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Master's Thesis
Academic Year 2020

Komemail: A Real-Time Remote Communication
Tool to Enhance the Experience of the
Cross-Cultural Program for Elementary School
Level Children



Keio University
Graduate School of Media Design
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A Master's Thesis
submitted to Keio University Graduate School of Media Design
in partial fulfillment of the requirements for the degree of
Master of Media Design

Wen Cheng

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Abstract of Master's Thesis of Academic Year 2020

Komemail: A Real-Time Remote Communication Tool to Enhance the Experience of the Cross-Cultural Program for Elementary School Level Children

Category: Design

Summary

Nowadays the globalisation and liberalism are overwhelming influence on field of education all over the world, because of extremely increasing multilingual and multiracial; multicultural in the society, the education curriculum are aiming to adapt to a different learning methods which mainly formed in interaction with cultural background and education environment. Significantly, communication impede as cultural difference in scripts for school curriculum setting which provide constraints on intentions and expectation that helped cross cultural communication in this setting.

Differentiation of the elements that enter into communication may difficult for students who do not share the same language and culture. The exist cross cultural program “ KomaKids” have been implied the pen pal formed of communication way, which allow to bring up student's curiosity to building relationship with pen pal friends outside countries, as well as encourage creativity that come out with their letter, by using this way provide the simplest and easiest method to develop the communication . Despite the program provide an assistant material that offer some key sentences or words that commonly used in daily, the challenges still remain; from the observation done by previous session showed that student heavily relied on the technology to translate the message, due to the large amount of message cards that hardly for student to demonstrate their text, and some cases result of de-motivation to complete the task. Aware of ICT ability is current education trend, the digitization implemented as the core value to encourage learner become active and provide a platform to organise the resource.

The present research apply in design research field which introduce a real time communication tool – a digital letter named “ Komemail ”. The purpose of design is to enhance the experience for exist program “ Komakids, to encourage the interaction between foreign partner by sending the digital mail in real time. This design is considered to be a learning aid tool to improve the intercommunication and interrelation for student who share different culture background, to create an active and liveable real time stimuli (visual, aural and vibrotactile). To begin the first chapter shows a general introduction of the background and issue. Next, the second chapters include literature review and related work of real communication tool, digitalisation education. Third, design of content and visual and interaction will be written and discussed here. Moreover, the digital letter “komemail” will be evaluated including content, visual, perspective and interaction. Last, the final chapter will summarized the overall work and further discussion of present design.

Keywords:

Real-time communication, cross-cultural communication, young education, interactive design

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The ” Komemail” project still work in process and need a lot of improvement, it definitely not a perfect project, but I believe that in future it will be benefit of children’s communication if the allow to have more comprehended innovation and improvements.

Chapter 1

Introduction

1.1. Background

Diversity is increasing in global education implying the need for educators to consider to integrate and model that support cultural competencies. Given different cultural contexts which brings communication challenges to this fields, when participants located in different location, time zone, or share the different language, acquire a certain state of consciousness and mind-set, the ability to communicate and relate to others from different backgrounds.

In such case, most of the programs are mainly focus on the language exchange learning aspects, rarely mention about cultivate and mutual acceptance and understanding, it is essential to realized that a open-mindedness is key to effective cross-cultural communication, especially putting on a youth education, learning about culture and language is a long way in ensuring a successful communication, without necessarily studying language, cultural communication more likely indicate a shift in learner-centered constructivist perspective. Many researchers claim that emerging technologies offer large opportunities for develop collaborative and synchronous learning situation, such as video streaming , online examination performance which able to enhance educational performance and trigger student's curiosity and creativity to explore new experience within learning.

According to Martin(2014) [1] discuss about the synchronous (real time) communication in supporting learning communities and add vitality in educational context, help student create a strong sense of connection and interaction ,student get to understand each other better and develop a greater “ sense of social presence that keep them in closer contact, this is because real time nature of the interaction, students will not frustrate from the delays and uncertainties of response.

1.2. Concept

As discussed above, the current cross cultural programs are not fully considered the principles of to guide the development of effective learning; Along with the fact that potential of real time communication tools can rise social presence as the nature of interaction bring by real time communication. The present research show a design of real time communication tool that specific for the use of promoting the interactive activities and communication for cross cultural education. The design will conduct with an existing cross cultural program “ Komakids “ as the inspiration, therefore, the name of this design call “ Komemail “.

“Komemail” is an app based education material that operates in a synchronous chat system, the idea come from the pen pal letter which originally as part of the session in Komakids, where students can exchange the message with keywords that offer different language. The design of Komemail digitised the pen pals letter , students can make pen pals friend from anywhere in the world, in the era of instant message. Compared with email, Komemail will firstly let students review and give a feedback animation video which they made through the Komakid program, this will help users create an initial topic to open up the conversation. By using the digital letter offer large search engine for users to seek the various ways of communication, such as icon or voice message, this help to overcome the challenges of language difference and chat can be more lively. Using digital letter fulfilled the needs for a sense of presence, but to create an enjoyable and engaging way for users is also under consideration, the design of Komemail allow user to create list of stamp collection that can put together as landmark picture, which deepen the cultural exchanging and learning, as Kear and Karen, (2020, p.85), [2] suggested that a sense of maintain of connection to others is when the user found value in knowing and understanding who else was interacting with.

Additional, the tool design will focus on creative and collaborative learning environment where communication is encouraged, and enhance experience of interactive with a wider peer group who from different background and knowledge based. There is some limitation caused by time zone, which is always cited as major drawback of real time communication tool, the present research will suggest to adopt the tool work together with school courses, so when the activities can appear worthy for student schedule time.

1.3. Thesis Structure

The initiative project idea is to improve the intercommunication and interrelation for student who share different culture backgrounds, to create an active and livable real time stimuli; the following subsection explain the “Komemail” real time communication tool in detail.

Chapter 2: In this chapter will review the related works of real communication tool and digital education, specifically on how these impact on developing intercultural education.

Chapter 3 and Chapter 4: The major part of this chapter is about Design, which show the process of developing “Komemail”, including design of content and visual and interaction, will discussed and written in detail.

Chapter 5: About this chapter, the evaluation is going to use the methods of both user experience test and observation record. The evaluation will focus on behaviour observation, and some interviews with facilitators will be considered here, this is in order to increase the feasibility and viability of research.

Chapter 6: The final chapter will summarize the overall work and further discussion of present design.

Chapter 2

Literature Review and Related Works

2.1. Literature Review

2.1.1 Learning Material Design

The initial purpose of this project design is to become an education aid to enhance experience of cross cultural program, that able to create collaborative and enjoyable global community for elementary level of students. Beside the format, it is essential to clarify the learning design as the major contribution is becoming a learning kit.

According to Korper [] it is necessary to claim out the components when design a multimedia environment which facilitate a process of indicative learning, such as virtual reality environment, serious game, simulated task. To prepare a script of learning situations will help to frame out the user's learning environment, full control and partial.

The following components describe the script model that used in present design

- Roles: In here it suggests users, facilitators or others stakeholders may appear in the script. “Komemail” primary user as students who participate cross cultural program. Since this is a learning material aid, the facilitators may being important role to be involved as an instructor to guide the method of using this tool.
- Act: It means the interaction flow in the content, in here refer to the format of visual design and interaction design; In order to reach the learning objectives, a comprehensive learning design will consider a guide and predictable act of the user.

- Setup: The setup is the virtual and actual environment that users act under different circumstances. For example, accessibility and validity for user's act in application.
- Sequence of Activities: The user follows the learning pattern that set by content. "Komemail" includes three steps of design flow. Step 1; Present overall works from different countries. Step 2; users are allowed to choose to do interaction. Step 3; the interaction area for users to do any actions.
- Condition: The potential reaction from users. Komemail sets the design out for any possible reaction and path that may occur, which user can view the certain correspondence according to the certain condition.

The following keywords for learning design, describe the learning performance from user as the expectations of design outcomes.

- Attractiveness: The content present to users; Target to younger age user has long been challenged to make them sustain the application, to make it simple and interesting are main themes of Komemail. It will be presented in Chapter 3 and 4.
- Accessibility : How easy can users be involved the tool. Komemail is an open resources for cultural exchange purpose, therefore can be reached to user from various locations.
- Continuity: How to preserve the value for the user after finish the program itself. Komemail is design for cross cultural program as an educational tool to help experience cultural difference, to make it continues without going along with program is crucial to the design.
- Contentment: Reflect to the learning value that users may receive. How they satisfy by using the application and actually benefit from it.

Real Time Communication Tool			
Internet	Video Calls	Instant Message	Content Share
RTC with IoT devices, the communication happen to when two connected and introduce a human element which the person to person communication can be improved by their operation.	Making video call in RTC are the primary form of communication and allow more accessible in multiple ways. it has largely increase the human interaction compared with phone calls.	Instant message in RTC as major communication nowadays , it stands to be a personal communication way and offer direct link between users, which is more security and scalability.	Content sharing in RTC refers to strategic distribution of online content, without specific servers provide by third party, it usually relevant to social media such as Facebook, twitter and Google.

Table 2.1 Real-Time Communication tool

2.1.2 Real-Time Communication

By definition Real-time communication is synonymous live in any form of telecommunication that enables the interaction with voice, video, and information. Nowadays, Real time communication has integrated in different browsers without necessary software application, and it allows multimedia or audio in real time, it transiting from a circuit switched network to a packet, and has been support and collaborated in a wider field of development such as social , education , business.

Along with industrial transformation, to meet different customer demand, the large value has been embedding real time communication to be adaptive and further transformation the way we communicate.

The following table shows the various RTC data channel that use in case.

Real Time Communication in Educational field

Ever since the education used to be broadcasts with single direction, and the

interaction is not shown between audiences and presenter. However, with the rapidly growing information technologies and educational profession, which has contributed education programs in all disciplines, that enable to reach larger participants more than the traditional classroom setting and offer opportunities of several interactive characteristics.

What is real time communication in the education setting ?

As the discussion above states, the real time communication can be adopted through different channels, and these systems allow the conversation and interaction which multiple users can reach each other via the internet to have meetings, discussions or perform with others functions. The feature included in the real time setting helps to maintain the interaction during the session. Martin (2012) highlighted the importance of live communication used in virtual classrooms, it suggested that the technologies available instructor to draw down the activities between audiences without physically appearing in a traditional classroom, instructors only need to share the content frame and administer the polls. In the recent research, Barrett (1998) stated that the use of time time techniques can help to bridge communities practices in cultural difference. The research concluded from the web conference enabled students to attend from various of area, the collaboration and communication available global connection through shared audio, text, video, that offer opportunities of as student-centered approach learning that do not have to be face to face and add on flexibility for the participation.

Why Real time communication ?

Motteram [3](2001) claim that synchronous reaction raises learner's satisfaction effectively. Finkelstein [4](2006) listed down some positive effects of using synchronous learning environment setting; strengthen social side of education, and embrace emotional exchanging and encourage multiple perspectives; there are four functions that he suggested to served by real time interaction while in the educational environment.

The framework adoption aim to identify instructor's perception about the class design for synchronous consider with different scenarios. This is for the use of providing meaningful information by promoting technology enhanced learning or

Adoption Factors			
Organisation Factor	Social Factors	Personal Factors	Technological Factor
Command	Peer support and pressure	Personal motivation and preference	ICT ability
Reward	Sense of community	ych interaction	Easy to use
-Institutional support and Support	Develop social Presence	Enhance learning	Availability for technology

Table 2.2 Adoption Factors

other additional components for online session.

The adoption model have been used to support the virtual classroom design under the research study of two specific lister - IT Forum and University Listerv, the data collected from members survey responds; the literacy will only summarize the result of the relevant area - education. Contrast with others factors, social factors regard to peer support and develop a sense of community were considered to be important, the personal factors such as (acknowledge the value of interaction and motivation) placed at second high; Loch and Reushle [?] (2009) point out that the real-time communication tool request minimal knowledge for instructor to use, and using technology is for instructor to aware the benefit and pedagogical implications when it adopted. Therefore, the personal factors and social factors mainly address this. Moreover, to archiving the lesson, the result shows that webcam and text chat were the most influenced features used in classion adoption. Cook et al' [5](2011) supported the use of synchronous audio and text, he believed that they promote the interaction and collaboration that allow to enter lesson from anywhere in world, increase the potential of people to connect from different part of globe. For educational purpose, the synchronous communication tool advantages of the online lessons that blended courses and enumerating the ways of technology being used in school, in term of help to increase the enrollment, reach out students from not only local but outside the world.

How is real time communication used in an educational setting ?

The synchronous conversation usually combines different tools while into one interface, and create an online classroom environment, where the instructors and participants can interact in the virtual area, the tools will include text chat, audio, video, or real-time conference, shared presentation, the platform support two or multiple ways of interactions. For example, in the virtual classroom scenarios, a presentation will be shared in real-time, student's need can be satisfied according to the flexibility of technology that allow presenter to change the teaching plan, compared to the traditional teaching environment, reduce the transaction distance level.

The online learning environment help to develop constructive feedback not only instructors but also between students themselves, such as seminar or small study group. Martin, Florence and Michele (2014) stated investigated the relationship among a group of nursing students, to test student-content interaction while experience synchronous education method. The results showed that learning experience improved inter professional team skills in health science as well as strong group cohesion. This is because students have more self-directed learning opportunities and being flexible for join the lesson, the level of autonomy and emotional independence will increase in learning process which naturally reduce experience of “ distance” and “ non-presence”

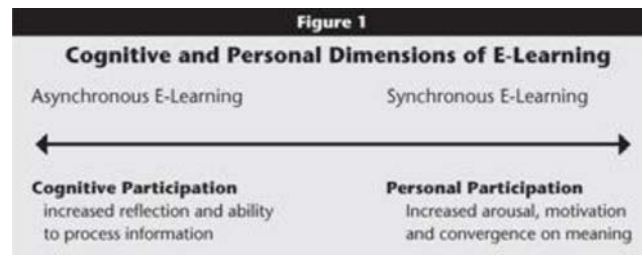
Cognitive and Personal dimensions of learning

The idea of cognitive and personal learning supported by asynchronous and synchronous, which as learning complement, instructors should consider when implicate different type of learning activities.

In the previous paragraph mentioned that the synchronous communication benefit of monitor the reaction from receiver, and make more commitment and motivation involved within; However, when the conversation process asynchronously, the receiver get time to prepare the message if sender does not expect to have immediate response.

These two types of online learning developed different ways for instructors and students to collaborate and exchange the information.

During the online learning situation, many learners are expect the asynchronous nature if the discussion contain complex issue, in which time is requested to do the



(Source: hwang [6])

Figure 2.1 Cognitive and Personal Dimensions of E-learning

reflection, and can be more critically assess other's idea regarding course topic; cognitive learning situation seems to be preferable with asynchronous way, the media tool such as email , discussion boards or blogs.

On the other hand, personal participation describes as more arousing type of learning and appropriate for less complex discussion and getting acquainted; usually learner expected to have instant message in the group discussion, for exchanging idea and planning tasks together, learner encourage to be more committed and motivated as the instant answer is expected. Such as real-time communication tool include videoconferencing, instant message or audio and complement with face to face meetings.

Thus, understanding of complex task and transforming of learner as cognitive or personal participants, which can benefit the ways of learning in the emerging media tool.

2.1.3 Intercultural Education

Transformation in technology and knowledge bring intense communication in every section, cultural and social alteration has become all the parts in life, and especially societal factors exposing new opinion in the field of education. Intercultural education seems to be the prominent point in field of education to have this alteration. Also bring up the historic and social side points at different level in globalizing world. With common living points as establishment for individuals difference in culture and social structure that need to work together. In here, intercultural education contribute to retain the position of national and interna-

tional level, in result of education and social process in multicultural societies existing in world.

What is intercultural education ?

Intercultural education can be explain with a wide range of definition, it is type of education develop the interaction between people, who carry different ideas and perspectives, languages, religion and cultures, particularly express cultural difference susu (principle, value, traditions) or others differences. (Aslantaş and Selma,2019) [7] Intercultural education aspoint the role of social meditation by adding productivity and acceptance to societies or different individuals. Moreover, Koc, Nizamettin, [8](2015) explained that intercultural education also include interdisciplinary approach that try to minimize the potential tensions and biases or stereotyped idea that appear in the societies, therefore intercultural education aim to develop the subjects like learning and understand the cultural difference, build up the intercultural communication.

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Why is important to learn foreign culture ?

The need of intercultural education has been sustained by challenges nowadays, and integrated with the need of tolerance and understanding for the situation of human who being differ from big society, with the term of same nationality origin

and other trait. The conflict, rejection and aggression may counteracted along with education, culture and acceptance of culture pluralism. As the above mentioned definition, of intercultural education create acceptance for achieving and communicating through, for the plurality of value and understanding among participants in societies.

Developing intercultural competence is necessary while talking about effectiveness of cross cultural communication, which denotes the ability to communicate with each individual who from different culture, and applicability toward a group and relations, interactions, it helps to understand the difference resulting by the distinctness of culture, the competence is about the ability to turning as familiar with a multicultural environment and being adjustable to an behaviour which is applicable to link with individuals of different origins. It also introduce a comprehensive understanding for one to communicate others who can shaping mutual relations on certain satisfactory level and toward an effective action. (Nowicka,2018) [9]

Dominique Bouchet developed the principles which is helpful to approach intercultural competence in theoretical and practical setting and enable to describe epistemological perspective.

1. One does not as a “typical” member of one’s culture
2. One culture does not exist in a closed or homogeneous form
3. One is not consider any member of group, their identity is determinate in relation of member of others groups
4. Culture as a form of medium to transfer its value and pattern to another transformation, to a processual in a nature.
5. To learn about foreign culture is a mutual way of learning, two groups will affect each other
6. Cultural communication is sort of exchange within each culture
7. cultural difference is form of exploring, to experience one’s culture

The principle line outed by Bouchet [10] (2012) explain people's position in a culture, as well as being both creator of culture and its participant.

Establish intercultural curriculum in primary school

Intercultural education is formal or informal process that influence the formation of principles and attitude open up the interaction between various culture and therefore learn to resolve the conflicts via conversation, education in here refer to activities which lead others individual or her/his community in a activities where realising potential or formulating one's personality and behaviour in relating to others world. (Nowak, Anna and Bielska, Ewa, 2009) [11]

The key idea to develop intercultural education is to take one step forward by helping student to explore the knowledge and skill and attitude through the lesson. By review the opportunities whether is exit in lesson for an intercultural perspectives; it will assist student understand the normality of diversity in world and help them to build imagination and use critical thinking to develop international perspective and social skill.

According to NCCA (National Council for Curriculum and Assessment) [12](2006) identified the development of an intercultural context that embodied the practices and disposition in classroom or curriculum.

1. A physical environment of the classroom:as the first message that student received in this area, where reflect a diversity image or model of positive contribution of people from diverse background, culture, art, science.
 - Display diversity as a normal part of life
 - Focus on spectacular and colour event
 - Ensuring that the irrespective of behavior, ethnic group or feel comfortable and enjoyable represented in the classroom Those aspects can include:
 - Classroom display: such as image, sign or notices, should be drawn from a range of cultural traditions in appropriate

- Equipment used: this also represent as diversity as normal. For example, paint, paper, crayons should be offer in wide range of colour which student used to depict as skin colours, which reasonably correctly.
 - Learning material: such as toys, dolls that may represent the diversity of group.
2. A social environment of classroom: This help to naturally build into classroom, the educator should make sure the information and knowledge is deliver appropriately and effectively, students may know how to show correct or positive attitude when facing new friends from different background. Also support children to develop inclusive community while interactive with someone who are different, ensure that they develop an attitude which everyone is included. Recognition and affirmation is the priority thing that student have to learn in intercultural education
- Enable to know or recognised some key words or phrases; like simple greeting or instructors; which can open up a good conversation.
 - Positive attitude is crucial within communication, help the dialogue toward diversity and recognising the ability of accept second language rather than think of their language as primarily with language's need.
 - Possibility of offering multilingual
 - The idea of model or role play will help to clarification and overall confirmation
 - Show the importance of supportive environment where students no fear to make mistake but show respect.
3. Resources used: The resources being used in intercultural education, beside the curriculum documents, there is necessary to look at the development of critical thinking and capability of use different perspectives, the ability to show empathy to people who are different than us, and with a willingness to accept and change the attitude and mind-set.
- The resources should reflect realisticity and positivity in a diversity of ethnic group in any form of illustrations, activities.

- The resources should possible aware of issues of equality, human right, conflict and the value of diversity
- The resources should contain a balance representation of men.women,people with ages, or whether disability.

In here, “Storytelling” as the strategy that encourage to reduce bias and typical stereotyping. In primary school, history class seems to be part of exploration of different perspectives that shape the way stories that being told. Profession suggestion that storytelling can improve the recognition of different point of view on story or history event, and help to develop empathy, an understanding and motivation will build of different character’s concerned.

The following example workshop developed by NCCA (National Council for Curriculum and Assessment) [12]the purpose of this activity is to help student understand the topic of bias and stereotype that people may pre-conceived notion at place, and enable to learn the value of culture diversity in the world.

Methodology:

- Introduce the France and asking how much student know about this country, educator can raise up the specific question directly to student. Such as Where about the France ? What French people look like ?
- Arrange students in group and giving work cards about France, the sample card with a relevant discussion question and information about France. Educators may able to circulates in class to facilitate the discussions, make sure it go smoothly.
- At the end with the whole class to review the discussion they had, to see whether the answer has changed or not, if did ask them to think about the difference.

the country of sample card is changeable, If one considers to implicate the activity.

France–The world in one country	Zizou
<p>Population 59,766,000</p> <p>Ethnic Groups French White Majority, French Basques, French Vietnamese, French North African</p> <p>Religions Roman Catholic 85%, Protestant 2%, Jewish 1%, Muslim 8%, no religious affiliation 4%</p> <p>Languages While everybody speaks French some have a second language, often a regional dialect such as Provençal, Breton, Alsatian, Corsican, Catalan, or Basque. North African French people may also speak Arabic.</p> <p>Where would you find France? Mostly in Western Europe, but France also has some land in South America, Africa and Asia that is part of France and is subject to the same rules and votes in the same elections as do French people in mainland France. This includes (among others) French Guiana (in South America, north of Brazil), Reunion (in the Indian Ocean, east of Madagascar, off Africa) Guadeloupe and Martinique (in the Caribbean) and French Polynesia (in the South Pacific Ocean).</p>	<p>Zinedine Zidane's parents were from Algeria. He was born in a poor area in Marseille. In Marseille, people from places like Algeria in North Africa are often discriminated against and disliked by other French people. Zinedine (French people call him by his nickname 'Zizou') overcame this dislike to become the most popular man in France.</p> <p>He became famous as a footballer and played for two of the worlds most famous clubs, Juventus and Real Madrid. However, his greatest achievement was to captain the French team that beat Brazil 3-0 in the final of the 1998 World Cup. Zizou scored two of the goals and was named man of the match. After the match, over a million people turned out in the centre of Paris to celebrate the victory. A picture of Zizou's face was projected on the famous monuments of France, and the crowd chanted 'Merci Zizou' (Thank you Zizou).</p> <p>The French team he led reflected the great diversity that is in France. Zizou's parents were from Algeria, Youri Djorkaeff's family came from Armenia, Patrick Vieira, Marcel Desailly, Lilian Thuram and Thierry Henry all have African origins, while Biexente Lizarazu comes from the Basque region. When France cheers on 'Les Bleu' (The Blues) it cheers on Blues of many colours and origins.</p>

(Source: NCCA [12])

Figure 2.2 Storytelling Workshop - sample card

1. Integrated thematical of lesson content The content of intercultural education in primary school can widely cross all the subjects which specific offer a more coherent and richer cross cultural manner, it is more likely to develop appropriate value and attitude, it will help educators integrated the curriculum within one-off fashion. The research suggested that a thematic approach is useful to ensure the criteria of appropriate knowledge and understanding and value throughout curriculum content. Some elements need to take account while planning the intercultural content

- Topic approaches
- Assessment
- lesson content

The integration of intercultural knowledge and understanding, the idea compass with four themes which identify the relevant for irrespective area, the way it may showed differently from classroom, the process need to be work with facilitator who aim to contribute a guidelines and adopted in proper manners.

2. Identity and Belonging: the richness of diversity in communities is key learning aim of the cultural curriculum, the recognition of diversity characteristic can be related as sense of belonging.
 - Skill : Interpersonal skill, Intra-personal skill, Ability to have engagement
 - Knowledge and understanding : Understand the diversity, contribution of people to society and knowledge about others cultures.
 - Value and Attitudes : Respect self and others, value a diversity of cultures and different representations Realized of right to understand and listen others Enable individual to make the difference
3. Similarity and Difference: Cultural diversity allow to have diverse experience which needs others to recognize the uniqueness, where in the term of its history, experience, wants, language. A fair society need to have different need and being equally to treat about their differences. For students in

young age, school will be an opportunity to allow them increase the awareness of a rich mix of cultures and explore a great diversity, not only English as mutual language but also the art that inter-presentation of culture can help them realise the image are framed by bias or stereotyping.

- Skill: Able to see the similarities in each and develop the thought of difference and vice versa. Able to change mind and develop relationship with people from various background, work together.
 - Knowledge and understanding: Ability to recognize diversity as normal part of life and accept the challenges and opportunities in diverse societies.
 - Value and Attitude: conflict can be derived from having different perspectives and cultural expressions therefore there is indeed of respect for diversity and health scepticism of stereotypical view of others groups.
4. Human Right and responsibility: There is a need of developing an awareness of people in a sense of dominant culture over another culture, as we all on the responsibility to respect and protect those rights. look for a better understand of respect, to against the issue of discrimination.
- Knowledge and understanding: Understand the independence in protection of human right and its struggles.
 - Value and Attitudes: learn to developing a sense of empathy and commitment to human right principles.
5. Equality : to simplify, the discrimination and misunderstanding mean to have recognised on a difference and make a judgement. It happens all the time, even in deciding food you eat and job you take, which the problem arising if the decision or distinction is unfair. As with idea of equality, children in the young age will learn to develop a concept of right which about fairness and unfairness and ability to adopted real case, through their understanding of what is the fair sharing in their society even wider in global.
- Skill: Able to recognize and refuse the stereotyping and imbalanced judgements.

- Knowledge and Understanding: Understand racism and inequality
- Value and attitudes: Commitment to develop equality and a belief of capacity of human's difference.

Although language is the principal and vital role of human communication, the idea of promoting interculturalism mindset as the vehicle to articulate student's understanding of the diverse world, helps them to clarify and interpret the attitudes and aspirations. emotion to explore the complex cultural difference.

2.2. Related Works

In this section will explain the relevant works regarding to the topics and show some example in detail.

2.2.1 Interactive design for children

Gaining children's attention is easy but maintain their interest and engagement is different, therefore to design interface for children use should consider some basic in mind. When a children in a mood of true play which the experience lead a continuation desire, below listed down the key elements that support to design specific feature of application tool. (Schlichting, Mark,2019) [13]

1. Interface Basic: a good interface design can encourage their curiosity.
 - Easy to use: The engagement may increase if children clearly understand how to do; a simple and intuitive for navigation and interaction will more likely support children's desire to use and control successfully.
 - Minimized the instructions: Usually children do at first and listen after therefore to limit the any auto or text guide structure will easier for them to take into this world as they only need a brief translation.
 - Responsive Interface: Children feel frustrated if the tool cannot have immediate respond to their action, they will click or tap again and assume that the tool is slow progressing, therefore the design should ensure that the immediately resulted.

2. Activity Basics: To involve an activities that can support children's interest and involvement.

- Emphasis on entertainment: to deliver the intrinsically fun will allow children to go further of learning while they use the application, every idea of design can be subjected a way of exploration on adding entertainment value.
- Offer various of content: Children are also easily to get exhausted the novelty. For example a customization allow children to express a sense of ownership and once they have ability to make their own, which will foster a stronger desire to return on page.
- Create open-ended: In many of the application design set a purpose where allow the user retention and give an open-ended opportunities, children can able to be creative. For example, designer will insert story or character which user can process own narrative sense while playing it. Add on humor and silliness: to create humor in application is a good way to make connection with children, because humor helps application become emotional and colour, livable.

3. Keep their Interest - the use of surprise: surprise is unexpected or feeling of astonishment or shock that can be happen reactive or proactive, develops an expectations about how this can work and what may happen next, making a mismatch with prediction.

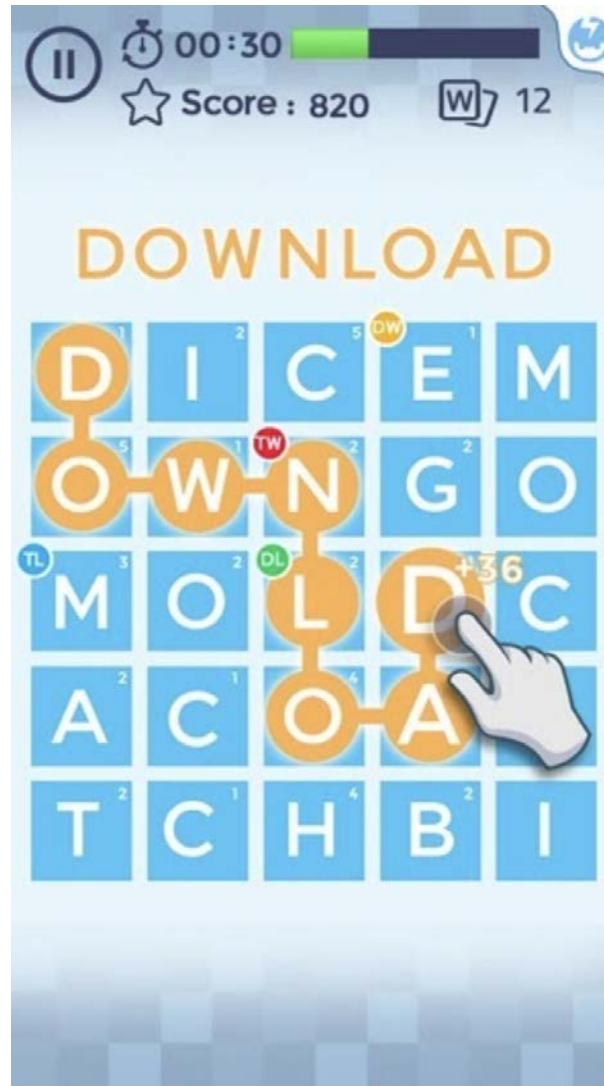
- Surprise grab their attention: the research showed that if people react to the surprise stimulus, the brain will automatically primitive respond, and trigger in psychological arousal. Jean Piaget a psychologist called this as mental or emotional state - disequilibrium, which is an important factor in learning process for children, this can be proved by baby in the earlier development stage, when you cover the face and peek out for WOW! the baby show the interaction.
- Surprise encourage more exploration: children have love exploration and this is part of nature instinctive learning in the playing process, they will continue to learn until their curiosity is been satisfied, and

during the process, they get to know how this works through and effect. Thus, this is the value and interest expended through the unexpected variations.

Below examples present some interactives design that explore the pattern in children's product and rule that may affect interface design, this will help to have initial invitation of children participation and quickly get engaged in the exploration.

Example 1 Visual Invitation The idea of collecting items, letters, shapes or color is a natural mind of human that grouping or look for bonding, this is also a inspiration for designer to have the idea of puzzle play or classification play, no matter children or adults are born as collector who comes with sorting objects into ordering and patterning. The application is good for word acquisition, the puzzle allow you to link the correct word while gaining knowledge about learning new word, if the player cannot find the word, they will give the clues to help them find the answer, once the player complete it which will automatically save to their collection list.

People enjoy looking for the relation-ships, between letter and categorizing them, this satisfy human mind and the design of interface unitizes.



(Source: Storm8 studios)

Figure 2.3 Word Scramble

Example 2 Audio Invitation Usually designer will draw down an audio invitation based on the sound that similar with animal or human-like voice, sometime they will coupled with an animation like characters, objective, children's curiosity will be piques if designer keep the mystery in the design.



(Source: MarcoPolo Learning, Inc)

Figure 2.4 Marco Polo Ocean

When children start a new action, the voice sound will guide them to the right direction and move; For example, if they want you to join this part, the guide voice will say “ Let's build a submarine” and if they complete the task, the voice will respond with a cheer and loud sound to encourage the next task.

Example 3 Social Invitation (Avatar or character creating) Reeves and Nass (1996) [14] stated that by using computer, human are looking for human to human interaction which is polite and responsive. Therefore it is a natural of interface design insert a friendly and compelling way to welcome the user.



(Source: cooking mama limited)

Figure 2.5 Cooking Mama

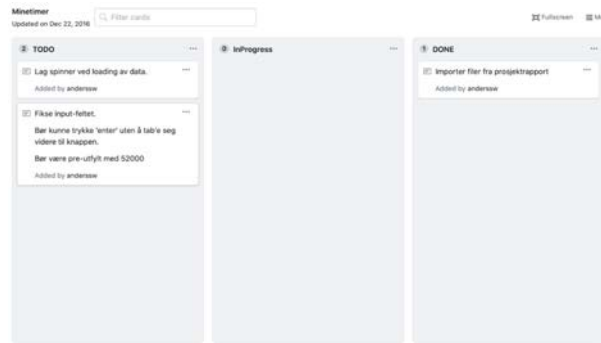
In the game play - Cooking Mama offer different kitchen tasks throughout the guidance from Mama, the character Mama will use voice to invites them to participate and lead to cook various dishes.

The character will greet, welcome, and invited to participate, this will attract children to started the story, to having a character invite them into the game is the same as wonderful day and feel real once they back then.

2.2.2 Real-time communication tool in Digital format

This part of the paragraph present the examples of Real-time communication in different formats, the examples been mentioned are about aiming the learning and teaching experience.

Example 1 Minetime



(Source:Minetimer.com)

Figure 2.6 Minetimer

Time is precious for everyone, as we live in cooperative environment that needs allocate the time efficiently and maximizing the productivity as possible, in order to make the balance workload and time, the “ Minetime” aim to create a real time cooperative tool, people in workplace can dealing the time management by providing quick access into personal daily tasks, also transparent for others members in this group, which can track, set the goal and workflow for specific task, for each of member can complete the task on time, pass down and evaluate by others.

Example 2 Ziteborad



(Source:Ziteborad.com)

Figure 2.7 Ziteborad

Physical board has been a long standing in working area, the idea of collaborative whiteboards is helpful to bring out the plan in big, visible format, when the idea is come out, it can be recorded quickly for the moment when the whole teams need to gather at the same place to collaborate on ideas . In the digital version, there is no longer a need to be present in office physically, having a virtual collaborative whiteboard comes in handy to have the office to convene in a place.

Ziteboard is a shareable web based whiteboard, which having a real time function, can loads into any others browser, the special of Ziteboard is that it does not need to create user profile to login, the shareable link is permanent, the most important is the feature of Ziteboard enable the boards to be published and turn to presentation mode, the audience and presenter not only can view the board but also to collaborate or edit them; the existing application like Google Chrome, Slack and Microsoft are available to plugin, allow the users merge the collaboration tool.



(Source:Padlet.com)

Figure 2.8 Padlet

Padlet is online sticky note board, it helped office worker, teachers or students collaborate, reflect, share idea, and distribute content in this space. Allow the virtual creation to approach teaching and lesson, especially for education purpose, it creates opportunities for student have more engagement, and quick easy to interact with, they respond and post on bulletin board, and teacher can collect each single of notes, and also it can also put into multimedia composite as well .

Chapter 3

Design

3.1. Design Objective

Design thinking is a design mind-set, solution focused and action oriented, the process helps to minimize the unsure and innovation by gathering users and customers to experience learning, testing, and refine concept, it highly depends on user's insight from real-world experiment, and project. The design thinking process is the first step to the design objective.

The issue for the current cross cultural program is that without connectivism and interactivism, to create a livable and interactive learning environment, children show no passion and curiosity toward global learning. Therefore, the real-time communication tool will expect to improve the interaction and approachable learning aid for the existing program. Vision consider as another crucial foundation in the design process, which aim to define the philosophy setting for particular product, in this case, vision explain open educational resources that bridge and smooth the communication and interaction between different culture background.

3.2. Target Persona

Based on the user experience and design thinking concept, the target persona mean a functional representation that experience the service or product, it represents the main user to the the service or product, but it does not have to be all kind of the users. For this project, the target persona are elementary children who include following conditions:

1. They are children who shared different cultural background and speak different language, and does not have chance or knowledge about the culture

beside their own culture.

2. They experience cross cultural program and emerge to know more about foreign culture, throughout the program, which wish to provide the learning aid to help a valuable communication and interaction with each other.
3. Without enough resource to access ICT education. For example, some schools are located at rural area, do not have technology equipments, therefore children unable to build connection outside the schools.

3.3. Customer mapping journey

The journey mapping is a powerful technique in UX research, it outlines the target persona, and defines each experience while the user uses this product or service, all the touchpoints reflect the reality with a certain degree of accuracy. To map out the model can help to make a customer-focused design.

The Below image explain customer mapping flow particular for this product

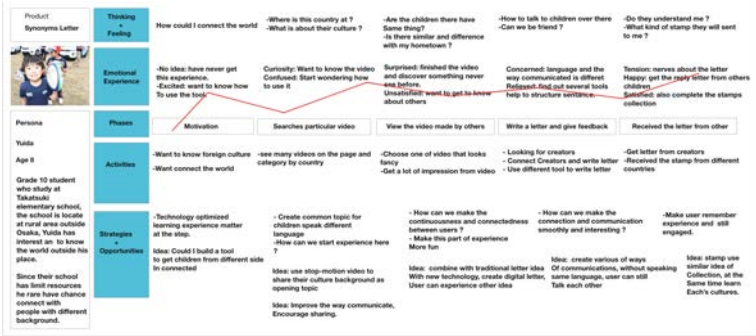


Figure 3.1 Customer Mapping Journey - Komemail

The customer journey map at “Komemail “ app within the pre-stage, which refer to the expected experience from user and the improvements / opportunities after experience the app, for each points in the journey can help to understand the pain points were. For example, when student finish the video made by foreign students, this will emger their motivation for building connection with each others, and designer need to make sure the experience of app complements what they can doing on site. The map developing the idea that journey progress right up to the time user retain as customer and keep using it.

3.3.1 Scenario Design

The following paragraph describe the user scenario. To create an user scenario help to communicating the idea of actual action when user use the design, map out the scenario scenes will benefit to formative the idea and approach the design goal; usually in the scenario design include some key or possible interaction may happen during the process.

The scenario design shows the each stage of behaviour and actions that expected to see while using the " Komemail " tool, the scene design is in order to present the core idea and concept about this design, the below figures will capture some important scenes and briefly explain in words. However, the scenario setting in the movie does not mean the real situation, the design tool may have a different approach, because the " Komemail" creates as an assist tool for specific cross cultural programs, therefore, the environment setting would be at school, and work along with the school curriculum.

In the real situation, the cross cultural program will cooperate with various schools, the environment setting will be real time which coordinate with others schools, the schedule time will be discussed with partner school beforehand, to create a real time mode.

Students will be allocated to watch a certain group of video, and write digital letters with them in real-time, once they finish the activities with the allocated group, they will move to the second group to continue the same activities. The process ensures that students can all get responses and have interaction with each other, each side of facilitators able to assist through this setting.

The actual short movie will provide link information where attached in the appendix.



Figure 3.2 Scenario Design - Scene 1 Figure 3.3 Scenario Design - Scene 2

The Figure 3.2 describe the first scene that happen in story, which the children show his love of Japanese animation, and he watch it with iPad.

In the real situation, groups of students will make their stop-motion animation before using the tool, and facilitators will help to upload their video with certain categories.

The Figure 3.3 describe the desire of learning about Japan culture and able to have Japanese friend, but he shows have no clues make it happen.

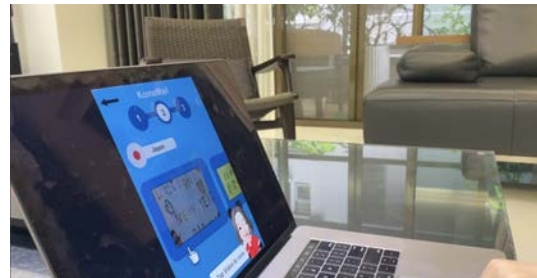
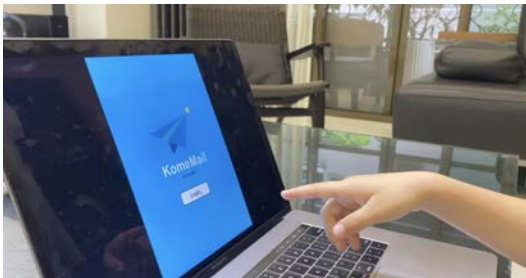


Figure 3.4 Scenario Design - Scene 3 Figure 3.5 Scenario Design - Scene 4

The figure 3.4 present that he finds out the tool Komemail which part of the cross cultural program " Komakids " and at the figure 3.5 present that the first step while open the tool, he can able to view the culture related animation which made by foreign children, and it will be categorised by countries.

In the real situation, students will be ask to register their information to create a Komemail account,group of student are free to watch video which they think is interesting or curious,students will list the video that they wish to write a digital letter.

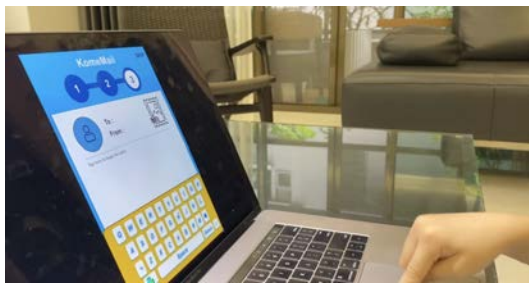


Figure 3.6 Scenario Design - Scene 3 Figure 3.7 Scenario Design - Scene 4

The figure 3.6 shows that after viewing animation from others, he can choose the next step to write a letter and leave his feeling and feedback to the video creator.

In the real situation, Once the groups has been decided, they will start to write digital letter to the decided group, students are allowed to use different communication methods to write letters.

The figure 3.7 shows that they both get each other's letter and become pen pal friend, he very happy at the end, because his wish is come true.

In the real situation, students can interact with different group once they finish first activities with first group, each group will have more than one chance to write mail to others foreign group, which they can also get different stamps from each group, and complete their collection.

3.4. Content Design

3.4.1 Methodology

The key principle of this application tool are, easy to make connection, increase engagement and interaction, these are for bonding the global friendship and develop global perspective. Connectedness refers to the return volume of users, the purpose is not only retain the users but also help them build the relationship and stay connected. The design of real time function is aim to feel the livable presenting, to let children realize they are interacting with real people. In the terms of engagement and interaction, the method of enrich the user experience, which mean not just allow them being connected but also understand each other, no matter

language barrier, they can choose any ways of communication provided by service itself, it is not supposed to be a language learning tool, but be a facilitated tool to smooth the conversation and learn each other's culture. The personalization communication stands for the function that make user feel special and particular design for them, in here refer to the design of avatar creation.

The project design select the most important content, which will be organised to the points and explain further as follow.

3.4.2 Concept Design

Design Concept is an abstract idea that to step out how to ideate a design, it underlies the logic, thinking and reason for the particular design, the concept will lead the choice of aesthetic and determinate your content of design.

The below proposed five design concepts are going to convey and explain the important roadmaps for each function of this tool.

1. Accessibility: To have accessibility, the tool design focuses on building the application that enables it to reach bigger users, it will cover the user interface and navigation colour, set of useful tools, and make it easier for users to access information. User Account Register: The user register page created is in order to create a safety platform that is available for children to use, and filter out malicious activity to operate here. Moreover, to have an account, users are able to access their own profile and track others profile's work. Figure 3.8 and Figure 3.9 shows the Login page which user access the application will see this page at first, the clear button design will lead the user into the application, since the target users are children, the button will larger than normal, this is in order ensure children can touch the button precisely.

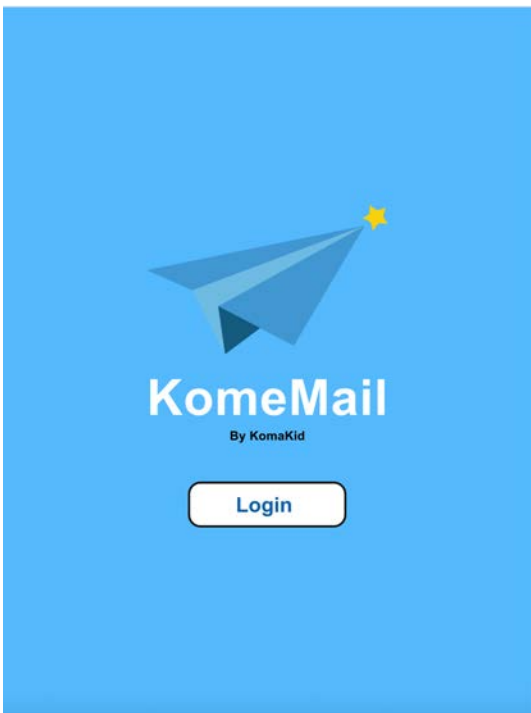


Figure 3.8 Make Pen-Pal Friend

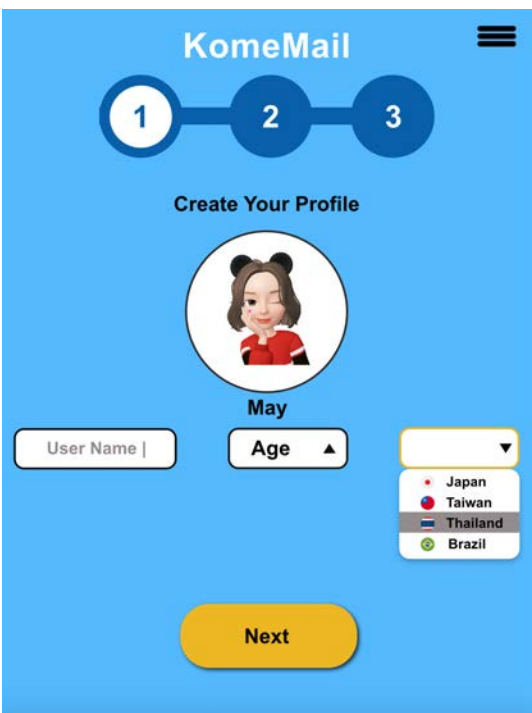


Figure 3.9 Mail Template

(b) Visual Style

A visual design refer to how should be present. To have clear visual design can help user more easily to access the page. In this part of paragraph explain visual and interaction design of "Komemail".

Since the Pen-pal is the main, the visualisation of structure flow need to be clear, also consider the target users is children, a simple visualisation is help to convey the information through guide step. Moreover the logo will continue with existing program "KomaKids" logo, as the application is design as learning kit for "Komakids", but is also can separately use.

The target user and content design are key thing to determinant the art style. As the target user are children who have different cultural background, the visualisation have to appropriate for their age and taste, which aim to be simple and interesting.

When user (children at elementary level) using the application in which mean that bring them into a visual world, the most familiar to them will attracted them more possible; Therefore, the cartoon-like virtual world - ZEPETO as the reference for the avatars design, since in the ZEPETO which consider a vistual city, people create own avatar and interact friend in here. the key design features of application include the area for video viewing, letter writing, stamp collection with soft and round edges.

Figure 3.10 is the reference style of present style, in order to make the interactive area more livable and funny, the cartoon style is necessary to be used, and will be consistent with the environment as avatars are stylised.

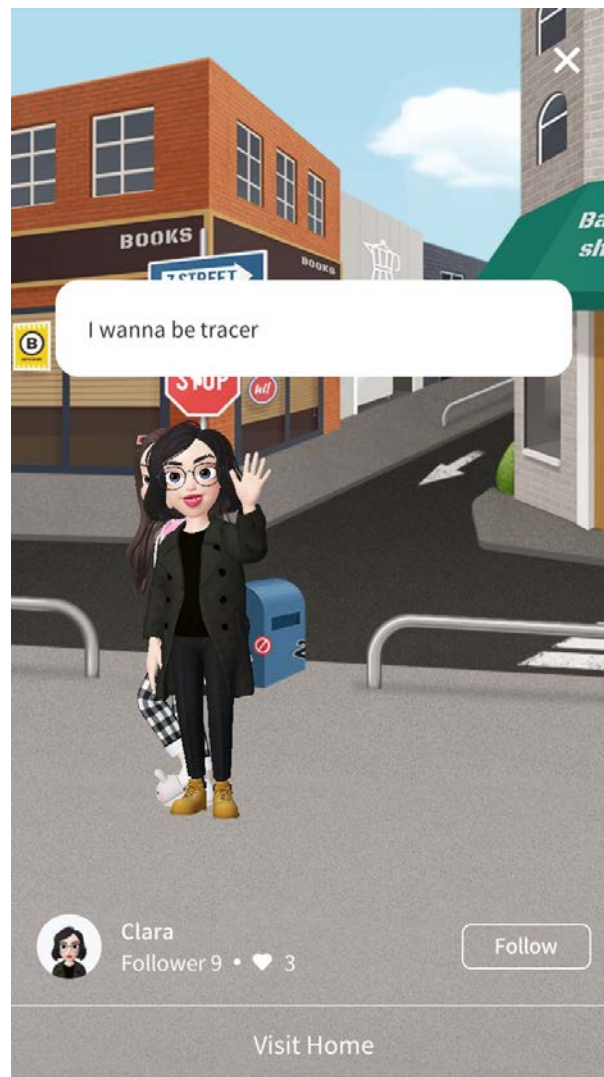


Figure 3.10 ZEPETO - Chat Area

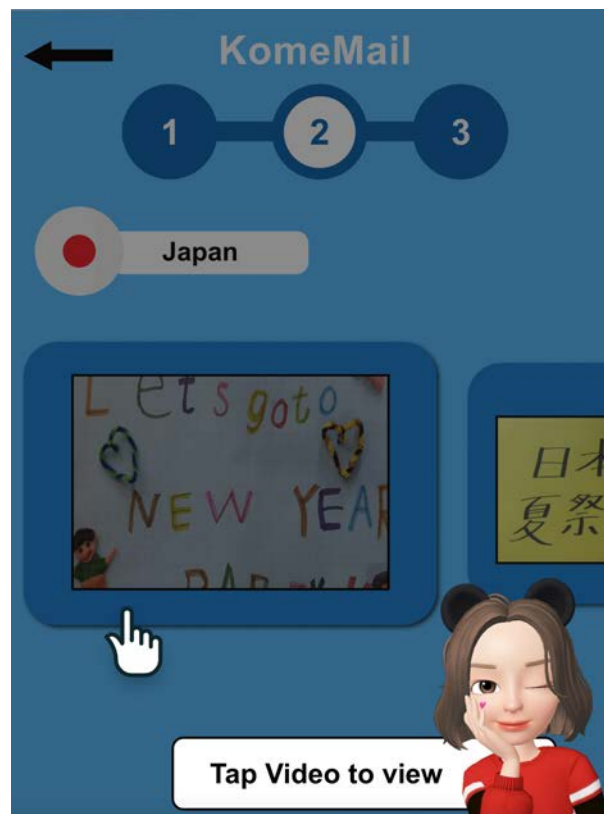


Figure 3.11 Video page with structure

The above Figure 3.11 shows the viewing page with avatar, the avatar appear with the guide message, this is consider that when children first use about may confuse, the guide can ensure that they are in the correct path, therefore the guidance will be place in each page, and will be only shown for the first use.

(c) Colour Theme

The selected colour is important for the visual design, and it will impact on the information deliver to user, In colour psychology, based on different colour will arose user's emotion and impact the user to explore the work.

One study show that children will be attracted by warm and bright colour, and it highly increase alpha wave in their brain, which may effect their awareness; Also about the bright and light learning, the research [15]explain that the daylight setting link to student's performance, the brighter setup can make improvement. (Gaines, Kristi S and Curry, Zane D, 2011)

Main Colour



Figure 3.12 Sky Blue

White
RGB (255:255:255)

Figure 3.13 WHITE

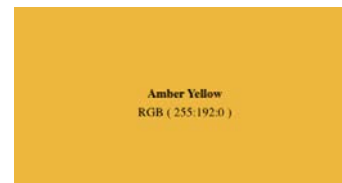


Figure 3.14 YELLOW

The colour of light blue (RGB 0:191:255)interpret the claim and inspiring , for the wave is compare long and stimulated. The chosen main colour as light blue, as the target user are children, most of reponds shows that children are often related " blue " to sky or ocean, which arouses a feeling of strength and spirit, they feel less nervous and comfortable in communication while in the presence to others.

To react the strongest colour - light blue, the core colour of white and

yellow are used to present the words and image, to add on joyful and aliveness to children.

(d) Front Theme

Since the base colour is light blue, the selected colour of font will be consider to bring the users on the same page. The function and appearance of front may effect user to perceive the content of this tool, the more contradictory front, the less attraction and miss-read may result at the end.

The chosen base colour is already brought the bright and clear, the setting of front colour will be consider to be white and black, this is in order to had the contrast and unity. Moreover, Ariel with Bold is the chosen main front style, as the target users are children, the enough thickness of words is suitable for children to read.



Figure 3.15 BLACK

White
RGB (255:255:255)

Figure 3.16 WHITE

Main Front : Ariel

Figure 3.17 Front Style

2. Attractiveness: the attractiveness here means that an implement of attractive product or service design, used to create a long-lasting

impression on users and motivate them to retain on the page, want to come back for use.

Here, the design focuses on bringing the finesse to functions design elements that can increase engagement and improve user experience where the user looks forward to learning culture and language according to his / her pen-pal friends.

This part will also cover the potential influence factor that comes from function design.

(e) Pen Pal Letter

The function design consider to keep the original idea of pen-pal letter, but modify as digital letter. The digital letter will set as the real-time mode; (the real time setting using flow explain detail in scenario scenes)

Below information describes the main influence factors of Pen Pal letter

- Promote Cross cultural learning

Research shows that people attend cross cultural program are more culturally sensitive than others. Therefore, student may disadvantage to open up the conversations if they did not see the common in between. The particular design consider the awkwardness and unfamiliar when students first meet each other; therefore, before they enter the first conversation, students will begin to view and upload their stop-motion animations that relevant to their own culture, to share and exchange their background. About the media creation part is be included to the existing cross cultural program " Komakids ". Most of students (refer to the users) who use " Komemail " will experience the process of " Komakids project", and Komemail will consider as learning aid tool help to develop the communication, although this is not the necessary process in the "Komemail", for those who do not experience Komakids program can also browser the video as the first step of entering the Komemail itself.

The image 3.18 shows the video browsing page, the step bar is help them understand the process location of this application. The video

categorized by the countries, this is for the viewer to know what the video about and who made the video. For example, if students from Japan do not have knowledge about Brazil, view the video made by Brazilian students can help them get to know about culture of Brazil from children perspective, also the video can provoke their first impression about Brazil, and develop their curiosity to connect and know more about this country.



Figure 3.18 Video page- Komemail

-Gain Education Confidence:

The present design is a real time letter, the reasons to be synchronous, due to the encouragement of interaction and enhancement of engagement. The research discover that [16] anxiety show to the classroom atmosphere if student aware unknown foreign culture or language. Unlike normal message chat, the letter without showing the activity status to others, this allow user to have time to think of the context and decrease the pressure of awaiting time, but since this is synchronous letter, user will know that the receiver can immediately see their letter and reply as long as they finish the letter.

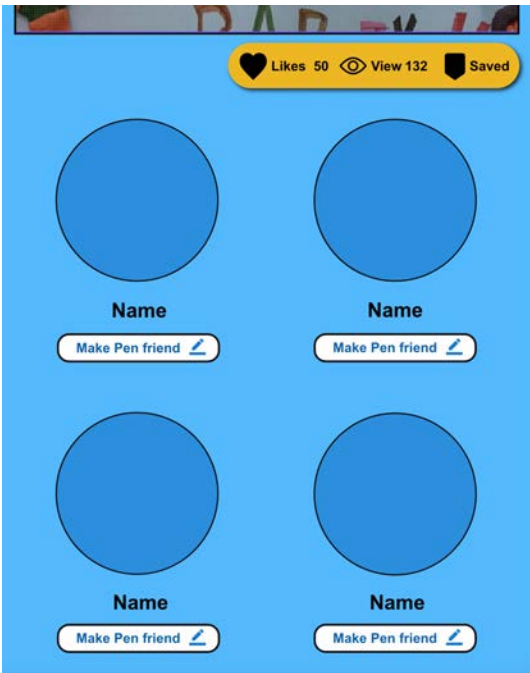


Figure 3.19 Make Pen-Pal Friend



Figure 3.20 Mail Template

The above figure 3-3 present the page of mail writing; Since the users all from different countries and speak different languages, students are often find it difficult to put on the first sentence, the mail format created is for users can easily structure their sentence and follow the format, they will not focus on one topic but various topics.

Therefore, the synchronous mail help to assist the communicate with people who from different background, once they realise the communication can be deliver smoothly and easily, their confidence will be created and start willing to interact more.

(f) Avatar Customization

To consist the retention for youth user is link directly to their feeling toward the hearing or seeing. Therefore, the research believe that [17] to have children stay engaged in the product or service, the character creation is necessary, because children will link themselves with the character, this will help them engagement more in the application. Moreover, the study also mentioned that to develop a good character is help to create a caring and supportive community, as the character trait can brought into a literature which is meaningful and value for children's learning. Another research from Designing Multimedia Environments for Children [18] stated that penalisation or customization is the way to facilitate children to express themselves and boost their captivities, children are proud of their creation, with the personalization of character making will encourage a strong sense of ownership, and boost desire of returning to the application.

Based on the Figure 3.21 shows that the mail box which the received mail will be stored in this page, and it will be organised depend on the senders, as the figure, the sender's avatar will also appear on the site, user can able to have the feeling of interacting with real people, although they do not have chance to see each other in person, the avatar will help them to imagine what each other's looks; On the Figure 3.22 which show the avatar creating page; within the application, at the beginning, the user will be asked to make their own avatar from any available variables, they can choose the elements of own looks.

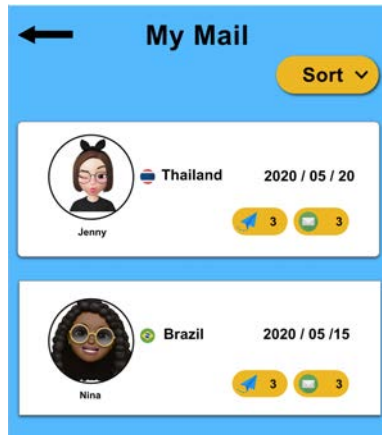


Figure 3.21 Pen-Pal Friend



Figure 3.22 Avatar Create

Therefore, the present design support the customised avatar, this will support and enhance communication by creating livable community and sense of alive.

3.Continuity: the definition of the constitutes which discipline from logical, sequential and uninterrupted experience while the user completing their tasks.

The specific design function aims to develop a pattern of continuity in each stage, these patterns include from the beginning to the end of application, together they create a routine of sensory experience for the user, who is able to realize each activity in the page.

Here explain how the user began and continued to the end of using this design tool, for each site will add on the information of user interaction.

Step.1

As the below 3.23 shows that the first stage while user click into the application tool. The number of the bar is in order to let user know their exact location of the page.

From the beginning, the user will be ask to fill out the necessary information in order to process next step.

Figure 3.23 Login Page

Step.2

The Figure 3.24 presents the second steps of this application, after the user register their profile, they will bring into the video viewing page, at this page the will see different videos which categories by countries, and all these videos are made by others users. They allow to view each other them according to the countries.

The Figure 3.25 shows that after viewing the video user allow to give a short impression, the feedback will received by video creators, which is made it for encouragement of interaction.

Research shows that people attend cross cultural program are more culturally sensitive than others. Therefore, student may disadvantage to open up the conversations if they did not see the common in between. The particular design consider the awkwardness and unfamiliar when students first meet each other; therefore, before they enter the first conversation, students will begin to view and upload their stop-motion animations that relevant to their own culture, to share and exchange their background. About the media creation part is be included to the



Figure 3.24 Video Viewing

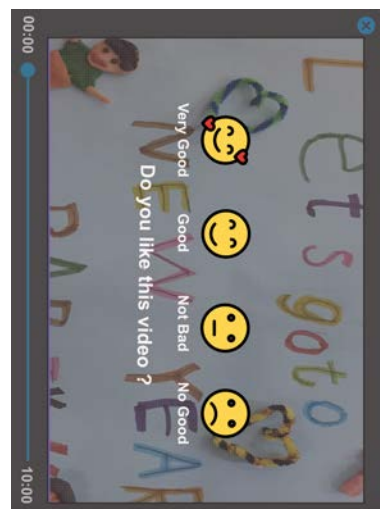


Figure 3.25 Video feedback

existing cross cultural program " Komakids ". Most of students (refer to the users) who use " Komemail " will experience the process of " Komakids project", and Komemail will consider as learning aid tool help to develop the communication, although this is not the necessary process in the "Komemail", for those who do not experience Komakids program can also browser the video as the first step of entering the Komemail itself.

To conclusion, the step bar is help them understand the process location of this application. The video categorized by the countries, this id for the viewer to know what the video about and who made the video. For example, if students from Japan do not have knowledge about Brazil, view the video made by Brazilian students can help them get to know about culture of Brazil from children perspective, also the video can provoke their first impression about Brazil, and develop their curiosity to connect and know more about this country.

Step.3

The below Figure.3.26 shows that while finish video, scroll down to the page which will show the video creators, and each of the video create

has the mail button, the viewer can chose one of the video creator as pen-pal friend, and decide to write mail to him / her.

This button will link direct to the page to write mail. The below Figure.3.27 shows that the mail page, this page is the core idea which distribute the activities here, user will interact by writing mail and received mail by each others.

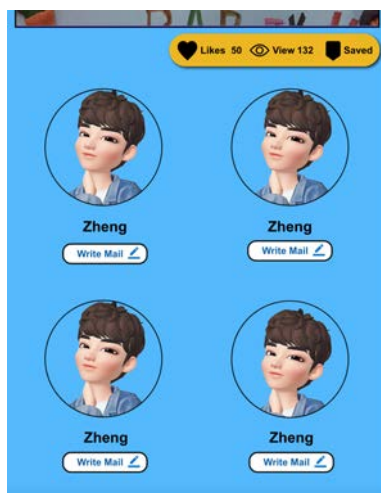


Figure 3.26 Chose Pen-Pal Friend

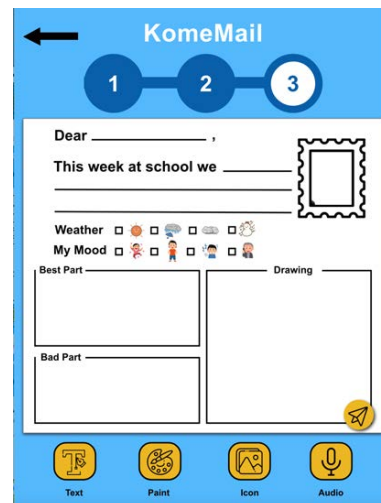


Figure 3.27 Writing Mail

4. Entertainment: There are thousands of cultural learning apps out there, designers are always looking forward to making it interesting and playful, especially it is for educational purposes, children may easily find it boring, this part describes the function design that aim to create entertainment, how user can benefit from it.

-Stamp Collection One of important function design in this application is the "Stamp Collection". According to Baker, Stacey Menzel and Gentry, James (1996) [19] the research about the collecting habit among children, the result shows that 72 out of 79 children join the interview, and they have collection of one kind or another and underlying the motives children's collecting behaviours; Firstly, they enjoy the collecting, usually the items will keep in their personal room or box, this reflect the attainment level. Secondly, it satisfies the curiosity of collecting domain and passion for desired items. Lastly, collecting can trigger the desire to connect with others, specially family or friends.



Figure 3.28 Pen-pal mail

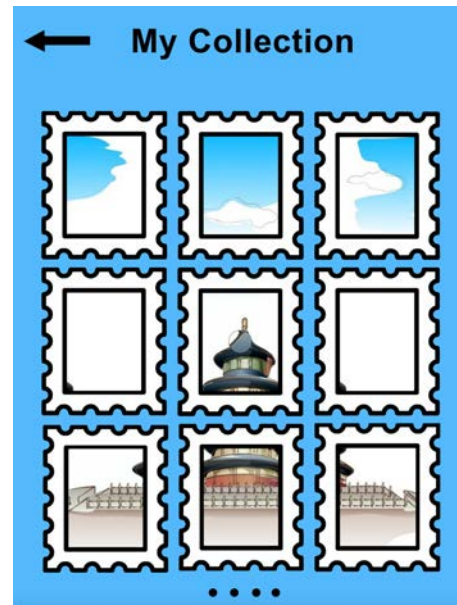


Figure 3.29 Stamp Collection

As the research mentioned, collecting is a great way for children to build the relationship and able to have initiate conversation based on the common interest; the above figure 3.28 and 3.29 show the interface design of stamp collection.

The present "Komemail" design combine the idea of stamp from traditional mail, in order to create deeper bond between students cross the countries, once they exchange the letter from one another, they will receive one piece of stamps which about the specific landmark from one of sender's country, the idea is to help student learn and share their culture by exchanging the letter, and deepen the impression for others' background, while they can also enjoy the process of collecting, create more common topic to understand each others, not only just writing mail but also sharing each other's collection.

5.Muti-Communication ways

Although the language skill may be an important part of cross culture, they are by no means the only requirement, it requires an understanding of different cultures and a willingness to learn and accept, adapt differences.

A desire for cross cultural learning starts from the point of view that communication is better if it is constructive, open-mindedness and does not suffer from language learning and misunderstandings. Most of the cross cultural program emphasis on language learning, but neglect the original meaning of global education; Building student's confidence and interest to learn about the world is the key to motivate them continue the learning and keep question about the multi-cultures. As mentioned above, the present design consider of that users are coming from different background, there is difficulty if they speak different language, the design including the various of tools to help user to build their conversation, users allow to use their creativity to set up the words and deliver the sentence.

The below Figure 3.30 and Figure 3.31 shows the user interface, while they writing the pen pal mail, they have four options to put the context on it.

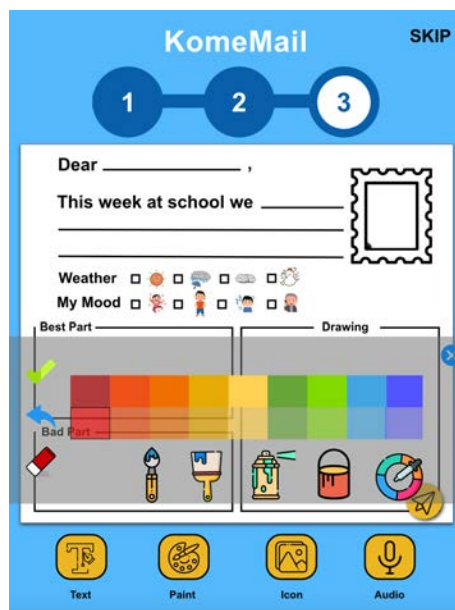


Figure 3.30 Mail with Drawing



Figure 3.31 Mail with Audio

Children nowadays are looking for new way of communication in this digital age. Zhao, Sumin and Flewitt, Rosie find out that [20] a five years old preliterate child text strings of emoji and silly picture, although it seems to be random, when discover the rhythm of texts, they put emoji into the sequence, and rambling into the learning and reading, result shows that emoji can be a useful precursor for communication, a way of acclimating children to the digital world by using symbols to interact with others.

Due to the face above, the Komemail design aim to put a lot of icons as the materials resource, provide students various ways to structure their sentence. Also they can input the image that does not store this application.



Figure 3.32 Mail with Icon



Figure 3.33 Mail with Icon

Chapter 4

Evaluation

This chapter about the analysis of user test in detail, the result will be withdraw from the experience and functionality of ” Komemail ”. The result will be divide into two part, the first part will be used in qualitative data, as this part of the research aim to determinate the research question about whether the real time communication tool is value for cross cultural program compare to the traditional tool, this part concern about human behavior and their perspective toward the tool

4.1. User Test Plan

User Test Setting

The purpose of this test is to evaluate the improvement of cross cultural experience by Komemail by observe elementary student’s behaviour and attitude changing, and some external perspective from facilitators of each side . The specific goal include:

1. Whether the communication is improve
2. Whether the interaction is raise
3. Whether their willingness is increase

The usability test will evaluate the design tool and will use 3 preferred scenarios completed by 3 elementary students. Users will be screened to ensure that they are between grade 3 to grade 6. The test will conducted in the environment set by each side of facilitators which including Taiwanese’s teacher and Thai teacher, and will include pre-test, post-task and post questionnaires, post-test interviews.

Length of session

The first testing trial will try to use another communication tool which has similar function with Komemail, due the incompleteness of design and also the research wants to refer to other tools of functions in order to see the defect while designing a communication tool. The selected communication tool is “SLOWLY” which is considered pen pal writing app specific target to adult , therefore the testing process will be supported by facilitators.

The second testing trial will conduct this draft design of Komemail , at this stage the design remains a simple function prototype due to the complex technology design process, the user is allowed to test out the interface flow of design.

The final testing trial will conduct the design tool of Komemail, the functions of design will be work separately due to the uncompleted design, each of functions such as various communication methods have to open with different browser pages. However, the incomprehended of design does not affect the purpose of this user test.

Problem statement and test Objective

The heuristic evaluation was used to assess the Komemail tool. The research conclusion to be disproved by the usability test are:

- The communication, the compare of paper pen-pal letter
- Search by keyword types (which communication methods are more preferred to use)
- The interaction process work as expected reaction (students interaction improved or willingness increasing)

Based on the finding from the heuristic evaluation, interview discussion and input observation, the test objective for usability study are evaluate the design tool relative to the user’s ability to have open mindedness to learn

different cultures, communication through the tool are become easier, student's engagement increase by using the tool functions

User Profile

Based on the persona of scenario movie setting to develop the test plan and user profile. The user profile describe as:

- Elementary school students
- Have past experience of cross cultural program
- Without fluent language ability

Number of Participants

The testing will be recruiting participants with these characteristics. There are three 3 students chosen to do the semi-structure interview,(Two from Taiwan and 1 from Thailand) 1 adult will be part of the interview candidate, who is also the teacher part of the original cross cultural - Komakids, the reason to interview teacher (Thailand teacher) is to understand their perception of this tool, because they are working closely with students, they have ability to see the difference while students use the tool.

Moreover, the testing about the functionality of " Komemail" the larger data are more possible to measure the usability of tool. the data will be collected from 10 survey from 5 adults and 5 children, for the children part will be filled by observant, because the complexity and question may hard for children to answer, and result of invalidated data.

Project Timeline

First Trial Testing: January 25th, 2020	
Taiwan Time / Thailand Time	Pilot User test with SLOWLY App
2PM - 3PM / 6PM -7PM	Pilot User test with SLOWLY App
Second Trial Testing: Feb 14 th, 2020	
Taiwan Time / Thailand Time	Komemail Prototype 1 User Test
1PM - 2:30PM / 5PM -6:30PM	Komemail Prototype 1 User Test
Lasr Trial Testing: March 12 th, 2020	
Taiwan Time / Thailand Time	Komemail Prototype 2 User Test
1PM - 2:30PM / 5PM -6:30PM	Komemail Prototype 2 User Test

Figure 4.1 Project Timeline

4.2. Observation and Interview Result

The real time as the main setting for this tool design, this is in order to achieve the livable and improvement in interaction. Based on the observation for user testing for 3 children and 1 adult, some key find-out will be list below following:

4.2.1 First testing trial result

This part of testing aims to provide a draft idea to structure the Komemail tool, There are two purposes of first stage testing. First, observe the specific communication topic interested users to develop the sentence and continue the conversation . Second, observe the useful and suitable function to assist users to build conversation easily. Therefore, the target user will be ask to try out each of functions that originally from SLOWLY App, to observe the user's reaction will help to selected useful design functions for Komemail tool.

The first testing was conducted on January 25th, 2020, with 5 participants. Two of them are grade 2 Taiwanese Students and 1 Taiwanese teacher as the process facilitators. The other two include grade 6 Thailand students with 1 Thailand teacher as facilitator.

They will ask to use “SLOWLY” app as the communication tool which is within 1 hr in the local time 2PM to 3PM in Taiwan time and 6PM to 7PM in Thailand Time.

Media Content and Testing Step:

Language : The language used in this communication tool is based on the local country language, as the tool is available for 42 languages, it will be easy for users to understand.

Operation setting: Before using the communication app, users will be ask to watch specific animation videos from Komakids website (Figure 4.1 and Figure 4.2) After exchange the video, they will be ask to use “SLOWLY” .At beginning, the facilitator will give a brief overview to explain some features in this application. Next, users will be asked to write first mail to each other with a topic of self-introduction, then second mail will ask to write the related topic about animation video, third mail will be considered to have open freestyle, and users can write any topic they would like to insert.

The result of feedback will draw observation from both of facilitators and observant, the observation target topic will focus on the two general ideas:

- Communication topic which can trigger more attention from users
- Communication method which can help users to structure their context despite the language barriers.

Evaluation

Students:

Participant A: Grade 6 student from Thailand, during the time when the user test was operated. The user test was took place at the school wherelocated at countryside area in thailand, this is the first experience of user to get in touch with foregien student, according to the Thailand facilitator, she looked nerve before the user test start, because she is worry about others cannot understand, and she does not have much knowledge to use technology items, the only few experience of using technology are at school.

Participant B: Grade 3 student from Taiwan, during the time when the user test was operated and she was currently at school which located at Taipei area, the user has look excited before the testing as she mentioned that the past experience

of interact with foreign teacher amazed her to know more foreign country, she feel confident to use the application.

Participant C: Grade 3 student from Taiwan, during the time when user test was operated, the user test was took place at school, the user seem to have no interest in any this program; according to the Taiwanese facilitator stated that the students without this kind of experience, therefore it may feel awkward at the beginning.

Facilitators:

Participant D: Taiwanese teacher who help to assisted Komakids program in Taiwan before, she is familiar with two students from taiwan and want the program can be able to part of school curriculum, as she mentioned that due to the last experience of Komakids, she discovered that the more realistic interaction with actual foreigner which can help student overcome the fear of learning different culture.

Participant E: Thailand teacher who help to assisted Komakids program before Thailand before, since the school is located at rural area, the teacher want to use simple equipment to help student reach global education, and want student learn global communication and build confident even without going outside of the place.



Figure 4.2 User use SLOWLY app with sticker function



Figure 4.3 User use SLOWLY app with video record function

After the user test, Participant C and Participant D were asked to have feedback according to the user test process, the interview without any structure with

freestyle talking, And keypoint feedback will summarised below:

Positive Feedback

Interaction and Communication:

- All participants seem to enjoy the process of writing mail, as the teacher mentioned that the real time mode helped students into the process if they know that they are interacting with a real person.
- The communication becomes easier, when users catch keywords or relevant images from messages while they do not understand the entire text.
- The conversation topic becomes rich when the user watches the animation video at the beginning, help them bring the first conversation topic.
- The various communication methods such as stickers and voice messages interest participants to seek more response from others.
- Participant A seems to be more relax if user mail instead of using instant message.
- Participant C mentioned that using mail app to interact with foreigner get him interesting to communication more, instead of talking with real person.
- Participant B mentioned that watching video beforehand help her to develop more topic to write in mail, and it is funny to have pen-pal friend with digital mail.

General negative feedback and suggestions:

- User are more easier to distract by animation stickers, and neglect the purpose of message exchange, without understanding the meaning of text.
- Facilitators suggest more features related to cultural learning would be better.
- Due to the application only allowing few features, the text messages are main communication methods, users spend a lot of time to do google translation which one letter took time to complete.

Therefore, the similar app design provide some useful insight before start design detail of Komemail tool, the observation points will be considered and refer into next prototype design.



Figure 4.4 User use SLOWLY app



Figure 4.5 User use SLOWLY app

4.2.2 The Second Testing Trial Result

Prototyping:

The second prototype of Komemail was created with Adobe XD, with several navigation buttons for users to click across the pages. The design process will modify and consider from previous user test experience.

At this part of testing is aim to see user's reaction while using Komemail prototype, the design consider the above mentioned five concepts and refer idea from similar app "SLOWLY".

Media Content and Testing Step:

Due to incomplete of design, the testing equipment would be install with laptop, the design operate faster with selected device - laptop which help testing process more smooth. In additional, consider another side of user who is from Thailand, they have informed beforehand, as the limited technology support, the testing prototype is only work with their laptop.

Language: The current design stage is only available for English version, therefore they facilitator's help is needed during the testing process.

Operation setting: this time of the user test, and consider to be first prototype of Komemail to be operate, student will be ask to over click the interface at the first page until last page of prototype, because at this stage the tool is not proper working functionally, the user will only ask for the overall user experience with the facilitator explanation of features using.

Each of the features are available work with offline, but cannot operate to sent to each other as digital mail due to the prototype still remain in testing stage.



Figure 4.6 User use Komemail app



Figure 4.7 User use Komemail app

The result of feedback will draw observation from both of facilitators and observant, the observation target topic will focus on the ideas of :

1) the overall experience perceived the idea of digital mail and first hand trial toward this tool.

2) User's reaction toward each functions.

Observation Result:

Three users seemed to be clear with navigation and without confusion at clicking on the page. They were content with their own personal Komemail account and use it to watch over each student's video, after viewing the video the tool as the connecting medium, that enables them to connect with the video creators, and users are able to make pen pal friends through the page. Students give positive reactions when they realize after viewing the animation, they have options to connect with specific video creators, if they like the video, to build the relationship with creators will trigger them to continue to the next steps. Also the personal character used in the media content get students to pay close attention to how they will interact with each other, as they said that avatars represent themselves.

Facilitators mentioned that students add more attention, as previous sessions from Komakids, the animation exchange and pen-pal writing are working separately, sometimes it took a while for the next session, students may forget what the watched before. The assisting tool “ Komemail “ puts each of the steps into

one device, which can catch the present moment and feeling to put into mail.

General Feedback and Suggestions:

- The icon features with words is better for user to clear the meaning of icon.
- Icon feature is more useful for younger user, they use this feature more often than older user.
- Audio feature installed can help to trigger them to talk more, despite the language difference, the audio create aliveness and develop sense of present.
- Facilitator suggested to have optional features that more concern about cultural exchange or building cultural knowledge.

Other finding:

There is another interesting finding during the user test with students, one of the participants saying that personal avatar creations help me to image his pen-pal friend, which get him more excited to know more about his pen-pal friend, and he would like to see more available feature working at this part.

To refer the observation , the second prototype will make an adjustment according to the result, this is aim to improve the interaction between both side of user, as the main purpose is to enhance user's communication, without features work together, the concept still can be test out.

4.2.3 The Final Testing Trial

The last prototype, as Komemail, consists of the items from previous prototypes plus suggestions have been given by the first prototype. Komemail is an assisting tool for cross-cultural programs to build up communication and interaction between students from different places, to share their cultural story and background in real time mode, this is in order to create a sense of presence. (The design process and detail scenario used will be available on Chapter 3)

Considering the students in rural areas may have difficulty or without a chance to get in touch with foreigners, experience different cultures. The Komemail is designed as an educational tool for those students to access easily. To start with the tool, students will need to register a personal account, after signing up an account, they can access the page with animation videos made by other students from different countries, next, watch over animation, they can choose certain video creators as pen-pal friends.

At the current stage, concerned with privacy and security issues, the application operation will work long with school curriculum, therefore personal IP addresses will not allow access to the tool.

At this part of testing aim to overview more concreted terms of design tool, consider further improvement of the various communication methods, also look-out others potential features may bring the cross culture relations more closing and deeper. As the chapter 3 mentioned all the designed features (For the explanation of all the features please refer to chapter 3) This part of paragraph covers with the final testing from the observation of three students along with two facilitators interviewed , to see the behavior and reaction changing from first prototype to last one, to prove the improvement and validation of Komemail.

Three main goal of the design would be answered:

- Whether the communication is improve
- Whether the interaction is raise
- Whether their willingness is increase

Operation Setting: The actual user testing was operating in Taiwan from 1pm to 2:30pm and Thailand time 5pm to 6:30pm. Overall time consumed is 1 hour and half, the location taken by at school, with an operation with facilitators from each side of the school teacher.



Figure 4.8 User use Komemail app



Figure 4.9 User use Komemail app

Observation Result:

Participant A:

Compare with the first trial testing stage, student A seem to be more confident to use the tool and relax on the interaction with digital mail, she particular enjoy the process of drawing, since she mentioned that she is not confident to communicate with foreigner, but drawing feature helped her to delivery her thought and idea into mail and deliver to her pen-pal friend. She was extremely surprised while receiving the letter from a friend, as she thinks this is her first foreign friend. The facilitator mentioned that while watching the video, she kept asking questions if she found out the item or place she has never seen before, and the facilitator encouraged her to use this as the conversation topic to write mail with her pen-pal friend, also while the testing is over she still asking facilitator to watch more animation videos. Participant A shows the passion to connect and learn with foreign culture, due to limited resources provided by the local area, help her to build first connection outside her area, and use the most simple tool to write a letter .

Participant B:

Compared with the other two users, she seems to be more familiar with global communication learning, while she is interacting with participant A, the letter context is larger than participant A. Despite the gap, she shows the passion of learning knowledge of foreign culture by wanting to receive more stamps from another side, she said she wants to know landmarks that collect on mail; among the

three users, she is the one who completed the first stamp collection. Surprisingly, as mentioned by facilitator, student B shared this on the note with her parents, and asked her parents if possible she wanted to go here and meet her first Thailand friend.

Participant C:

At the first trial of testing, student C shows less interesting of join the user test and without motivation to interact with foreigner, at the final user test, he has slightly pay attention in the while viewing the video, particular the video of ghost video made by Thailand student, as he is very interesting of this kind of topics, he also mentioned that because without experience to talk to foreigner student, he felt embarrassing if he will input wrong things, but after watching animation and mail structure help he to improve the confidence to interact with thailand students, and find common interesting thing. Facilitator add on comments that she saw potential improvement here, as this student use to be shy and talk less in class, use digital mail, not only help him start conversation not only with foreign student and bonding relation with his classmate by sharing his experience of doing this user test.

This part of section will summarized their answer into the point, the interview question will be attached at appendix.

From the interview, 4 participants will be ask for experience the design tool at first, and process into a semi-interview, because three of participates are children who around age 6-8, it would be suggested to use the group interview, this is in order to decrease the pressure or nervous for children, with the environment with they enable to express in real. Since one of child from Thailand, she will interview with facilitator from Thailand.

Facilitator and Students Interview

- They noticed that children will willing to learn second language, since they try to understand the letter.

- The biggest difference compare with paper letter, which you can see their reaction immediately, and leading them to the right directions.
- I think the most meaningful part is stamps collecting, they can able to learn new things, at the same time also enjoy it.
- I believe this is a good way to let student explore the world, and open their mind, the tool provide the resource and platform to build out the relationship.
- Because they interact and learn each others with same age students, I believe it can encourages their learning rather than just teaching them.
- Children feel proud and happy to share animation to others.
- They think the digital letter did help them to build friendship.
- They think by using this tool, the conversation become relax and easy.
- When they received the letter, they feel excited and happy

4.3. Evaluation of Visualisation and Interaction

Visualisation and Interaction as an essential role of design, because visualisation design introduce the use and interface of this digital pen pal letter, the clearness and accessibility of front design related directly with the purpose of design content for user to use.

Thus, the evaluation will carry out with the questionnaire via 10 participant users experience, there are 5 adults and 5 children are chosen to do the user test, the reason to have different age of user, which is in order to gain different perspectives of user experiences.

The following chart show the questionnaire result, the survey context will list below in the appendix.

The chart install the numeric rating scale instructions, which indicate the accessibility of this design, the 0 represent the design tool is hard to access, 10 represent easy to access.

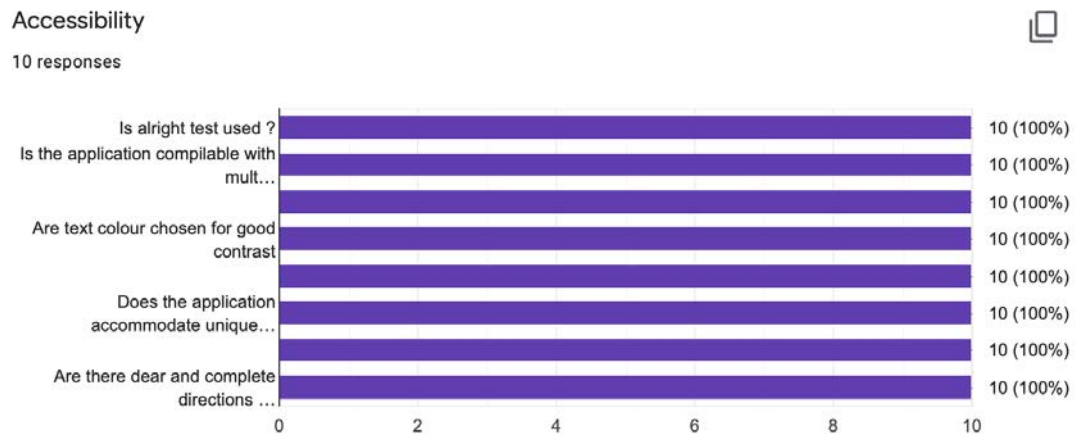


Figure 4.10 Question 1

Based on the Figure 4.1, which shows the overall result of accessibility for "Komemail" design, as see from the chart, the result show 10 for each sections, it means the design tool is easy for user to access and compliable.

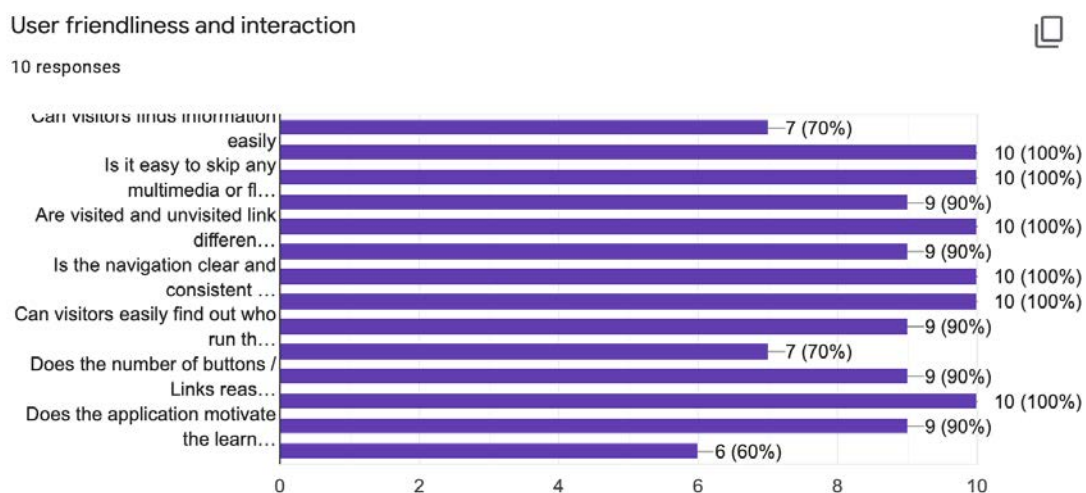


Figure 4.11 Question 2

Based on the figure 4.2 show the result of user experience on friendliness and interaction design, as see from the chart, overall are rate above average, however, the motivation for user to continue the learning is relative low, the structures and information are clear and easy for user to find.

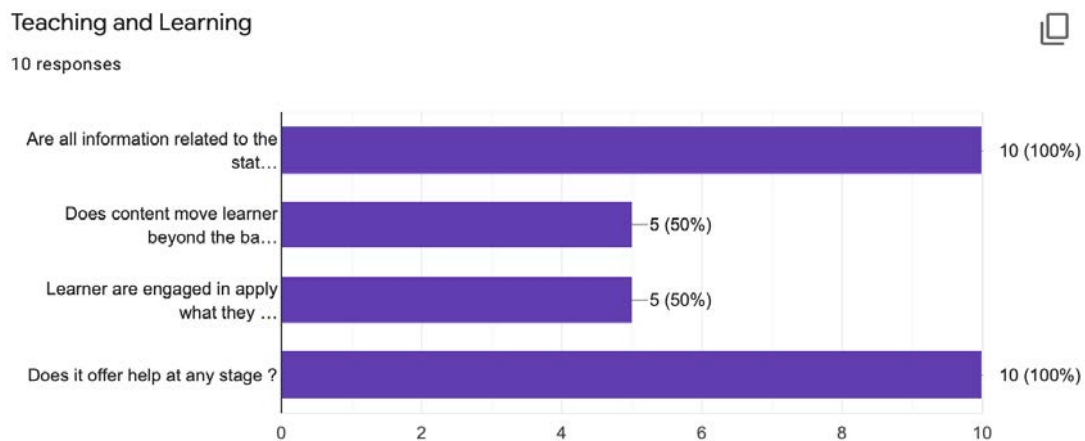


Figure 4.12 Question 3

According to Figure 4.3 present the teaching and learning result from the questionnaire, as see from the chart, although all the function and design are clearly provided and related to the purpose of education goal, the seem still have gap to move user's motivation beyond the learning.

Last but not the least, this part of paragraph examine the usability of design including the accessibility, user friendliness, interaction and teaching learning. Due to the limited number of participants, some insight of user experience of summarised in to key points, which extract from the comments of questionnaire.

- User suggest that due to large features installed in the application, the accessibility expected to have more fluent flow
- the navigation is clear for user to use.
- at the second steps of writing mail part, sometime is take too much time to load the data.

- Communication with icon features is await for too long to load the data.
- Due to the limitation of design, the available functions work separately with each function, such as view video and write mail are operate separately with different window, this may confuse user; it would be suggested to have the moderator script before the user test start.
- Some buttons design suggest to have bigger scale, consider the target user is children, their finger may have limit to reach each button.

Chapter 5

Conclusion

5.1. Discussion

The purpose of the Komemail is enhance the experience by improve their communication and engagement for elementary school level of students, as the assisting tool for cross-cultural program - Komakids, thus it called Komemail, overall two prototype were builded during the research times upon, and continue with second prototype, but at the conclusion will present the result which validating the idea of concept. As communication tool for children, "Komemail" come up with the design of digital letter introduce a real time of communication way; overall include cultural exchange, global awareness, different communication methods. It aims to develop the cross cultural program, to offer comprehend learning and build connection, although this design is mainly for the "Komakids" program as assist tool, others program can also apply as education aid, the learning design consist with content,visual,and interaction design, to achieve the connectivism and interactivism, attractiveness, the user test will be carried out into the evaluation process.

Throughout the observation and interview result from both student participants and facilitators, it is proven that Komemail can help to build communication and interaction by enhancing experience of cross cultural programs. The student from Thailand due to the learning resources limitation, who rarely has a chance to get in touch with any foregin culture even have conversation with foreigners. The user test gives her a chance to enjoy her first time interacting with foreigners. Despite the unfamiliarity and unconfidence, the digital mail offers various conversation tools, she allows to use any methods which she feel easier to create the mail; Plus a real time mode to create presentness and without showing sender status, she

can freely enjoy the process to create her mail and also get fast-response.

Although participant B indicated that her confidence of communication with foreigners, watching over the cultural animations and the special features of stamp collection has deepened her knowledge toward unknown cultures.

At the same time, participant A has more look forward to become more outgoing after watching the animation, indicated he would become open-minded to share the experience not only on digital mail with foreign friend but the his own classmate. The tool helped him to reveal his interest, start to build connections with others.

The above finding has proven and show an optimistic outcome of Komemail which can deepen the meaning of cross cultural experience through exchanging the digital mail in real time, student interaction and communication has enhanced. The positive feedback of future development in interview selection, including the insight of communication methods, and educational factors bring global awareness, other aspect which are practical and friendly user interface, and colour used.

Despite the positive feedback, there are limitation still remain, and need to be considered into the improvement. This design tool did not present all the functions, due to the time and technical skill limit; for example, the real time functions still work in process, therefore during the testing process, the time may delay, user may confuse at this part. Moreover, because this is design for children, the user safety issue request consider into this design, the design are suggest to cooperate with school and limit to the school IP address, this is in order unappropriated content may show up or others may use the tool for malicious purpose. In the initial stage of development, the learning tool would be better to operate under the school environment. In the term of learning and teaching, the interaction design development is essential to reach the goal, as the result show some users still hard to gain the design beyond the learning, therefore, this design tool will suggest to gain deeper and detail insight of user experience.

5.2. Future Work

In the development of Komemail has not yet to completed, based on the insight of user, the future improvement and development will be suggested below, the improvement points will be categories into three parts:

Collaboration and Facilitators

- As the design aim to develop the cross cultural program, the partnership schools and institutions participated are expected to have more.
- The tool requires to operate under the assist from facilitators or educators, a proper training session for facilitator is expect to have in future.

Design and Course Content

- More languages available in this application as the application wish to reach more globally.
- More testings and observations are requested to understand user's experience, since this is the educational tool, this enable user gain insight of using this application.
- The design consider as assisting tool specific for Komakids program, the operation design is under school environment setting, further adjustment with school curriculum, optimistic result would be to customized for specific course, help to develop global learning and social interaction with wider range of group of students.
- A detail improvement of communication functions are expect to see, as large of respond show that the delay and defect happen while writing digital mail.

Time zone

- Real-time mode setting as core idea that develop this design tool, however, upon now all the partnership schools are within Asia area, if consider to have partner schools outside Asia area, the time difference may have hard to reach the idea of real-time. A comprehend guide book are expect to include in the future design.

Apart from the content design, from the view of broadening the design, there still a gap need to fill out in real time part. This is because of the time zone difference in different countries.

Overall, I believe that there still remain improvement and further development. By reaching out more insight of user experience and construct and revise the real time's strategy, which allow different countries of students can benefit of it.

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Appendices

A. Evaluation Sheet

B. Interview Question

C. Digital mail from participants

Evaluation Checklist for Assessing Effectiveness of Kids App (Komemail)

	Question	Yes	No	N/A
	Accessibility			
	Is alright text used ?			
	Is the application compliable with multiple browsers ?			
	Is front size / spacing easily to read ?			
	Are text colour chosen for goof contrast ?			
	Do all media resouces work at all times ?			
	Does the application accomodate unique learning styles and various ability levels ?			
	Are videos, if they don't autoplay, having at the very least, an accessible Play control ?			
	Are there dear and complete directions available for access or installation ?			
	User friendliness and Interactivity			
	Can visitors find information easily ?			
	Does the back button always take them back to preceding page ?			
	Is it easy to skip any multimedia or flash demos ?			
	Do the page load quickly on standard modern connection (10-20 seconds)			
	Are visited and unvisited link differentiated ?			
	Do the pages within application use consistent design?			
	Is the navigation clear and consistent throughout whole pages ?			
	Are there alternative ways of accessing the same information ?			
	Can visitors easily find out who run the application ?			
	Are the most important elements of the page visible without scrolling up and down or from side to side ?			
	Does the number of buttons/links reasonable?			
	Does text and documents employs multimedia enhancements to make learning interactive ?			
	Does the application motivate the learner to continue learning and master concepts ?			
	Does it provide Appropriate feedback throughout the instructions ?			
	Comments ?			

Figure A.1 Evaluation Sheet-1

	Question	Yes	No	N/A
	Teaching and Learning			
	Are all information related to the stated purpose and learning goals ?			
	Does content move learner beyond the basics and encourage learning and thinking / student are engaged in apply what they learned ?			
	Does the site use real world examples to make the instruction relevant for learner ?			
	Does it offer help at any stage ?			
	Comments			

Figure A.2 Evaluation Sheet-2

Komemail Interview Question (For Student)

1.	Are you proud and happy to share your animation ?
2.	Do you think you can easily make friends ?
3.	What do you feel when you received letter from foregin friend
4.	Use three words to describe your feeling after using this tool

5. Draw a picture express your feeling after using “ Komemail”

Figure B.1 Interview Questions - Student

Komemail Interview Question (For Facilitators)

1.	Do you see any difference after students using " Komemail"
2.	Compared with a normal chat application or paper letter, do you find different reactions from students ?
3.	Through the synchrony digital letter, do you think any improvement on student's communication ?
4.	Do you think this tool can motivate their willingness to interact with foreigners ?

Figure B.2 Interview Questions - Facilitator

Komemail Interview Question (For Student)

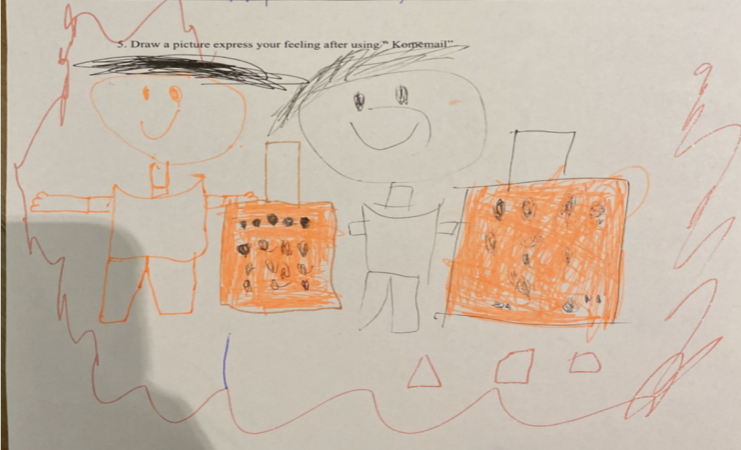
1.	Are you proud and happy to share your animation ? 1. Yes,
2.	Do you think you can easily make friends ? 1.
3.	What do you feel when you received letter from foregin friend ? 1.
4.	Use three words to describe your feeling after using this tool 1. happy , special , proud .

5. Draw a picture express your feeling after using " Komemail"

Figure B.3 Student interview answer

Komemail Interview Question (For Student)

1.	Are you proud and happy to share your animation ? 1.
2.	Do you think you can easily make friends ? 1.
3.	What do you feel when you received letter from foregin friend ? 1. /
4.	Use three words to describe your feeling after using this tool happy thirsty not
5.	Draw a picture express your feeling after using "Komemail"



The drawing shows two stylized figures, one in orange and one in grey, each holding a large orange box filled with small black dots. The figures are drawn with simple lines and have smiling faces. The background is decorated with red scribbles and small geometric shapes like triangles and squares at the bottom.

Figure B.4 Student interview answer - 2

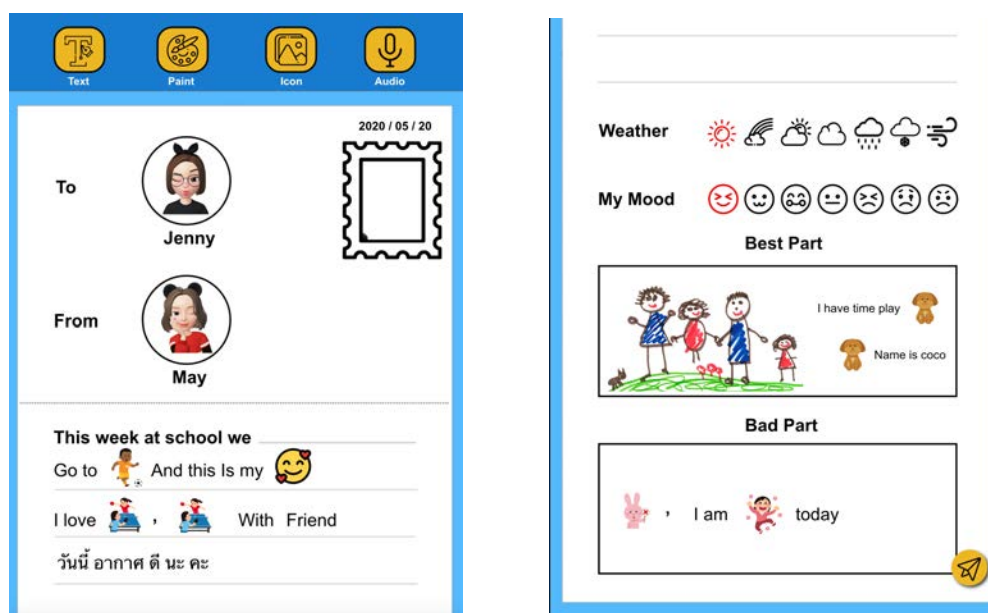


Figure C.1 User use Komemail app - example 1

Figure C.2 User use Komemail app - example 1

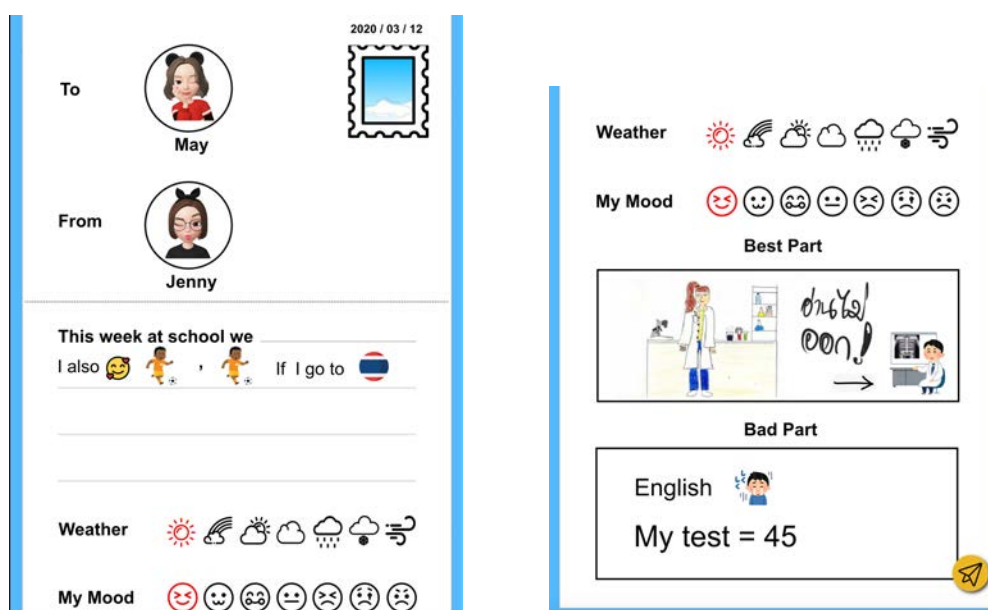


Figure C.3 User use Komemail app - example 2

Figure C.4 User use Komemail app - example 2