning interactive display in the public
	3. The self-access Language Display can assist people in improving their English skills by themselves
Space	1. Public space
	2. Outside the class room.
Function	1. Interactive with user.
	2. Can assist person in improving their English skills by themselves.
	3. Temporary Exhibition: can change the data learning
	4. The area can be adjusted to respond to a variety of learning activities.
	5. Modern communication systems
Behaviour/ Activities	1. Self-access learning
	2. Communities of practice for motivating others to join
	3. learning without permission
	4. Learning the English language
Behaviour and expectations of environment	1. To establish suitable learning opportunities including the setting of appropriate activities.
	2. Environment must be attractive and stimulate learning.
	3. To provide new technology and new resource.

Table 3 Guideline for designing to support cognitive effectiveness and social support

Cognitive Effectiveness	Social Support
1. Good fun, nice environment and atmosphere can create impression which leads to good learning.	1. Environment should reflect the uniqueness of the place.
2. Passion for the outdoor environment will help enhance the learning process and experience in long-term study.	2. The design space for activities should be in an appropriate size.
3. Environment presents a form of order to help people understand that the applications are easy to use.	3. Environment can be adjusted to the user privacy when they needed.

In the questionnaire survey there was evidence of interactive display design influences on effective learning among the Thai people. 50 people participated in the questionnaire survey. The chart was used to describe the result of questionnaire. The proportion of female is more than male: there were 32 females. The chart shows 22 participants, aged around 18 to 20 years old, are lower than participants, aged around 21 to 25 years old (see Fig. 5). Furthermore, there is a questionnaire of learning style; 'what is your learning style, when do you want to improve your English skills?' The researcher has found that the majority of participants chose learning by 'audio visual' 19 people and 'practice by doing' 21 people. While some 3 participants chose learning by 'lecture', 7 people chose 'reading', nobody chose 'demonstration' and discussion group (see Fig. 6).
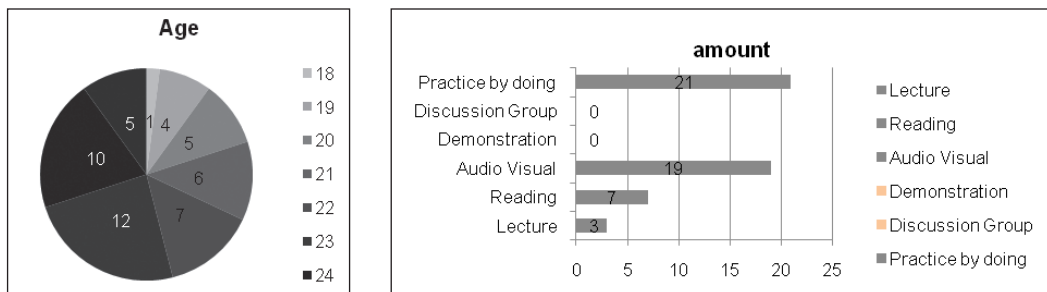

Fig. 5 Left hand side: the pie chart shows the amount of participant age.
Fig. 6 Right hand side: the chart illustrates learning style of participant.

For the learning style of each participant, the researcher has found that the importance of learning a language is conducive of a learning environment. Most of the participants think that 'Audio Visual' and also Practice by doing can help them to improve their English skills. Audio Visual had been material based learning rather than any other theoretical way to acquire the second language. It is more important because about 85% in the present teaching system are affiliated with the audio-visual materials and practice by doing. Table 4 illustrates the overall of opinion from the participants of questionnaire number 3 (questionnaire number 3 see Fig. 1).

Table 4 The reason of providing interactive display for self-access learning language in the public will help to encourage and improve personal learning.

Key-Findings
1. Motivate learners and promote learning as an activity, support collaborative as well as formal
2. The importance of interactive display for self-access learning language help Thai learners practices the language skills by themselves. Provide different materials that include media and other aspects that can lead to l earner's efficiency in language learning.
3. Interactive display is a 'practice by doing' because learners enjoy having fun while they learn.
4. The high-quality of interactive display, such as the environment, display a design and activity for learning which are the main factors influencing people to go to play and stimulates effective learning.

In addition, the range below presents the factors that influence people's intention to enter a space & interactive display in the public. First, the environment around the public space had 23 people. Second, the interactive display design had 16 people and the function of space & interactive display had 11 people that chose.

Table 5 The ranging of factors had influence people's intention to enter an interactive display in the public.

1	environment around the public space
2	interactive display design
3	function of interactive display

In the final questionnaire, the researcher concluded that the opinion of participants making interactive display design for self-access language learning was more effective due to the following reasons: first, there was an academic interactive display for some users such as students or citizens. Second, there was a practice on language skills through personal access, in addition it was followed by what has been taught in the classroom. Third, there was practicing and learning from personal experience in the public. Lastly, there was learning by practice and doing from a picture or diagram than from a lot of text.

Obviously, it can be seen from the interview and questionnaire based on literature review that Thais lacked the support to learn English in the public because there is a lack of opportunity to use English in their daily life: the majority of Thais speak Thai to communicate with each other. The researcher used the suggestion from the research to create a space & interactive display in the way of a guideline design to encourage self-access English learning skill in public space.

The Conclusion of A Guideline Design and Suggestions for Further Design

According to Suvanajata, the Thai ambassador to Myanmar (cited in Bangkok Post, 2013) said university and colleges needed to help correct a mindset of Thais and equip them with adequate knowledge to be ready and realistic for the integrated regional society, especially for learning the English language. The guideline to support language learning is on designing an interactive display which will be established to encourage the adoption of English language among Thai people, especially with adolescent between the ages 18 to 25 years old. The aim of the design is to emphasise the importance of English language and encourage the learner to learn by themselves. In addition, the aim also brings out improving English proficiency and on influencing people to adopt the English language by playing from an interactive display.
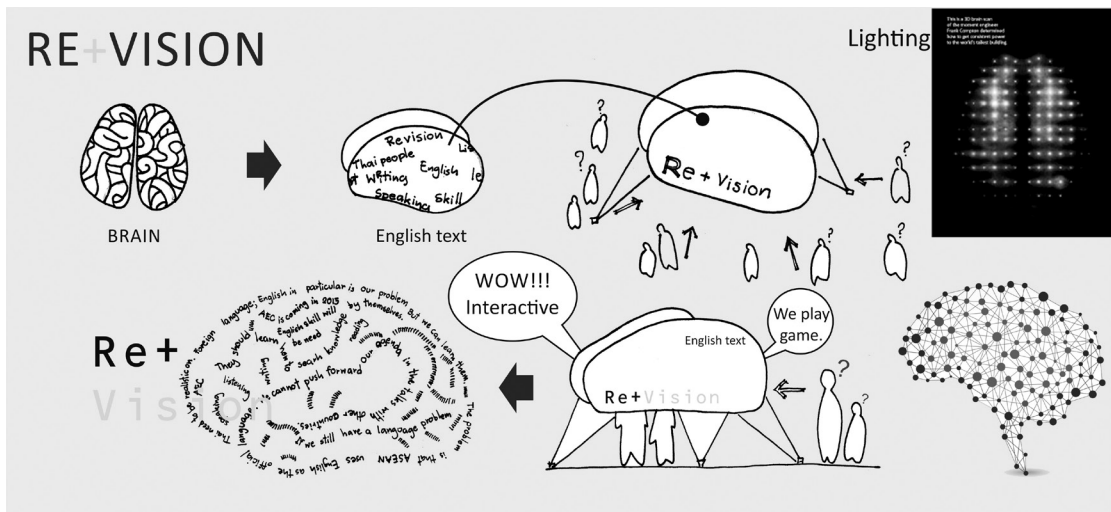
Fig. 7 This sketch design show the use of brain structure to convey "Re+Vision" concept.
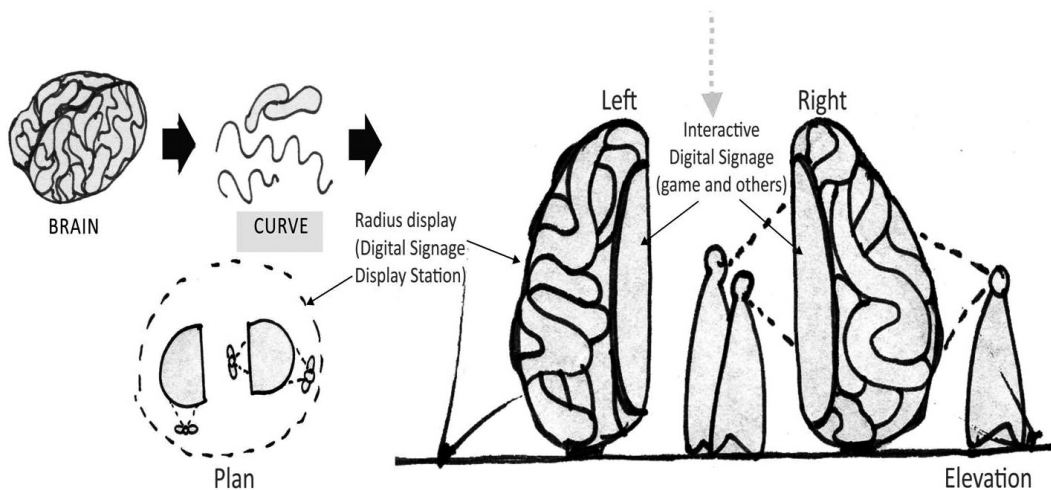

Fig. 8 This sketch design shows the use of brain structure to convey "Re+Vision" concept.

As illustrated on Fig. 7 above, the concept presents the human brain in theme 'Revision' which is aim for people in rethinking their mind about language learning that English is not difficult to learn. The process shows that when user sees the interactive display, they might have different thinking especially, about learning English. Nevertheless, when they walk inside the interactive display, it will present the activities for personal access to their skills. This interactive display can change a person's thinking in terms of different thinking to be the same thinking by using the same brain with others. The idea is when audience interact with the interactive display, they will change

their mind to appreciate that English is fun, and challenges them to play and learn more with the interactive display.

The interactive display in the public has considered the theory and the result of surveys which had been applied to the functions of design, materials and others which lead to the short term solutions to address low English skills problem with learning of experience through 'audio visual' and 'practice by doing the learning style. The interactive display was design from the radius display that people can interact around the display which is divided into 2 sides of the brain which have different activities of learning (see Fig. 8).
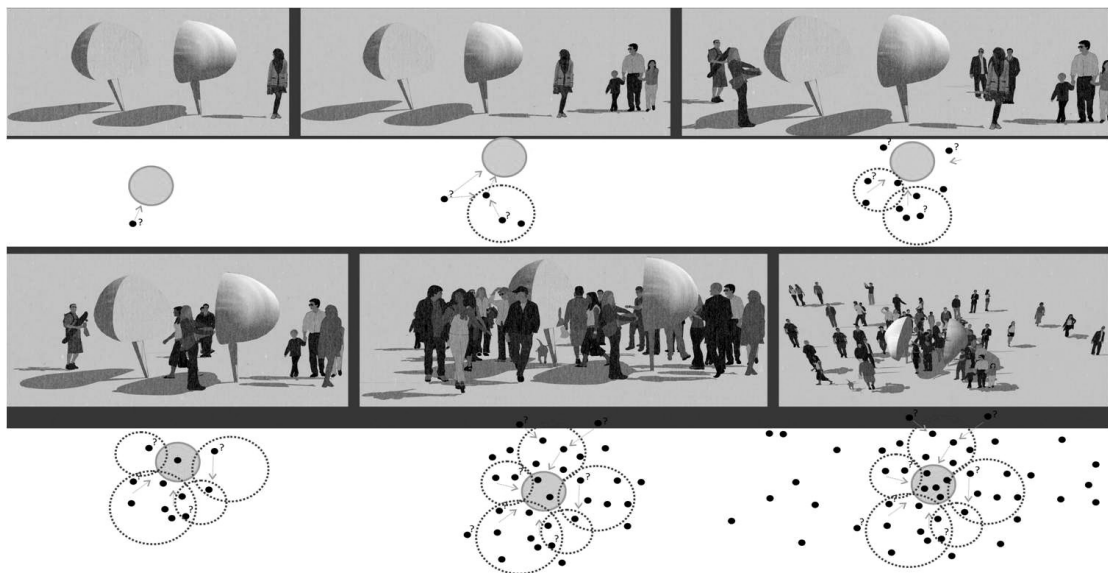

Fig. 9 Arrangement diagram of central activities area in the public space.

"Different people have different stocks of knowledge, time and money, which together helps shape their ability to access different spaces and places Mean and Tims, 2010 (The JRF's research and development programme, 2010: 11)" The study by the National Archives (2011) found that young people always had a restricted mobility and knowledge near their home, university or the city centre during the weekends. Thus, the designing space should be located in a suitable site with a small meeting/activity space for individual, groups and societies to use. For learners, the arrangements of outdoor environments at central activities area are very important. The size of the central activities area, design, colour, and the area arrangement all influence how learners learn. The arrangement diagram above also shows the relationship of human, interactive display and learning through social activities that will happen at central activities area which is derived from the theory (see Fig. 9).
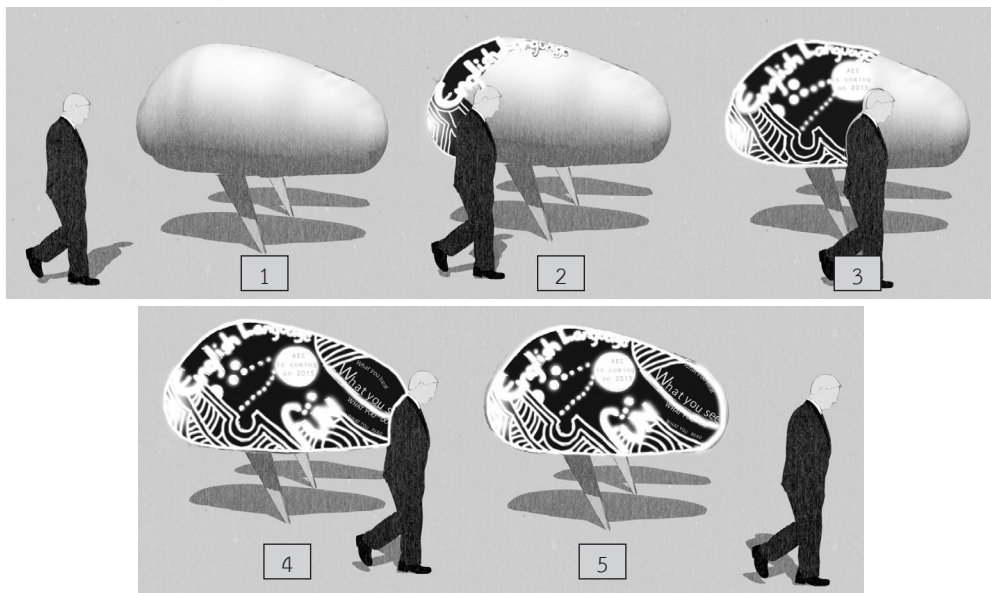
Fig. 10 This figure illustrates function design of interactive display when people interact with it.

The function of interactive display has emphasized supporting the use of new media to motivate learners attentive of self-access language learning. The design in Fig. 10 demonstrates how the interactive display work while people just walk pass, it will show all the knowledge with conclusive reading, listening, speaking and writing for people to interact by themselves. It is obvious to see that this is the other way of teaching to motivate people to learn and join everywhere that provide interactive design, instead of only learning English in the classroom.

In conclusion, based on an experimental study, this research has designed an interactive display to encourage self-access language learning in the public space as a short-term solution for Thai people to develop their English skills and English practice in everyday life. The interactive display can be applied to any kind of public space. The design in this research provides a guideline grounding from which further research can be extended upon. If it is possible, a similar study with long-term solution would allow a sustainable design to promote learning English as the world's lingua franca in Thailand.

เอกสารอ้างอิง

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