

The Pedagogical Development of an International  
Teacher in the Cultural Context of Finnish  
CLIL Home Economics  
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## ABSTRACT

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This thesis draws on content and language integrated learning (CLIL) as a methodological innovation in language education. In order to become competent CLIL teachers in 21<sup>st</sup> century, however, teachers should not merely have expertise knowledge in their own teaching fields but take pedagogical tact into consideration. The aim of this qualitative action research is to understand: (1) How an international teacher from Taiwan utilized the theoretical framework of CLIL 4Cs and (2) How 4Cs were used as a support to develop pedagogical tact in CLIL home economics classes in a Finnish lower secondary school.

The action research approach and process were conducted in two cycles that included planning, acting, observing and reflecting. The data collection and analysis adopted a qualitative approach to select, refine and thematically code the data.

The three main key findings are that: (1) the harmonious integration of 4Cs can support the considerable conceptual change from teacher-led to student-centered CLIL class, (2) the 4Cs and pedagogical tact are necessary parts of a teacher's repertoire, and (3) the three dimensions of developing pedagogical tact indicate the importance of a trust-worthy relationship between teachers and students when using 4Cs as a support.

This research highlights the value of cross-cultural experiential learning and teaching this experience can be viewed as an essential experience for CLIL teachers to develop more pedagogical tact. It is hoped that this action research will encourage Taiwanese government re-conceptualize the core spirit of CLIL education.

Keywords: Action Research, CLIL 4Cs, CLIL Home Economics, Pedagogical Tact, Cross-Cultural Experience, Finland, Taiwan

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*Be kind, for everyone you meet is fighting a hard battle.* (Ian MacLaren)

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# 1 INTRODUCTION

According to United Nations of Education, Scientific and Cultural Organizations (UNESCO), there are five essential pillars for 21<sup>st</sup> century citizens of learning: learning to know, learning to do, learning to live together, learning to be and learning to change (Sector, 2005). In order to achieve these goals, teachers in class should not only be able to assist students but enrich their international teaching experience so as to make connection with competence in 21<sup>st</sup> century outside of the world. In addition, with the need of multicultural society of education, Content and Language Integrated Learning (CLIL) has become an educational approach in learning interdisciplinary subjects from European perspective (Coyle, 2008; Coyle, Hood, & Marsh, 2010). Moreover, research has showed that CLIL approach in Finland has been utilized in more institutions (Jäppinen, 2005) and gaining its potential across continents (European Commission Directorate Generale for Education and Culture, 2006). That is, CLIL learning and teaching in 21<sup>st</sup> century play important roles in the terms of the idea of global village of knowledge and technology around the world.

Moreover, the European Center for Modern Languages (ECML) has announced that language is the heart of learning from 2016 to 2019 (Council of Europe, 2016). The importance of multilingual and multicultural competences have been discussed and put into present curriculum. The awareness of second/foreign language education for both learners and teachers also attracted tons of educators and researchers. They have been interested in not simply viewing CLIL as an innovation in education but also considering it as a process of pluriliteracies (Meyer, Coyle, Halbach, Schuck, & Ting, 2015). By noticing this trend toward the future, what our role of being a teacher is, no matter language or subject teacher and how to enrich our teaching experience to embrace the world and get the courage to teach (Palmer, 2010) in different social and cultural contexts.

I, myself, have worked as a three-year English teacher from Taiwan and found that I needed to improve English teaching proficiency in class as well as

teaching with pedagogical tact (van Manen, 1991a). Pedagogical tact is a keen sensibility embedded in teachers toward students. Teachers know what to do or not to do in order to pave a positive way of orientation (van Manen, 1991b). In addition, when I studied in University of Jyväskylä (JyU) and took several courses relevant to my past teaching education such as CLIL and foreign language pedagogy. At that time, I was aware that English is also viewed as a foreign language in Taiwan (Chang, Wu, & Ku, 2004) and that my teaching experiences might be similar to Finnish teachers'. They had to learn English as a foreign or second language in school when they were students. They are not native speakers and must have encountered some similar difficulties as their students learned from their CLIL classes. By understanding this point, the inner voice of my heart and mind called me and I had a strong desire to observe and participate as a non-native teacher, and investigate how to use CLIL as an innovative teaching pedagogy in home economics class. One time, when I observed a home economics class as usual, I was asked if I would like to teach my own country's food. I consented to teach because I remembered what my teacher said in class that you will not understand what CLIL is until you really start to plan and reflect on it. Besides that, teachers do not need to be native or fluency in the target language (Marsh, 2002). Therefore, with curiosity about what textbooks and journal articles have said and done as theories and what I thought I have lacked after being an English teacher, I decided to take the unknown challenge and prepare to teach my first international home economics class in English.

At this stage of the action research, the four essences, content, cognition, communication, and culture of CLIL are used as a tool during these two teaching practices to explain how I develop my international teaching experience through different dimensions of pedagogical tact in home economics class in lower secondary school in central Finland.

The following section begins by outlining pedagogical tact in Chapter 2 and CLIL 4Cs in Chapter 3. In Chapter 4 and 5, the methodology of research task, implementation of the study and ethical solutions are described. Chapter 6

presents the qualitative results and the final chapter concludes the main finding, taking into the account the limitations, as well as implications of the study.



## 2 PEDAGOGICAL TACT

The goal of becoming a competent CLIL teacher in 21<sup>st</sup> century contains a spirit of pursuing. As van Manen (2002: 63) said:

*[...]; a 'real' English teacher cannot help but poetize the world— that is, think deeply about human experience through the incantative power of words.*

To enhance the quality of teachers' teaching needs not merely the knowledge in textbooks. The role of teacher, their integrity and identity (Palmer, 2010) and self-education (van Manen, 2002: 14; van Manen, 2012: 3) all present the dignity and subjectivity in class without disguise. The spirit of pursuing excellent teaching is not a novel issue during the past decades of educational research field and the wanting for excellent teachers is never ended. How teachers adjust and adapt themselves during dynamic teaching processes in realization of good teaching is the most concrete way to inquiry. From this perspective, how to develop those competences I have mentioned above by applying pedagogical tact in class should be taken into consideration.

### 2.1 What Pedagogical Tact is?

To precisely define pedagogical tact is difficult. The first person that introduced the related concept of pedagogical tact is most likely a German educator, Johann Friedrich Herbart (1776-1841). He once lectured and mentioned *tact* and *tactfulness* (Muth, 1982), viewing that *tact* first as *Gefühl* (feeling or sensitivity). However, at that time, the notion of tact had neither been systematically studied nor used in English teaching texts (van Manen, 1991a: 523). Later, another educator from the US, William James (cited van Manen, 1991a: 523, 524) interpreted *tact* by using an example that teachers should be sensitive to the child's natural motives and attempt to connect these to school curriculum. More recently in Finland, Toom's dissertation (2006) implied that pedagogical tact is within the teachers' practical knowing, interactive thinking, reflection manifest-

ing in teaching-studying-learning process as a whole. In addition, the focus of his research was set on the interactive phase of the whole process and the purpose of this study was closer to mindfulness, or to be more specific, pedagogical tact.

Most significantly, pedagogical tact, probably coined by Max van Manen, is recognized as a capacity and responsibility for mindful pedagogical action in specific moments to young people in order to educate and help them grow, which can be beneficial through teachers' contact, orientation and reflection in terms of a positive attitude of every day in class (van Manen, 1984; van Manen, 1986; van Manen, 1990; van Manen, 1991a; van Manen, 2013). Although pedagogical tact sounds like a gift or talent when most teachers hear the pedagogical term at the first time, in fact it can be prepared and practiced as a special *feel* for acting tactfully while teaching.

## 2.2 What Pedagogical Tact Includes?

There are five characteristics of pedagogical tact (van Manen, 1991a: 528-533) worthy to be mentioned to help teachers understand its profound meanings.

First of all, tact means *the practice of being oriented to others*. It is the core spirit of pedagogical tact. Teachers have responsibility to guide students and lead them on the right tract.

Secondly, tact *cannot be planned*. It may confuse teachers at first sight comparing the definition of pedagogical tact in previous section, which mentioned that pedagogical tact can *be* prepared and practiced. As a matter of fact, van Manen has said that 'teachers need to have expectations, set goals and objectives, evaluate progress and growth' (2002: 85). This indicates that because we are in a diversity of pedagogical moments, we cannot plan our pedagogical tact beforehand. We hardly foresee what will actually happen in class.

Thirdly, *tact is governed by insight while relying on feelings*. This abstract description can be connected to Nel Noddings' care and education theory. In her book (Noddings, 1995), moral education from care perspectives drawing on that

teachers usually demonstrate their caring in their relations with students as a model, manifesting caring through dialogues, cooperative learning and inter-personal trust. In other words, caring itself is out of love.

Fourthly, *tact rules practice*. This means that tact influences how teachers teach. Even though there has been no sound theory to explain the tenet until now, it does not mean that pedagogical tact does not exist and is unable to guide teachers. On the contrary, it is present in different pedagogical moments and also teachers' thoughtfulness to rule practice.

Therefore, the fifth characteristic, *the tactful structure of thoughtful action* (see also Palmer, 2010; van Manen, 2008) is a realization of thoughtfulness. With considerate seeds in teachers' inner heart and mind, we connect not only ourselves with the living core of students' lives but students' inner worlds. By reviewing those definitions from educators and teachers and by eliciting these special characteristics of pedagogical tact (Hare W., 1992; van Manen, 2002; van Manen, 1991a: 516, 517, 518; van Manen, 1991b), I gradually develop three dimensions of pedagogical tact from theory into practice as below.

### 2.2.1 A Sense of Vocation

A sense of vocation is tact that teachers notice educational relation and know how to react it simultaneously. Palmer (2010: 30) gives the definition of vocation, 'the place where your deep *gladness* and the world's deep *hunger* meet.' This related sensitivity for teachers can be realized in class. Through various forms of observations, gaining enough confidence and preparation, having years of teaching experience, personal commitment to a lesson and other possible measures, teachers can realize pedagogical tact without doubt. In the following three dimensions of pedagogical tact, an authentic account was used from van Manen in his English teaching experience (see also van Manen, 2002: 72):

*When I walked into a classroom and got a sense of where these students are coming from. I knew that some of them have been working part time during the week-*

*end, other have good or bad experience on Saturday and Sunday,[...](van Manen, 1991a: 516)*

From this anecdote, we can see his sense of vocation unfold at the moment when he entered the classroom and began to re-member (Palmer, 2010: 20) his students. This pedagogical tact manifested in pedagogical moments naturally brought out the next dimension.

### 2.2.2 Thoughtfulness

Pedagogical thoughtfulness is maintained by a kind of seeing, listening, and responding to students in different moments (van Manen, 2002: 10). Thoughtfulness can be generally categorized into two in this study, caring and humor. Caring is showed in what kind of movement or procedure needs to be mentioned in class and what sort of problem teachers may encounter during teaching. Humor is used when teachers use their body language to interact, create humorous atmosphere such as by using exaggerate gestures or by telling jokes. As mentioned before, a thoughtful action is a realization of tact; they are hand in hand (Cuenca, 2010; van Manen, 1991a; van Manen, 1991b). The previous anecdote continued (van Manen, 1991a: 516):

*[...] Yet, (students) all managed to sit down in their seats at eight this morning. Right now, they could not care about Rilke or poetry.*

This short description presents pedagogical thoughtfulness, in terms of caring and mindful consideration. Although the teacher and students should be in a situation of teaching or learning something at that moment, the teacher felt that students were thinking other things except Rilke or poetry in their minds and was aware of the mood of students. To develop this tact is not a difficult matter, but it definitely requires experience and effort for teachers through constant reflection in daily life situations.

### 2.2.3 A Relationship between Teachers and Students

As teachers always search a better teaching and learning environment, the relationship between students and teachers should not be neglected. That relation-

ship is an intimate result of teachers' and students' interaction within verbal or non-verbal communication. The previous anecdote continued (van Manen, 1991a: 517):

*So, [...]. One of my students, Darryl, whose loud shuffle and laughter somehow seems to flavor the mood of the class. He caught my eye and I smiled at him. Somehow he seemed to interpret this as an invitation to make a comment about the ice-hockey team that lost in the semi-finals.*

From this anecdote, the teacher provides evidence of a relationship of students in casual life through eye-contact and smile (non-verbal). In addition, it is obvious to speculate what may happen afterwards. That is, sharing his defeated ice-hockey game experience with the teacher and other students in class (verbal).

By excerpting this account and splitting into three pieces so as to build up my three dimensions of pedagogical tact, teachers can understand what happened to students before lessons get started and. It requires a sense of vocation and thoughtfulness to see their relationship while teaching and daily life in school. In addition, these three dimensions are not only used before a lesson but applied in class and after class.

### 2.3 Why Interested in Pedagogical Tact?

There three main reasons to support my passion to investigate pedagogical tact. First of all, becoming a skilled and reflective teacher (van Manen, 1991a) for me is a way to perform qualified teaching in class. Becoming skilled means acquired from outside and the accumulation of thousands of hundred practices. Each time after practicing I realize where needs more improvement to conduct better for the next time. Therefore, for me, becoming skilled and reflective are complemented although it takes time to gradually achieve. However, as a teacher I seldom have time to respond or reflect in class (van Manen, 1991a; van Manen, 1991b; van Manen, 2013) because each class has various and dynamic situations that I have to tackle with everyday.

Secondly, after I took courses in University of Jyväskylä such as Foreign Language Pedagogy and CLIL. I began to be aware of multicultural learning and teaching environment can create more different outcomes and value. It means when I was first-year student in international master degree program, I encountered not only international people but also had intercultural experience. In addition, I began to read articles and European language education policy in the CLIL course. I found that pedagogical tact was already put into practice to match European framework for CLIL Teacher Education (Target, 2010: 24). For example, a qualified CLIL teacher is a learner who follows a personal path of enquiry, reflection (van Manen, 1995), and evaluation. Some research such as the development of CLIL teachers or student teachers (J. Moate, 2011a; Niemi, Kumpulainen, Lipponen, & Hilppö, 2014a) can be counted. In addition, reading van Manen's article is insightful to explore its essence.

Finally, as van Manen's article mentioned that pedagogical tact is lack of robust support in educational theories and rarely to be realized (van Manen, 1991a: 527). This dearth of theoretical support aroused my inner voice to explore deeper and to prove John Dewey's (1929) theory that knowledge is from experience, to be more concisely, the interest of pedagogical tact is from teaching and learning experience.

## 2.4 How I Use Pedagogical Tact?

A sense of vocation, thoughtfulness and a relationship between teachers and students are related to CLIL teachers in home economics class. On the one hand, school is a place where the private and personal space of home is expanded to take in larger public or community space. It is a medium of home and the real world (van Manen, 2002: 71). On the other hand, if a school is a place where children explore a world of human relationship world, then a home economics classroom is a place where students learn what they should have learned like home. In addition, van Manen has said (1991a: 531)

*'To exercise pedagogical tact is to see a situation calling for sensitivity, to understand the meaning of what is seen, to sense the significance of this situation, to know how and what to do, and to actually do something right.'*

I used my three developing dimensions of pedagogical tact in my CLIL home economics teaching practices within reflection cycles, anticipatory reflection (before class), interactive reflection (during class), re-collective reflection (after class) (van Manen, 1991a: 512-513). The notion of reflection, asking questions and putting something into practice appeared in these cycles as Schön (1983) stated 'think while *doing* it.' This is also one of the essences of action research.

In this chapter, I present what pedagogical tact is and its special five characters – the practice of being oriented to others, cannot be planned, governed by insight while relying on feelings, rules practice, and the tactful structure of thoughtful action. Through reviewing literature, I attempt to develop my three dimensions of pedagogical tact – a sense of vocation, thoughtfulness, and a relationship between teachers and students. With personal and academic interests, I build up and integrate these three dimensions of pedagogical tact to constitute the essence and excellence of pedagogy in lesson planning, teaching demonstrating and after-class reflection.

### 3 CLIL 4CS

Max van Manen's core concepts of pedagogical tact are not simply abstract theories implemented in home education and school education fields. I presented them in the previous chapter and they can be truly realized not only in real world but in authentic CLIL teaching situations. In order to gain a comprehensive understanding of pedagogical tact and put it into realization in my CLIL lessons, I chose 4Cs as my theoretical background to support the development of pedagogical tact when I planned, implemented, and reflected in CLIL lessons.

#### 3.1 What 4Cs are?

Although the definition and model of CLIL can be varied in different contexts and countries, it is still unclear for researchers and teachers to explain explicitly (Cenoz, Genesee, & Gorter, 2014; Llinares, 2015). As a result, research showed that content and language teachers have conflicts when choosing or designing CLIL lessons (Wolff, 2012). The need for frontline teachers in dynamic CLIL settings is obvious; it is necessary for teachers to have fundamental and clear-cut principles for both content and language teachers when planning CLIL lessons by themselves (Mäkiranta, 2014).

It might not be easy to have a well-developed conceptual theoretical framework like Coyle (1999) who has established theory of 4Cs as well as applied the theory into practice as a framework (Coyle, 2005a: 8; 2005b; 2008). Those 4Cs stand for content, cognition, communication, and culture (Coyle, Hood, & Marsh, 2010). Although Coyle has set up the 4Cs framework since 1999, other researchers further added *five* dimensions, culture, environment, language, content and learning (Marsh, Maljers, & Hartiala, 2001:16) and 5Cs, content, community (or culture), communication, cognition and competence (or context) in different contexts (Agolli, 2013; Attard Montalto, Walter, Theodorou, & Chrysanthou, 2015). Researchers and both content and language teachers



nowadays mostly utilize 4Cs to develop or guide themselves in choosing, deciding, constructing material and activities for their lessons, and establishing criteria to examine the quality of CLIL lessons (Meyer, 2010).

Moreover, Coyle (2008: 103) noted that 'the 4Cs framework for CLIL starts with content and focuses on the interrelationship between content, communication, cognition and culture to build on the synergies of integrating learning and language learning.' As can be seen, each C plays different but indispensable role in the whole process of CLIL lessons' planning, progress and production. In the following paragraphs, I will explain each C based on Coyle's 4Cs theory and explain from which perspective I am looking for/through and in my CLIL lessons.

### 3.1.1 Content

Choosing what to teach is the first step when planning lessons. Content is at the heart of learning and teaching process because knowledge, skills, and understanding are three important elements that teachers should focus on in CLIL lessons (Coyle, 2005a: 5). Content also means that teachers have related knowledge and personal experience about what to teach and teachers should have general ideas (Erlandson, 2014; Shulman, 1987). It is more subject matter when we discuss from National curriculum perspectives like the Finnish National Board of Education (FNBE, 2004; Target, 2010). With those clear and concrete definitions of content above, it seems to lack practical guidelines. Specifically, in Coyle's article (2005b: 7), it provided several explicit guidelines for teachers to prepare content by asking the following questions: (1) *What will I teach?* (2) *What will they learn?* (3) *What are my teaching aims/objectives?* (4) *What are the learning outcomes?* After teachers answer all the questions above, they can start to think about what sort of teaching material they need and develop their activities and assessment afterwards.

### 3.1.2 Cognition

After deciding *what* content to be taught, then it is *how* question sentence should be asked (Nikula, Dalton-Puffer, & García, 2013). For example, how is the current status of teenagers' mental and physical development (Piaget, 1971)? to know students' overall situations at the moment can help teachers easily get into their thinking process and how is the process of students get information from teachers or other classmates (Gagne, Wager, Golas, Keller, & Russell, 2005)? to understand how teachers use nine events of instruction to attract students' attention. Then teachers are able to know how to engage students in content and give students opportunities to construct their own understandings. Recent research (Nikula et al., 2013: 78) mentioned that 'it was subject-only teacher who was more inclined to use a great share of questions encouraging divergent higher order thinking that needed to be verbalized in more complex way.' However, it is not only content or subject teachers who can ask higher-order thinking questions but language teachers can also attempt to cast this questions in CLIL classes. By adopting and adapting Anderson and Krathwohl's (2001: 67-68) lower-order thinking process and higher-order thinking process, Coyle (2005b: 7) provided some questions for teachers to explore thinking skills for students. For example, 'what kind of questions must I ask in order to go beyond display questions?', 'which tasks will I develop to encourage higher-order thinking– what are the language as well as the content implications?' and 'which thinking skills will we concentrate on which are appropriate for the content?' These questions convey important information that students are able to construct their own understanding through content and communication and be challenged from lower-order thinking to higher-order thinking.

### 3.1.3 Communication

Planning *what* and *how* are the first two steps but how to convey ideas through a medium is another question for teachers. As Vollmer (2008: 273) states: '*Every learning involves language learning or is language learning at the same time and communication, therefore is of overriding importance also subject learning.*' From his sen-

tence we should not overlook and underestimate communication since most of the time teachers in CLIL class need to use language to teach and most students learn through it. In addition, research in CLIL class talk and how teachers initiate and respond has concerned (Schuitemaker-King, 2013). Take Morton's article (2012: 104) for example. He drew on talk in interaction for class and carefully proposed useful questions for teachers to think while observing science CLIL lessons:

1. *Before class: 'How does the **teacher** describe the conceptual issues?'*
2. *During class: 'How does the **teacher** use classroom talk in dealing with learners' conceptions?'*
3. *After class: 'How does the **teacher** describe their own interactive instructional practices in dealing with conceptual issues relating to the genetic topic?'* [Emphasis added]

From these questions, we can understand that teachers have an influential role in students' learning process including their language using and learning in CLIL. As teachers, we should not neglect students' reaction and response at the same time when we plan a lesson. However, recent research from Denmark (Attard Montalto et al., 2015: 21) suggests that teachers talk *less* in CLIL since language for learning is using English or a target language as a tool or medium to introduce ideas and instruction for communication including dialogues with teachers and students in class (Mercer, 1995; Wells, 1999).

Coyle et al. (2010: 37-38) further advanced the main concept of communication by demonstrating three dimensions, namely language *of*, *for* and *through* learning to enhance and motivate students' language using and learning.

First of all, language *of* learning means that teachers select key words and phrases usage, which corresponded to the theme of their lesson goals for students. In the first stage, teachers choose an appropriate level of vocabulary for students. Secondly, language *for* learning signifies the main purpose of language. Teachers usually set up goals for CLIL lessons and to improve students' language proficiency. The last dimension is language *through* learning, which anticipates that students will learn the language through interaction in class

such as activities and tasks. This dimension may give more unexpected results since students may face different reactions through interaction in class.

Moreover, there are more communication skills worthy to mention. Coyle has adopted Cummins' (1979) basic interpersonal communication skill (BICS) and this is a skill for people to improve their understanding when communicating by using eye-contact, body language, clarifying, rephrasing, and so on. I viewed this as a vital skill for students' learning and for teachers in lesson planning, class demonstrating and reflecting after class. Nevertheless, it might be a pity even if a person has profound and abundant knowledge, skills or understanding but he/she has difficulty in interpersonal communication. Other skills for communication should be taken into account when planning lessons such as ICT skills.

#### 3.1.4 Culture

Culture is the last C in Coyle's theoretical framework but it does not mean it has the least primacy of the 4Cs. In fact, intercultural awareness is the core of CLIL spirit (Coyle, 2006b: 9-10). To be more explicit, it is a process from intercultural awareness to intercultural understanding (*ibid*). When teachers start planning CLIL lessons, they should consider that they are designing in a multicultural society for students. In addition, recent study (Agolli, 2013: 141) pointed out that intercultural competence is unconscious to be neglected or ignored (15%). Obviously, culture plays a vital part of 4Cs but it is not easy to be implemented because of its nature. Moreover, culture is more like a thread to connect other three Cs (Coyle, 2005b: 7). Here are several tips for teachers to think before applying culture into CLIL lessons:

1. *What are the cultural implications of the topic?*
2. *How does the CLIL context allow for value added?*
3. *What about otherness and self?*
4. *How does this connect with all Cs?*

By doing so, culture can be viewed from subject cultures and disciplinary viewpoints to develop conceptual understanding through different contexts (Coyle, 2015: 93;

Meyer, Coyle, Halbach, Schuck, & Ting, 2015:51) to help students be sensitive to differences between self and other people and learn from each other.

### 3.2 Why Interested in 4Cs?

After presenting what the 4Cs are in the previous section, there are three reasons for why I am interested in the 4Cs.

During the past two decades, most articles and classroom focused on second language acquisition and proficiency (Coyle, 2008) but teachers' voice (J. Moate, 2011a) is seldom to be heard. Study suggested that CLIL should be viewed as a holistic methodology (Meyer, 2010) instead of focusing on language learning (cf. Krashen, 1981). Moreover, the nature of teacher and student interaction (Dalton-Puffer, Nikula, & Smit, 2010; Mercer, 1995) may construct different understandings of the roles in a CLIL classroom. Nowadays the bloom of classroom observation (Nikula et al., 2013) and all teacher education should aim the goal of educating every teacher as a CLIL teacher (Wolff, 2012: 107) arouse my enormous curiosity about what actually happens in CLIL classes and my interest in developing my own teaching in CLIL class. That is, I would like to bridge the gap between theoretical aspects and practical teaching. Furthermore, I want to use my personal intercultural teaching experience in CLIL class to allow more CLIL teachers to know how I realize it.

The second reason is that after I took several courses about CLIL and foreign language pedagogy in Finland. I came up an idea of 'power of integration' (Coyle et al., 2010). Each C from Coyle's theoretical framework is influential to the others when they get united. These Cs will become much meaningful and powerful. Firstly, take content and communication for example. In order to achieve the objective goal *within* and *across* the curriculum (Joyce, Calhoun, & Hopkins, 2008; Marsh, 2008: 238), teachers need to consider the aim and the way they teach. Languages can be applied in different contents but how to synergize will depend on the social context and teachers' teaching experience. Secondly, take communication and cognition for instance. Examining the relationships between classrooms talk directed learners' conceptual change (Morton,

2012). The way teachers taught and planned for students before class (proactive), in class (interactive) and after class (reactive) can be seen in Morton's research. Teachers' talk and communication skills successfully transformed students' conceptual knowledge in CLIL science class. In addition, Cummins (1979) developed a matrix adopted by Do Coyle et al. (2010), which manifested the relationship between language and cognition in CLIL task and material evaluation. This is also a tool to examine teaching materials (e.g. slides and instruction sheet). The third example is the relation of content and other 3Cs. Content is fundamental material but at the heart of learning knowledge, skills, and understanding which is not isolated in context but integration with other three components (Coyle, 2008:103; Coyle et al., 2010:45; Coyle, 2015: 90). As a matter of fact, there are still other instances which can be mentioned such as culture with other 3Cs, communication with other 3Cs and cognition with other 3Cs.

The third reason is the consequence of the learning and teaching outcomes. CLIL lessons can provide students better language proficiency in lower secondary school, better subject matter knowledge, better attitude and motivation, and brain undertakes less effort when using bilingual (Van de Craen, Ceuleers, & Mondt, 2007: 71-75). Both teachers' and students' benefit comes from the 4Cs and the integration.

In conclusion, the basic interest in 4Cs can bring more unexpected results when planning, implementing, and reflecting in CLIL class.

### 3.3 How I Use 4Cs?

It is important to mention that teachers can realize their lesson planning skills or other different teaching skills, but it seemed not possible for them to practice the skill in the same way (van Manen 1991a: 533-534; Toom 2006 : 77). This is quite astonishing that even though I know the nuts and bolts of 4Cs, it does not mean that I can forge it in the same way and have the same outcomes. Few study proved that CLIL classes were taught by subject teachers who are also the

language teacher (Coyle, 2008: 106). Therefore, different teachers may utilize 4Cs in different aspects in their own ways.

For my own purpose, I plan to implement 4Cs with pedagogical action research to reflect and develop CLIL pedagogy experience and relationships (Carr & Kemmis, 2005; Dewey, 1929; Niemi, Kumpulainen, Lipponen, & Hilppö, 2014b; Schön, 1983; Toom, 2006; Vandermause & Townsend, 2010). Even though the interaction in teacher-led class is much easier (Nikula et al., 2013), 4Cs are planned and designed on the basis of students. What I attempt to do at this stage is that how the 4Cs used as a tool with three developing dimensions of pedagogical tact reflection cycles (van Manen, 1991b) as my ideal notion to realize in CLIL class from anticipatory reflection (planning), interactive reflection (implementing), re-collective reflection(reflecting) (see Figure 1).



FIGURE 1 4Cs with Pedagogical Tact

In this chapter, I have presented that what the 4Cs are for and explained each essential component of 4Cs with theoretical framework and with my perspectives. Further I elaborate the concept that not only two of 4Cs can be integrated but those 4Cs are mutually integrated and have potential influence on each other. In the last section, I choose pedagogical tact as my main notion in this study and 4Cs as my theoretical background in CLIL lesson planning and conducting so as to develop these in my international teaching practices.

## 4 RESEARCH TASK

The aim of this action research is to understand during these two teaching demonstrations in home economics class in lower secondary school in central Finland. How I use CLIL 4Cs: content, cognition, communication and culture as planning, implementing and reflecting tools to discover how I develop and describe the essence of my international teaching experience through three dimensions of pedagogical tact: a sense of vocation, thoughtfulness, and a relationship between teachers and students are the main concerned.

In the study, there is one main research task with two research questions designed to meet the overarching aim of this thesis– *How does an international teacher use the principles of CLIL as innovative education for pedagogical development?*

The two research questions are:

- (1) How can the 4Cs be used to develop CLIL lessons?
- (2) How can the 4Cs support the development of pedagogical tact in CLIL lessons?



## 5 IMPLEMENTATION OF THE STUDY

This qualitative study aims to understand how I, as an international teacher from Taiwan, utilize the CLIL theoretical framework 4Cs (Coyle et al., 2010) as a tool to plan, implement, and reflect on CLIL home economics class in a Finnish lower secondary school. By doing this, how I develop and describe the essence of my international teaching experience through three dimensions of pedagogical tact (van Manen, 1991b), a sense of vocation, thoughtfulness, and a relationship of teachers and students, during these two teaching experiences is also manifested in this action research.

Due to two different teaching periods in this study, the following sections contain two practices (I call them Cycle 1 and Cycle 2 below.) except approach and context section. The teachers from Cycle 1 and Cycle 2 were given the pseudonyms and indicated the country they came from. The pseudonyms were given randomly and did not affect any teaching moment in the whole study.

### 5.1 The Approach and Context

Action research, also called 'classroom research' (Hopkins, 2014) or 'self-reflective enquiry' (Kemmis, 1982), is a powerful method to bridge the gap between theory and practice. It has been applied in psychology, education and other social institutions (Newby, 2014). In the educational field, it provides opportunities for teachers to plan and reflect before class and after class as continuous cycles in the research. That is, action research is more like a journey of 'think while doing it' (Schön, 1983) and a process of 'learning by doing' (Dewey, 1938). In addition, a British educator and curriculum reformer, Stenhouse (1975) mentioned '*teachers as researchers*' to encourage teachers to discover problems and understand difficulties like researchers in their research and to plan to solve these obstacles. Later, Kemmis and McTaggart established a formal development of action research in education field in 1982 (cited McNiff & White-

head, 1988: 26). This self-reflective design gave detailed blueprint for action research with basic enquiry two cycles to educational practice. It starts from planning, acting, observing and reflecting and to the next cycle – a set of question-emerging and problem-solving. In order to answer the research questions for the study, I decided to play the role of, 'teacher as researcher' (Stenhouse, 1975) and adapted the version of Kemmis and McTaggart (1988) and van Manen's reflection cycles (van Manen, 1991a) as an approach for both cycles (see Figure 2). Each cycle has three sessions: planning, acting, observing and reflecting. Figure 2 briefly explained the process of two cycles in this study.

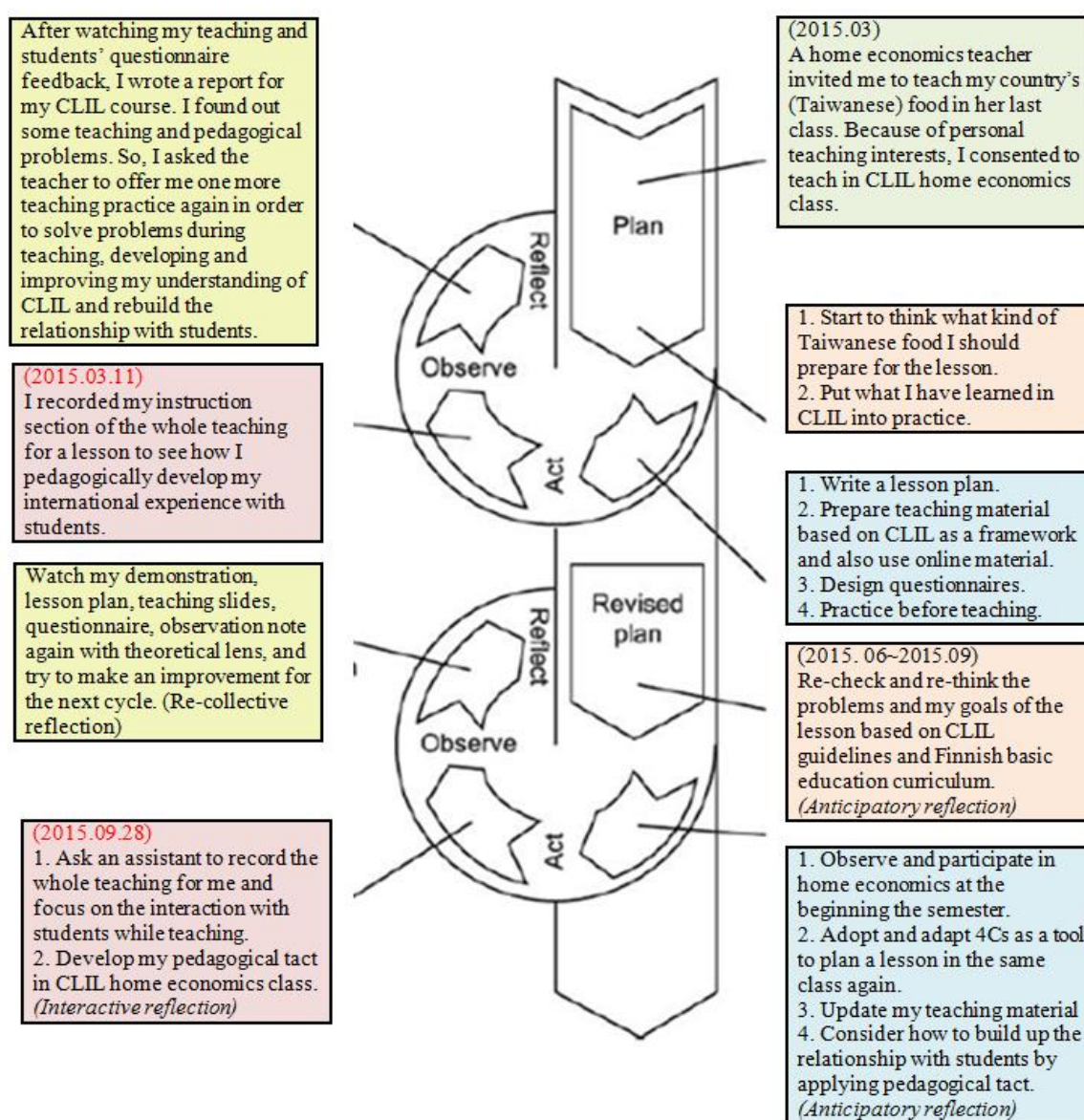


FIGURE 2 Research Cycles of this Study.

The context of the action research was in a mid-size lower secondary school in central Finland. This school was established in 1962 but was totally renovated during the year of 2007 to 2009. Finnish students and other foreign students can study in English in K. School (pseudonym) from grade 1<sup>st</sup> to 6<sup>th</sup> and in V. School (pseudonym) from grade 7<sup>th</sup> to 9<sup>th</sup> through a CLIL strand. The students' language proficiency in English is tested before they study in the school. In addition, students in Finland learned English as a subject from 3<sup>rd</sup> grade (FNBE, 2004). The V. school is known for its international connection, strong connection with teachers and parents, and wide variety of course options. Moreover, English and Finnish are interchangeable in CLIL class. Most importantly, the school views that each student as an independent individual, and provides an encouraging atmosphere and a democratic community where everyone is respected.

The research site, home economics classroom, has well-rounded applications and teaching equipment and a cozy atmosphere. Besides, the students in the school are required to take home economics class as compulsory course in 7<sup>th</sup> grade. For 8<sup>th</sup> and 9<sup>th</sup> graders, it is optional for CLIL course. Generally, there are four sections of period each semester and only one of the periods is for CLIL teaching, in which English is usually chosen as an additive language. The other three teaching periods are taught in Finnish. Each class for the home economics lesson is 90 minutes with 15 minutes break in between.

## 5.2 The Participants

TABLE 1. Participants of Two Cycles

Cycles (Time)	Cycle 1 (2015.02~2015.05)	Cycle 2 (2015.06~2015.10)
Teachers	2 Teachers (Taiwan, the other from Finland as an assistant.)	4 Teachers (Taiwan, and the other three teachers from Finland, Korea and Germany as assistants.)
Students	Thirteen 8 <sup>th</sup> & 9 <sup>th</sup> graders (Twelve girls and one boy)	Fifteen 7 <sup>th</sup> graders (Eight girls and seven boys)

Table 1 provides a summary of participants of both cycles. As can be seen, in spring 2015, the participants in Cycle 1 were two teachers and thirteen students. I was a language teacher from Taiwan with three-year teaching experience in English language teaching and a class teacher in lower secondary school before I came to Finland. The other teacher, Johanna (pseudonym) was a qualified home economics teacher with related teaching experience in a lower secondary school in central Finland. The thirteen Finnish students (twelve girls and one boy) were from the same school as Johanna but they were from different classes and grades. All of them were 8<sup>th</sup> and 9<sup>th</sup> graders interested in home economics. Students were allowed to choose optional courses in this school such as art craft, visual art and home economics and so on in CLIL setting. Besides, they did not have to take any test to prove their English proficiency before enrolling in these courses.

The participants in the second cycle were different. There were four teachers and fifteen students. The other three teachers were, a Finnish teacher Johanna, a Korean teacher as an assistant to help record, and a student teacher from Germany helping with the students' cooking. The fifteen students (seven boys and eight girls) were 7<sup>th</sup> graders from the same school as Johanna but they were from different classes. This course was a compulsory course for them and they had no home economics class in their primary school (FNBE, 2004). The content of home economics for students was new and they had not many experiences in cooking foreign food before. In addition, four of these fifteen students were from English speaking countries such as the UK and the USA and other non-English speaking such as Italy and Pakistan. The rest of the students were Finnish.

### 5.3 The Research Process

The research process at the beginning was on the basis of Kemmis and McTaggart's spiral process (McTaggart & Kemmis, 1988), through the three sessions,

planning (anticipatory reflection), acting (interactive reflection), observing and reflecting (re-collective reflection) during two cycles (see Table 2).

TABLE 2 Research Processes of Two Cycles

Cycles (Time)	Cycle 1 (2015.02~2015.05)	Cycle 2 (2015.06~2015.10)
Plan (Anticipatory reflection)	Personal interests in CLIL Class observation Teaching material Preparation	Re-check and re-think Cycle 1's teaching problems and difficulties Class observation Re-design the teaching material
Act (Interactive reflection)	Demonstration Feedback from students & the teacher	Demonstration Feedback from students & teachers
Observe & Reflect (Re-collective reflection)	Watch video Self-reflection	Watch video Self-reflection
Language(s)	English (Finnish if needed)	English (Finnish if needed)

### 5.3.1 Cycle 1

After talking with Johanna, I was allowed to visit her class twice a week. I observed her CLIL home economics class. I took field notes before I was invited to teach a CLIL lesson. At the same time, I took a course related to different perspectives in CLIL in university. After receiving the invitation from Johanna, we made the date to do the teaching practice. Then I started to plan my lesson by using content, cognition, communication and culture (4Cs). After I went through 4Cs for several times, I set out planning my teaching material, including a lesson plan (see Appendix 1), instruction sheet (see Appendix 2), slides, and questionnaire (Bloom, 1956; Likert, 1932) with feedback box (see Appendix 3).

On demonstration day, I asked students and Johanna if I could video record the lesson. They agreed so I placed a camera on a static table to record my teaching especially focusing on instruction part and Johanna helped me take photos of me. Those video and photos were gathered information on me as the

teacher. However, the focus was only on my introduction and instruction part instead of whole teaching process when students made their food in pair. After students' cooking, I asked them to evaluate their understanding and share their feelings for today's lesson on an anonymous questionnaire.

Afterwards, I watched my video clip several times and read students' questionnaire and feedback. In the meantime, I made notes about pedagogical difficulties and problematic situation on a sheet of paper while observing my video. Then I organized and compiled these notes as part of my CLIL final report (see Appendix 5). Besides, I was aware of some pedagogical problems and difficulties (e.g. lack of interaction with students in the video) after watching the teaching video clip, reading students' questionnaire feedback, and writing a final report of CLIL. Therefore, I asked Johanna if it would be possible to offer me one more teaching practice. She happily agreed with my suggestion so I could start planning the second CLIL lesson.

### 5.3.2 Cycle 2

After I received oral consents from Johanna, students and as well as the principal of the school, the research process of the second cycle could continue. The research process of Cycle 2 was conducted in a spiral and reflective process again in the study (see Figure 2).

I planned the second CLIL lesson after reading the book (e.g. Coyle et al., 2010) again and other related articles (e.g. Coyle, 2005b; Dalton-Puffer, 2011; Meyer, 2010; Morton, 2012; Niemi et al., 2014b), watching video clips about authentic CLIL teaching in different levels (from primary to secondary school) and various subjects (e.g. geography, history, physics, math and so on) around European countries on Internet. I started to prepare and wrote down aims in my lesson plan. After that, I checked and thought the problems in Cycle 1 again so as to modify the teaching material, including the lesson plan (see Appendix 1) (e.g. adding vision, context, preparation, and the day before the authentic teaching section), instruction sheet (see Appendix 2) and slides (e.g. attaching photos from Cycle 1). After being ready for the preparation, I emailed all the teaching

material to Johanna and my supervisors. I renewed some parts of the slides after getting their replies. Meanwhile, to get close to students this time, I participated from the students' first home economics class, taking notes about the teacher's pedagogy and skills in home economics and assisted students when they needed (e.g. reminded cooking steps). Before the demonstration day, I gave consent letters (See Appendix 9) to the students, the home economics teacher, and their parents or guardians to let them decide to participate in my research. I received all the consent letters from students and their parents before and on the demonstration day.

On demonstration day, one of my Korean classmates helped me record the whole teaching for 90 minutes and mainly focused on me, especially the interaction with students in class. During class, I consciously applied pedagogical tact to scaffold students in my instruction part and anytime they needed. The teaching went smoothly and I invited students to do their self-evaluation on a questionnaire and give feedback (see Appendix 3) by drawing or writing their feelings on the same paper at the end of the class.

After the demonstration, I initially wrote down my reflection for this lesson, and then I watched my videos for several times, pointing out some difficult situations and new problems, and thought up some suggestions for the next cycle.

#### 5.4 Research Methods

In this study, the natural qualitative data were collected during two developing spirals of planning, acting, observing and reflecting with a variety of methods (Caine, 2010; Creswell, 2013; Kemmis & Wilkinson, 1998; McTaggart & Kemmis, 1988; Newby, 2014; van Manen, 1991a). There were two periods of time for data collection in both Cycles (see Table 3). All the data were only shared with Johanna and my supervisors. Students could get an access by making a request to the home economics teacher.

TABLE 3 Data of Both Cycles

Data from Cycle 1 (2015.02~2015.03.11~2015.05)	Data from Cycle 2 (2015.08~2015.09.28~2015.10)
Before Class	Before Class
<ol style="list-style-type: none"> <li>1. One observation note</li> <li>2. Two learning diaries</li> <li>3. Teaching material (lesson plan, instruction sheet, and slides)</li> </ol>	<ol style="list-style-type: none"> <li>1. Three observation diaries</li> <li>2. Teaching material (lesson plan, slides, and instruction sheet)</li> </ol>
During Class	During Class
<ol style="list-style-type: none"> <li>1. One videotape (30 minutes) &amp; photos</li> <li>2. Questionnaire &amp; feedback</li> </ol>	<ol style="list-style-type: none"> <li>1. Video tapes (90 minutes) &amp; photos</li> <li>2. Questionnaire &amp; feedback</li> </ol>
After Class	After Class
<ol style="list-style-type: none"> <li>1. Reflection report</li> </ol>	<ol style="list-style-type: none"> <li>1. Oral feedback from the home economics teacher and students</li> <li>2. Reflection notes &amp; report</li> </ol>

#### 5.4.1 Cycle 1

As can be seen, primary data from Cycle 1 were collected in the various traditional method including one observation note, two learning diaries, teaching material (lesson plan, instruction sheet, and slides), a videotape, questionnaire and feedback, and a final report (Hopkins, 2008: 127) during the period from February to May in 2015.

I gathered and chose the notes related to pedagogical moments such as influence of teacher's behaviors on students and activities. The field notes were collected in handwriting form but were helpful for the trace of learning diary. Then, I compiled the notes and wrote two learning diaries with my opinion on Johanna's teaching pedagogy, the key point of food process I made with students and what I learned and reflected on the day (Kirkpatrick, 1917; van Manen, 2015). I collected two diaries kept in word documents. In addition, I gathered the lesson plan based on the concept of CLIL (Coyle et al., 2010) and Bloom's taxonomy (Bloom, 1956) for students' activities and collected slides and instruction sheets for the use in class according to my lesson plan.

Visual and audio records have long been used in research (Harper, 2003). It was helpful for researchers to examine moving images in video clips. On demonstration day, the camera was on a static table and recorded for 30



minutes. After finishing recording, I checked the quality of sound and images. The home economics teacher sent me photos she took during my teaching practice through email. I uploaded the video and photos and made sure they could be stored online before I could extract and analyze them. The advantage of collecting both still and moving images is that they 'remove difference' in experience (Newby, 2014). In the end of the lesson, I invited students to draw feedback box and to do the questionnaire for their understanding check and self-evaluation. Those closed and open questions were designed in English according to three domains of Bloom's taxonomy (1956) with Likert scale (1932). In addition, Johanna gave me oral feedback. I recorded her words and collected all of them after class.

After watching videotape for several times, I noticed some teaching difficulties and problems and I tried to figure out possible solutions on the report as well. I wrote reflective notes and composed them into my final report after class.

#### 5.4.2 Cycle 2

In cycle 2, during the period of August to October in 2015 (see Table 3 above), the data were three observation notes, updated teaching material (e.g. lesson plans, instruction sheets, and slides), three video clips, questionnaire and feedback from both the teacher and students, oral feedback from the teacher and students, and a final report with several procedures.

The notes and diaries started to collect when I observed class in the beginning of August 2015. As an active observer and a participant in class (Newby, 2014), I gathered the whole process of teaching procedures and pedagogical tact (van Manen, 2015). After each lesson, I organized these notes into a complete diary. There were several notes and three diaries collected before the teaching practice. These materials were stored and shared online before teaching practice.

On the demonstration day, I asked the Korean teacher to help me record (Harper, 2003) and the camera could go with me wherever I went in the class-

room(van Manen, 2015) so that I could watch the relationship between students and myself afterwards. The total length of the clips was 90 minutes including the instruction and food-making session. After she finished the record, I double checked the sound and images on my computer and assured that they could be uploaded and kept safe. I collected the adjusted questionnaire (Bloom, 1956; Coyle et al., 2010; Likert, 1932) and feedback box from students after they made their own food. I also received oral feedback from students and Johanna and typed into words on reflection report. I collected all questionnaires and took photos of each paper.

I wrote reflection notes first after I finished my demonstration. Then, I synergized them into a complete report. Finally, I collected the report and uploaded online. All the data I gathered and collected were uploaded in file named Cycle 1 and Cycle 2 on Google drive and shared only with Johanna and my two supervisors.

## 5.5 Data Analysis

In this research, I collected dataset in the previous section; however, not everything goes to answer the research question (Onwuegbuzie & Daniel, 2003). Therefore, I utilized thematic analysis, which is a method can be applied across a range of theoretical and practical fields (Braun & Clarke, 2006; Braun, Clarke, Terry, Rohleder, & Lyons, 2014). I adopted 4Cs and pedagogical tact as theoretical framework to code. The theory-led data analysis contained several steps in different times. Table 4 provides an overview of different steps in the analysis. Each of these is explained in more detail below.

TABLE 4 A Summary of the Data Analysis Step by Step in Two Cycles

Cycle 1 & 2	Texts	Visual (Photos and Videos)
Step 1	Print them out and read several times	Choose photos related to 4Cs and pedagogical tact
Step 2	Make tables of 4Cs as planning and reflecting tools	Watch 4Cs in videos for many times
Step 3		Extract teacher's and student's reaction in the video with 4Cs in a table

Step 4		Play the video again without pause
Step 5		Draw a table to point out teachers' speech, action, students' reaction and others' feelings.
Step 6	Print another copy of all text to code pedagogical tact or mark possible pedagogical tact on the margin	Print the excerpt out and code pedagogical tact
Step 7	Organized those tables and clearly indicate 4Cs and pedagogical in both Cycles	

### 5.5.1 Approaching the Analysis

There were generally two types of dataset, text form and visual (photo and video) form. The first step was to print out the texts dataset of Cycle 1 and Cycle 2 file from Google drive and read them several times (Step 1). Working carefully with the data in this way helped me review all the information I had and recall what I had done.

The second step was to make tables of how I used 4Cs as planning and reflecting tools (Step 2, see Table 5 & 6). These tables helped me dissect every pedagogical moment I made related to 4Cs which I did in different stages of cycles and look through the difference after each cycle.

TABLE 5 4Cs as Planning Section of both Cycles

4Cs	Key definition(s) (What I understand)	Material	Planned activities
Content			
Cognition			
Communication			
Culture			

TABLE 6 4Cs as Reflection Section of both Cycles

4Cs	Key definition(s) (Through reflection)	Problems	Action(s)	Planned for next time
Content				
Cognition				
Communication				
Culture				

In addition to the text and photo datasets, the videotapes provided a record of how the 4Cs manifested in class (Step 2). Using the video dataset, I made a time-flow chart extracting teacher's speech, action, and students' action in which it belonged to one of 4Cs (Step 3, see Table 7).

TABLE 7 Time-flow Chart of 4Cs in Class of both Cycles

Cycle(s) 4Cs Time	Content	Cognition	Communication	Culture
E.g. 0:41 (Cycle 1)	Teacher's action: Teacher's speech:			
E.g. 51:07 (Cycle 2)			Students' speech: Teacher's action: Teacher's speech:	

Combing the initial analysis from the textual, visual and video datasets supported my reflection on the teaching experience, enacting the moves illustrated in Figure 1. Once I had a clear overview of what had happened when it was easier to identify what problems had occurred and decided on what action could be taken the next time (see Table 6). I was not only interested; however, in whether the 4Cs were successfully implemented in my teaching but whether pedagogical tact was present and how to develop this dimension of my teaching. This was the focus of Step 4 in the data analysis.

Therefore, I watched the video again and while watching, I drew a time-flow table of events and pointed out every important pedagogical moment on the left column, teacher's speech in the middle and teacher's action, non-verbal gestures in Cycle 1 and add Johanna's action/response, students' action and response, and other teachers' feelings in Cycle 2 (Erickson, Green, Camilli, & Elmore, 2006: 180) on the right hand (Step 5, see Table 8).

TABLE 8 Time-flow Chart of Pedagogical Tact in Class of both Cycles

Cycle 1	Time	Teacher's Speech		Teacher's Action		
	9:27	Johanna: I open the window so that we can get lighter inside.		Johanna goes to the window and opens it.		
...						
Cycle 2	Time	Teacher's speech	Teacher's action	Johanna's Action/response	Students' Action/response	Other teachers' feelings
	12:58	Tell one	Speak the	NA	Look at the Eng-	NA

	pupil that the next step is to add some salt.	Finnish word 'Suola'.		lish instruction for a while.	
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After finishing drawing the table, I printed out the excerpt and another text of both Cycles and used highlighters to color-code with three possible developing pedagogical tact (Step 6, see Appendix 4 & 8).

Analyzing the dataset in this way supported the theme-led theory scrutinizing every pedagogical moment and 4Cs in my lessons. Through the analytical steps 1 to 6, I had identified how the 4Cs and pedagogical tact were manifested in my lessons. The challenge that I faced at this point; however, was that the 4Cs and pedagogical tact were separated.

In order to solve this difficulty, I tried to organize those tables mentioned above, specifically indicated 4Cs and pedagogical tact relation in both cycles and made tables for both of them (Step 7, see Table 9 and Table 10).

TABLE 9 Each C in Cycle 1 and Cycle 2

C (content, cognition, communication and culture)	Cycle 1	Cycle 2
Plan		
Key Definition(s)		
Material		
Plan Activity		
Do		
Teacher's Action		
Teacher's Speech		
Students 'Action /Response		
Observe and Reflect		
Key Definition(s)		
Identified Problems		
Plan for the Next Time		

TABLE 10 Pedagogical Tact in Cycle 1 and Cycle 2

Pedagogical Tact	Cycle 1	Cycle 2
Plan		
Do		
Observe and Reflect		

With careful analysis and clear tables displayed in this section, I gradually refined the information I needed from the dataset. Those different ways to in-

tertwine and examine 4Cs and pedagogical tact in different stages of Cycles helped me how to find the supportive evidence to interpret and explain my findings in the next result chapter.

## 5.6 Ethical Solutions

In this study, the role of the researcher might be the most controversial issue because of '*teacher as a researcher*' (Stenhouse, 1975) in the study. However, action research is originally designed to improve not only outcomes of students' achievement but enable teachers develop professional identity and integrity (McNiff & Whitehead, 1988; Newby, 2014: 631; Palmer, 2010: 10). Teachers as researchers wanted to find out some unknown pedagogical situations in current field. The research site, participants and research process were chosen in a natural way but the research method, data collection and analysis were based on academic research principles (Creswell, 2013).

The participants' background and personal information present in consent letters and questionnaires were confidentially kept anonymous without being used in any public or profit institution. In addition, the participants were informed of the aims, purposes and research process before they signed the consent letter and questionnaire (British Educational Research Association, 1992). They also had the right to withdraw the data at any time.

The validity of the research was based on trustworthiness, authenticity and credibility (Creswell, 2013). All the information interpreted in the study was gained from different data source, organized before analysis, member checked many times (*Ibid*: 201), and used a theoretical and coherent stance for coding themes. After interpreting the meaning of themes, rich and thick description and reflection were used to support the findings. Although the gender in the first cycle was unbalanced (only one boy with other twelve girls), it actually did not influence the way how teacher designed and reflected in CLIL course and applied pedagogical tact in teaching practice.

The reliability was present in the study as well. Checking and double checking the transcript and assuring there were no obvious mistakes manifesting in the analysis section (Flick & Gibbs, 2007). This also assured reliability of the codes and themes afterwards.

## 6 RESULTS

In this action research, I adopted the principle of CLIL 4Cs, content, cognition, communication and culture, as planning and reflection tools to develop and describe my international teaching experience through three dimensions of pedagogical tact, a sense of vocation, thoughtfulness, and a relationship between teachers and students during these two teaching demonstrations in home economics class in a lower secondary school.

More importantly, the main research task, *how does an international teacher use the principles of CLIL as innovative education for pedagogical development* of the study is answered in this chapter. In the following section 6.1 and 6.2., the two research questions are answered. In section 6.1, the aim is to answer the first research questions: (1) How can the 4Cs be used to develop in CLIL lessons? In section 6.2, the focus is to answer the question: (2) How can the 4Cs support the development of pedagogical tact in CLIL?

### 6.1 4Cs as Tools of Two Cycles

The principle of CLIL, 4Cs, was used as a multi-functional tool in both cycles. In the following sections, I will provide a summary of each C and integration of 4Cs at the beginning, and then present important findings of content in 6.1.1, cognition in 6.1.2, communication in 6.1.3, culture in 6.1.4, and the power of integration of 4Cs in 6.1.5.

#### 6.1.1 Content

TABLE 11. Content in Cycle 1 and Cycle 2

Content	Cycle 1	Cycle 2
Plan		
Key Definition(s)	A teacher has related knowledge about what to teach and	1. Knowledge and skills that students are going to construct and learn by teachers' pedagogic selec-



	have general ideas on it (e.g. Taiwanese agriculture)(Shulman, 1987)	tion: (1) Introduce basic information about Taiwan (2) The origin of green onion pancake and through students' past learning experience (3) Characteristics of Finnish pancake 2. Home economics as a subject to learn and teach (Target, 2010)
Material	1.1 Reference books 1.2 Edited slides 1.3 Online resource	1.1 Slides 1.2 Photos of food making process taken from Cycle 1 1.3 Videos (e.g. introduction of Taiwanese food and recording in class from Cycle 1) 1.4 Students' learning experience 1.5 Previous students' and Johanna's feedback 2.1 National curriculum and guideline for CLIL teachers (e.g. a set of principles and ideas for CLIL professional development and a tool for reflection) 2.2 Realia (e.g. real knife and cutting board to show how to cut green onion into pieces)
Plan Activity	1.Presentation 2.Interaction (e.g. Q&A) 3.Making food 4.Questionnaire	1.1.1 Presentation with Q & A 1.1.2 3-minute video watching online 1.1.3 Both teacher(s) and students share experience of Taiwanese and Finnish pancakes 2.1.1 Demonstrations( e.g. key steps of making Taiwanese pancake) 2.1.2 Teacher's self-check list (Coyle et al., 2010) 2.1.1 Make Taiwanese pancake together
Do		
Teacher's Action	(0:41) Show the first slide and introduce the topic today. (1:01) Point at the screen and introduce Taiwan.	(1:03) Look at students and wait for a moment. (2:12) Tell students the other name of Taiwan. (3:40) After hearing one student say that (Taiwan) is very small. Induce

		<p>students to know more about Taiwan. Introduce the origin of pancake.</p> <p>(5:25) Point the map on the screen.</p> <p>(5:54) Point the photo on the screen.</p> <p>(7:40) Introduce the origin of Taiwanese Green Onion on the slide.</p>
Teacher's Speech	<p>(0:41) You know that where is Taiwan, right?' (Clarify)</p> <p>(1:01) Taiwan is an island and this is our main land. The capital city is Taipei.</p> <p>(3:50) In this place, we call it '三星' (Samsung), not Samsung of your cellphone brand.</p> <p>(2:52) Today we are going to do Taiwanese green onion pancake.</p>	<p>(1:03) Ask students if they have already heard of Taiwan and ask 'what is your first impression when talking about Taiwan?'</p> <p>(2:12) We are Republic of China. (<i>cf. People's Republic of China</i>) We have our own president and China they have their own president.</p> <p>(2:13) Teacher's answer: Different constitutes.</p> <p>(3:40) Do you know Pacific Ocean? Teacher's action: After hearing one student say that (Taiwan) is very small. Induce students to know more about Taiwan. Yeah, it is very small. But how small it is?</p> <p>(5:25) Okay, Taiwan in a nutshell. We have capital city in the northern part of Taiwan. Southern part for tropical (product) and diversity animals, Eastern part for aboriginals and western part for industrial factory.</p> <p>(5:54) So let's move on today's topic.</p> <p>(7:40) Before we start to make the pancake, I would like you to know the origin of pancake in Taiwan.</p>
Students 'Action /Response	N.A.	<p>(1:03) Some students have known or heard of Taiwan. They replied 'In Asia, Chinese food'.</p> <p>(2:12) What does it mean?</p> <p>(5:54) Chinese. Mum Taiwanese Green Onion pancake.</p>
Observe and Reflect		
Key Definition(s)	<ol style="list-style-type: none"> <li>1. Fix the aim of the goal to teach one or two ideas on it</li> <li>2. Basic understanding of home</li> </ol>	<ol style="list-style-type: none"> <li>1. Concrete teaching aims, learning outcomes and material to be taught (Coyle, 2005b)</li> <li>2. The fundamental material at the heart of learning knowledge, skills,</li> </ol>

	economics and be able to teach	and understanding not only be isolated in context but integration with other three components (Coyle, 2008: 103; Coyle et al., 2010: 45; Coyle, 2015: 90)
	3. Acquire from living experience	3. The material gained from students' living experience.
Identified Problems	1.1 Lack of content accuracy 1.2 Too broad topic 2.1 Did not use the proper measurement 3.1 Without video recording	1.1 Run out of time on introduction 1.2 The world map on the slide was too small for students 1.3 Lack of awareness of students' correctness of answers 1.4 Forgot to share personal experience 1.5 Did not prepare enough oil & paper bag. 1.6 Did not give clear instruction 2.1 Teachers should have fully comprehensive knowledge about the topic/theme (van Manen, 2008) 3.1 Teachers should have understood students' previous experience.
Plan for the Next Time	1.1.1 Update accurate information online 1.1.2 Focus on the origin of green onion pancake 2.1.1 Change measurement 3.1.1 Prolong the time of video taking include the whole interaction	1.1.1 Skip the video if we do not have time at that moment. 1.2.1 Enlarge the map on the slide 1.3.1 Try to think all possible answers 1.4.1 Plan the time allocation 1.5.1 Remember to prepare next time 1.6.1 Write down the working load on the instruction sheet to remind pancake 2.1.1 Explain clearly if necessary (time management) 3.1.1 Try to think all possible answers beforehand.

As Table 11 indicates above, there are obvious changes while preparing, implementing, and reflecting in both Cycles. It is worthwhile to mention that transformation of content from three aspects. First of all, content is viewed as a

way of understanding cultural context. The following observation note provided the evidence.

*'This time they were going to make pasta and smoothie strawberry parfait. The first one is from Italy and the second one is from Finland. [...]. Johanna introduced the first dish by asking, "Does anyone know about Italy?" I heard one of the students answered "Pizza and pasta." [...] Then Johanna continued to introduce the history background of Italy, the national flag and history of cheese. [...]'(Excerpt from March 9<sup>th</sup>, 2015, observation note).*

This note clearly indicates that teachers are able to develop students' cultural awareness by introducing the first impression of a country (e.g. Italy) and then making its food (e.g. pasta). The preparation of content involved the cultural context; teachers need to understand the culture of food and its own history background before they teach CLIL lessons.

Secondly, content was no longer only focusing on food I would like to prepare and introduce for students in home economics class. For example, in Cycle 1, the planned content were Taiwan and Taiwanese pancakes but connections between them were not clear and it seemed that I put too much emphasis on Taiwanese agriculture and lost the focus on the origin of pancakes. On the other hand, in Cycle 2, the content was richer and connection was stronger because Taiwan is a country in its own right, and the pancake is a particular product of Taiwan. This inferred that teachers should acquire much deeper content knowledge to make content more meaningful rather than present isolated surface concepts of it.

Finally, those identified problems of content presented in Cycle 1 were solved in Cycle 2 (see Table 11). The reason is most likely that I could correct myself and enrich my insufficient knowledge in a short period. In fact, there did still exist problems in Cycle 2 but they were different and more related to technical problems in this component.

### 6.1.2 Cognition

TABLE 12 Cognition in Cycle 1 and Cycle 2

Cognition Plan	Cycle 1	Cycle 2
Key Definition(s)	<ol style="list-style-type: none"> <li>1. The process of how students get information from teachers (Gagne et al., 2005)</li> <li>2. The current status of teenagers' mental and physical development (Piaget, 1971)</li> </ol>	<ol style="list-style-type: none"> <li>1. Engage in and refer to revised taxonomy by Anderson and Krathwohl's (2001: 67-68) to guide students to think:               <ol style="list-style-type: none"> <li>(1) Lower-order thinking process</li> <li>(2) Higher-order thinking process</li> </ol> </li> <li>2. Think while doing it (Schön, 1983; Vandermause &amp; Townsend, 2010)</li> </ol>
Material	<ol style="list-style-type: none"> <li>1. Slides (e.g. pictures with procedures)</li> <li>2. Instruction sheet</li> <li>3. Questionnaire</li> </ol>	<ol style="list-style-type: none"> <li>1.1 Slides</li> <li>1.2 Instruction sheet</li> <li>1.3 Online source</li> <li>1.4 Questionnaire</li> <li>1.5 Ingredient: Food</li> <li>1.6 Previous students' and Johnna's feedback</li> <li>1.7 Video recording in class from Cycle 1</li> <li>2.1 Ingredient</li> <li>2.2 Questionnaire</li> </ol>
Plan Activity	<ol style="list-style-type: none"> <li>1. Presentation</li> <li>2. Interaction (e.g. Q&amp;A)</li> <li>3. Making food</li> <li>4. Questionnaire</li> </ol>	<ol style="list-style-type: none"> <li>1.1.1, 1.6.1, 1.7.1 Interaction Q &amp; A in class</li> <li>1.1.2 Quick photo quiz</li> <li>1.3.1 Observation (watching video)</li> <li>1.4.1 Answer questionnaire</li> <li>1.2.1, 1.5.1 Making food</li> <li>2.1 Make their own green onion pancake</li> <li>2.2 Answer questions</li> </ol>
Do		
Teacher's Action	<p>(4:48) Start to explain the procedure. Show the real photo and dissect the procedures.</p>	<p>(6:00) Ask students questions.</p> <p>(14:00) Take up the green onion and the knife to help students recall the skill of chopping food.</p> <p>(15:11) Point at the photo on the screen.</p> <p>(18:37) Using the photos on the slides (organize).</p>

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		(30:34) Reply to student's question. (46:56) Ask the student questions. Look at the instruction carefully but continue to help student's dough. (1:26:30) Ask students to write or draw down their feelings right away.
Teacher's Speech	(2:01) How many people do you have in Finland? (Recall) Invite students to answer. One student replied: five million (4:48) First of all, you have to chop the green onion and then add flour in a bowl.	(1:03) Ask students if they have already heard of Taiwan and ask 'What is your first impression when talking about Taiwan?' (identify) (4:57) Do you know how old is your country? (recall) (6:00) Do you still remember last time you made Finnish pancakes? What is the character of it? (recall, clarify) (14:00) Do you still remember how to chop the food? (recall) (14:01) First you have to make your hand like a snail to put on the green onion and then chop into pieces. (15:11) It is a little bit difficult but let's look at: after the dough is flat, you just scroll them and then try to make a shell shape. Is it clear? (15:12) Then you knead the green onion again and see the shape. (18:37) Let's review the steps. Number one... (30:34) If the dough is too sticky for you, add some oil inside and try to use your hand to take it out from the bowl (identify). Johanna's response: Maybe a little bit flour. (46:56) What is the next step? 'Okay, now you can spread

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		<p>with the rolling pin.' 'You learn it.' (clarify).  (1:26:30) If you have time, you can draw a picture describe your mood after eating a pancake. 'What is your feeling about it?'(metacognitive).</p>
Students 'Action /Response	N.A.	<p>(1:03) Some students have known or heard of Taiwan. They replied 'In Asia and Chinese food'.  (2:12) One student asked 'What does it mean?'(clarify)  (4:57) One replied 75 years old/another replied that it's over one hundred.  (14:00) Yeah, some students replied. One student showed by using the gesture to the teacher. (apply)  (15:11) um clear  (18:37) Repeat and say the steps with the teacher.  (1:26:30) Sit in a group and began to write their feedback while eating their pancakes.</p>
Observe and Reflect		
Key Definition(s)	<ol style="list-style-type: none"> <li>1. Lower order-thinking (Bloom, 1956)</li> <li>2. Identifying- (e.g. help students understand the differences between Taiwan and Finland and different ways of cooking in eastern and western)</li> <li>3. Learning and doing - The process of making green onion pancakes</li> <li>4. Assessment students' self-evaluation and teacher-evaluation</li> </ol>	<ol style="list-style-type: none"> <li>1. Students are able to construct their own understanding through content and communication and be challenged from lower-order thinking to higher-order thinking (Anderson et al., 2001; Coyle, 2005b; Coyle et al., 2010).</li> <li>2. Other thinking and learning skills through activities (interpersonal interaction)</li> </ol> <p>(1) Students' different ways to receive information from teacher  (2) Other language influence (e.g. mother tongue or addi-</p>

		tive language) (3) Students' metacognitive
Identified Problems	<p>1.1 Not contain enough tasks for students to develop their higher order-thinking</p> <p>1.2 Too nervous and did not explain the way of cooking differences</p> <p>2.1 Give the wrong information to students</p> <p>3.1 Students not fully understand each step and missed some key steps.</p> <p>4.1 Few students did not know the words in the questionnaire so they did not know how to answer the question.</p>	<p>1.1 Lack of the ability to organize students and other teachers' ideas in class</p> <p>2.1 Observe one student seem not like to use his hand to make the dough</p> <p>2.2 Time management of making a dough was not as I expected</p> <p>2.3 Individual differences</p> <p>2.4 Notice another student being slow at the process and seem need more care</p> <p>2.5 Without Finnish version of questionnaire</p> <p>2.6 Did not check how much they still remembered about Taiwan or Taiwanese food</p>
Plan for the Next Time	<p>1.1.1 Design questions in class</p> <p>1.2.1 Practice makes perfect</p> <p>2.1.1 Update the newest information on the slide</p> <p>2.1.2 Be more confident</p> <p>3.1.1 Briefly introduce the most different way of cooking</p> <p>3.1.1 Make sure they have understood all the steps and design a quick oral test</p> <p>4.1.1 Ask students if they have any difficulty in reading the questions first</p> <p>4.1.2 Students can share their feelings and discuss when they give feedback on the questionnaire</p>	<p>1.1.1 Prepare the answer in advance but also include everyone's brainstorming</p> <p>2.1.1 Encourage students and see the following situation.</p> <p>2.2.1 See the situation and shorten the instruction part</p> <p>2.3.1 Open-minded to different response and pay more attention to students in need.</p> <p>2.4.1 Encourage him when he finished one step</p> <p>2.5.1 Design Finnish version of questionnaire next time so as to assure every student can read and understand.</p> <p>2.6.1 Ask if we still have time to meet in class or after class.</p>

As cognition section manifested in Table 12, the change in my way of teaching was from just passing down information to students to inviting and engaging students' involvement in lower-order thinking process to higher-order thinking process. For example, on the increase of students' visual sensation and lower-



order and higher thinking interaction. Adding two activities by using previous photos to create a photo quiz (see Figure 3) and Q&A interaction about in a video is beneficial to the development of students' cognition. Another example can be found in the same table of the *do* section. It showed that low-cognition could still bring communication and interaction. From the beginning, I eagerly explained every sentence on the slide, required students to recall, and tested their home economics skills in order to realize their daily life interdisciplinary subject knowledge (e.g. history and geography) on the topic. Students can understand how to evaluate and created their own perspectives of the lesson from activities through teachers' and other students' responses when giving feedback.

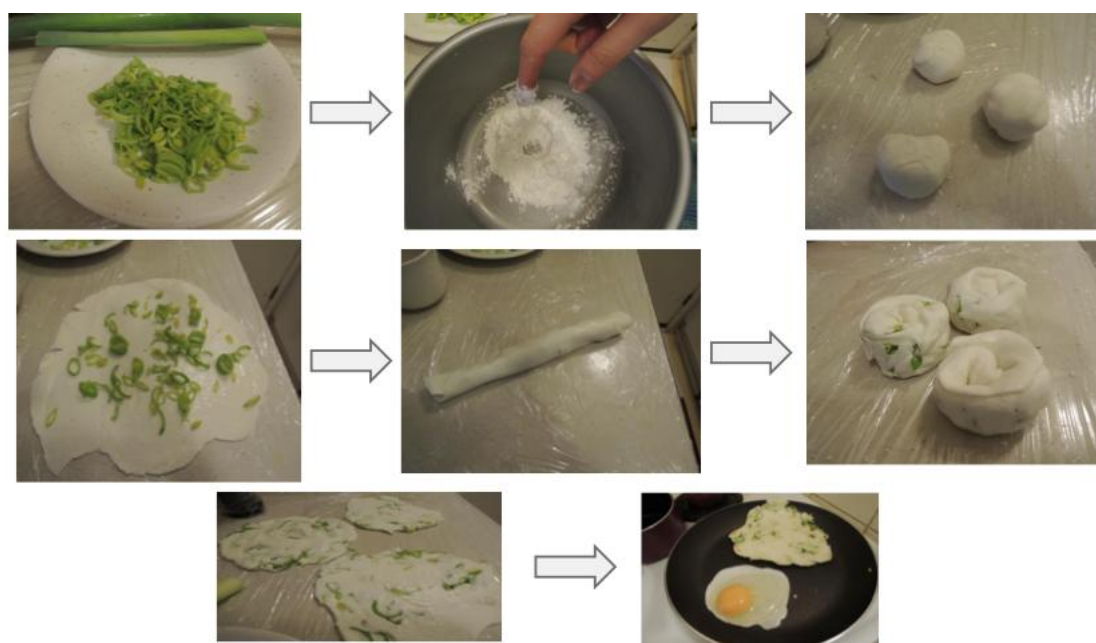


FIGURE 3 Photo Quiz in Cycle 2

Besides the change drawn on above, the assessment played an important role in this section supervising students' process and progress in thinking and performance. It is helpful for teachers to use formative assessment in Cycle 2 (e.g. photo quiz) to check students' understanding, rather than only use the summative assessment of questionnaire in Cycle 1.

### 6.1.3 Communication

TABLE 13 Communication in Cycle 1 and Cycle 2

Communication Plan	Cycle 1	Cycle 2
Key Definition(s)	Language <i>for</i> learning: Use English or target language as a tool or media to convey ideas and instruction for communication in instruction and dialogue (Wells, 1999).	Add language of learning and language through learning for students according to 3As theory (Coyle, 2005b). 1. Language <i>of</i> learning: (1) Key verbs of vocabulary used in home economics such as add, put, knead, pour, and mix and so on. (2) Numbers of measurement (L, dl, etc.) (3) Ask students to recite the whole instruction in class 2. Language <i>for</i> learning: (1) Learn how to share experience (2) How to ask personal experience to other question (e.g. What does it mean? Or Do you mean...?) 3. Language <i>through</i> learning: (1) Listen to teachers' instruction and suggestions (2) Make sure of peers' instruction or needs 4. Language <i>cross</i> the curriculum (Coyle et al., 2010; Joyce et al., 2008:136)
Material	1. Slides (pictures & text) 2. Presentations	1.1 Home economics text book 1.2, 2.1, 2.2, 3.1, 4.1 Slides (photos and text) 2.2, 4.1 Online source (video) 3.1, 3.2 Questionnaire 4.1 Previous students' and Johanna's feedback 4.2 Video recorded in class from Cycle 1
Plan Activity	1. Instruction 2. Interaction	1.1.1 Interaction (Q&A) 1.2.1 Demonstration

		<p>2.2.1 Sharing past related experience 3.1.1, 3.1.2 Answer questionnaire 3.2.1 Make green onion pancake 4.1.1, 4.1.2 Used as material in slides</p>
<hr/>		
Do		
<hr/>		
Teacher's Action	<p>(3:50) Smile because of the joke she makes fun of herself. (6:00) Draw the shape of snail in the air and make some students laugh.</p>	<p>(1:03) Look at students and wait for a moment. (8:21) Point at the slides and make a joke of the brand Samsung. (14:20) Invite students to pay attention to this step. (51:07) Come toward the student who says he is going to have a fail pancake. Re-make the pancake for the students. (53:40) Use the rolling pin to help students make it thinner.</p>
Teacher's Speech	<p>(0:41) You know that where Taiwan is, right? (6:00) After making a dough, make it into snail shape. Do you know the snail? (for)</p>	<p>(1:03) Ask students if they have already heard of Taiwan and ask 'What is your first impression when talking about Taiwan?' (8:21) Samsung (三星) is a place. The origin of pancake. It is not your cell-phone, Samsung. (through) (14:20) What is the second step? (51:07) I think you can do it again. Take the rolling pin. I think it is difficult to make it fail. (53:40) The thinner, the better because later on you could fry them quickly.</p>
Students 'Action /Response	N.A.	<p>(1:03) Some students have known or heard of Taiwan. They replied 'In Asia, Chinese food'.</p>

		<p>(8:21) One of the students said the word 'Samsung' again.</p> <p>(14:20) One student raises his hand and answered Place flour and salt in a bowl and make a hole.</p> <p>(30:34) Ask both Johanna and I the situation of the dough. (<i>for</i>)</p> <p>(46:56) 'Take out one of the dough, what does that mean?' Then add more flour on the table. (<i>of</i>)</p> <p>(51:07) Can I do that like this, it is kind of fail. (<i>for</i>)</p> <p>(53:40) Ask question: How thin should it be? (<i>for</i>)</p>
Observe and Reflect		
Key Definition(s)	<p>1. Language <i>of</i> learning: Key words such as greeting words, ingredients, kitchen, utensils, name of countries, verbs for making pancakes</p> <p>2. Language <i>for</i> learning:</p> <p>(1) Introduce a topic</p> <p>(2) Learn how to comparing /contrasting information</p> <p>3. Language <i>through</i> learning:</p> <p>(1) Q &amp; A</p> <p>(2) New phrases to express</p> <p>(3) New vocabulary to learn</p>	<p>1. To be able to use communication skills (listening, clarifying...etc.) through the medium of language to answer, question, share with other teachers and students in class</p> <p>2. Language <i>of</i> learning</p> <ul style="list-style-type: none"> <li>· key words and phrase usage</li> </ul> <p>3. Language <i>for</i> learning</p> <ul style="list-style-type: none"> <li>· sharing experience</li> <li>· asking for help</li> </ul> <p>4. Language <i>through</i> learning</p> <ul style="list-style-type: none"> <li>· reading questionnaire</li> </ul> <p>5. Combination with/Using ICT skills in home economics. (online searching)</p>
Identified Problems	<p>1.1 Lack of students' response in data collection</p> <p>1.2 Some students had difficulty in reading instruction in English</p> <p>1.3 Sometimes students were too shy to speak in English</p>	<p>1.1 Teachers should know or understand to what extent students are familiar with additive language (e.g. Some students are too shy to speak in English)</p> <p>1.2 Teacher should require</p>

	<p>2.1 Felt culture differences when I told a joke</p> <p>2.2 Students are not sure about the exact fact of their home country.</p> <p>3.1 Students were used to speaking in Finnish when they worked in pairs.</p> <p>3.2 Whenever I asked if they have any question they were too shy to answer so that I had difficulty understanding what they were thinking or what kind of task they were trying to do.</p> <p>3.3 I somehow lacked in confidence and courage to ask students questions.</p>	<p>language proficiency and pedagogy, especially skills such as basic interpersonal communication skill (BICS)(Cummins, 1979)</p> <p>2.1 Mispronounce the word, "origin".</p> <p>3.1 Limited opportunities for students to practice new language structures</p> <p>4.1 Forgot to ask students if they have difficulties in reading the questionnaire.</p> <p>5.1 Lack of ways to assist students in developing a range of strategies through the CLIL language.</p>
<p>Plan for the Next Time</p>	<p>1.1.1 Ask for other assistant for the help of whole class video-taking</p> <p>1.1.2 Have more students' responses by asking questions and inviting students to participate (e.g. reading the slides)</p> <p>1.2.1 Make sure all the students understand the key words</p> <p>1.3.1 Supervise students' process of making pancakes and help if need</p> <p>1.3.2 Be more familiar with students (van Manen, 1991)</p> <p>1.3.3 Reduce the pressure by using Krashen's lower affective theory (1982).</p> <p>2.1.1 Try to make the joke shorter.</p> <p>2.2.1 Check the exact number.</p> <p>2.2.2 Use the ZPD theory to help students.</p> <p>3.1.1 Observe the current process first and see if they need help.</p> <p>3.2.1 If they need help but</p>	<p>1.1.1 Be familiar with them and accompany them when they need</p> <p>1.2.1 Watch the video recording first and find out the situation with difficulties then ask other teacher for help (Coyle, 2005)</p> <p>2.1.1 Make sure each pronunciation of word I am going to say in class and practice as many times as possible</p> <p>3.1.1 Depend on teaching situation if there is any possibility to share their feelings after making their own food.</p> <p>4.1.1 Design two kinds of languages, both English and Finnish</p> <p>5.1.1 Develop a range of cognitive/thinking strategies through CLIL language by designing questions for students</p>

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have difficulty expressing in English, ask Johanna, the original home economics teacher for help.

3.2.2 Make sure students have understood all the steps before they get started.

3.3.1 Make myself be confident first.

3.3.2 Build good relationship with students before previous lessons.

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From table 13 presented above, there were theoretical and pedagogical changes while planning, implementing and reflecting in this section. In Cycle 1, only planning the theory of language *for* learning perspective to use the additive language, English, expressing meanings or to convey ideas seemed not an effective teaching practice in class and there was no identification how students used English with a specific goal because of lacking students' response during class. However, the situation became different in Cycle 2. By adopting the measurement usually used in students' home economics textbook, I invited students to recite the whole instruction and to learn key words (language *of* learning) about cooking and usage of measurement on the slide at the same time and told a planned joke with a punch line (language *through* learning) related to topic in class (see Figure 4 & Figure 5).

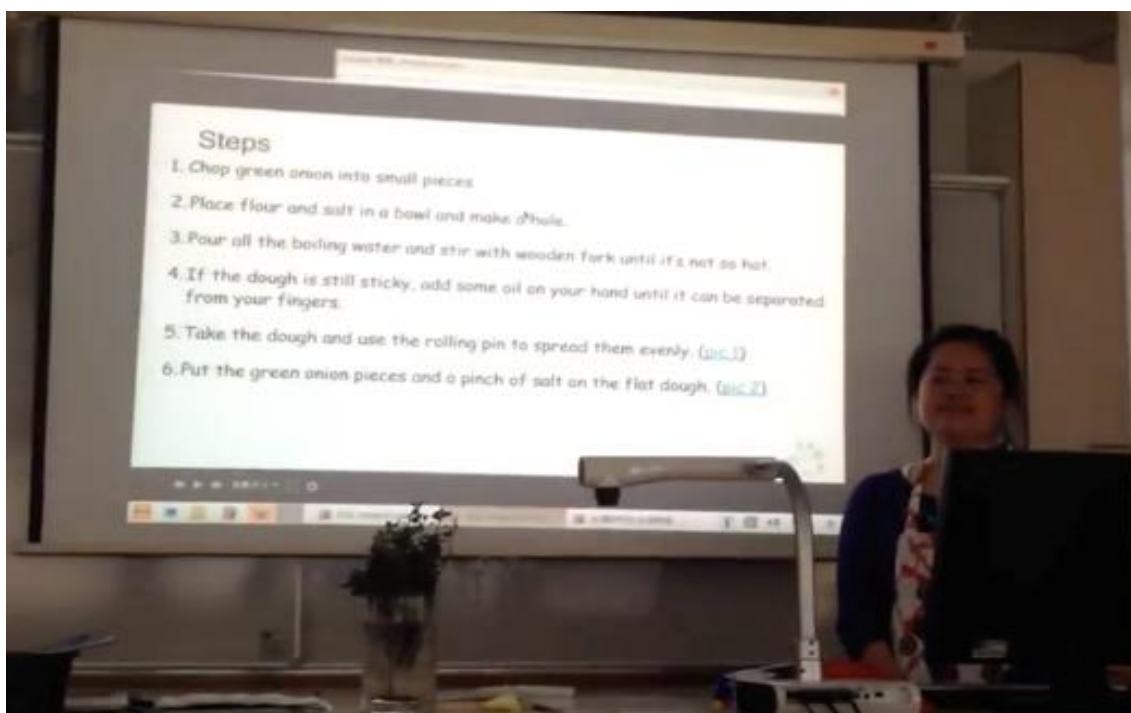
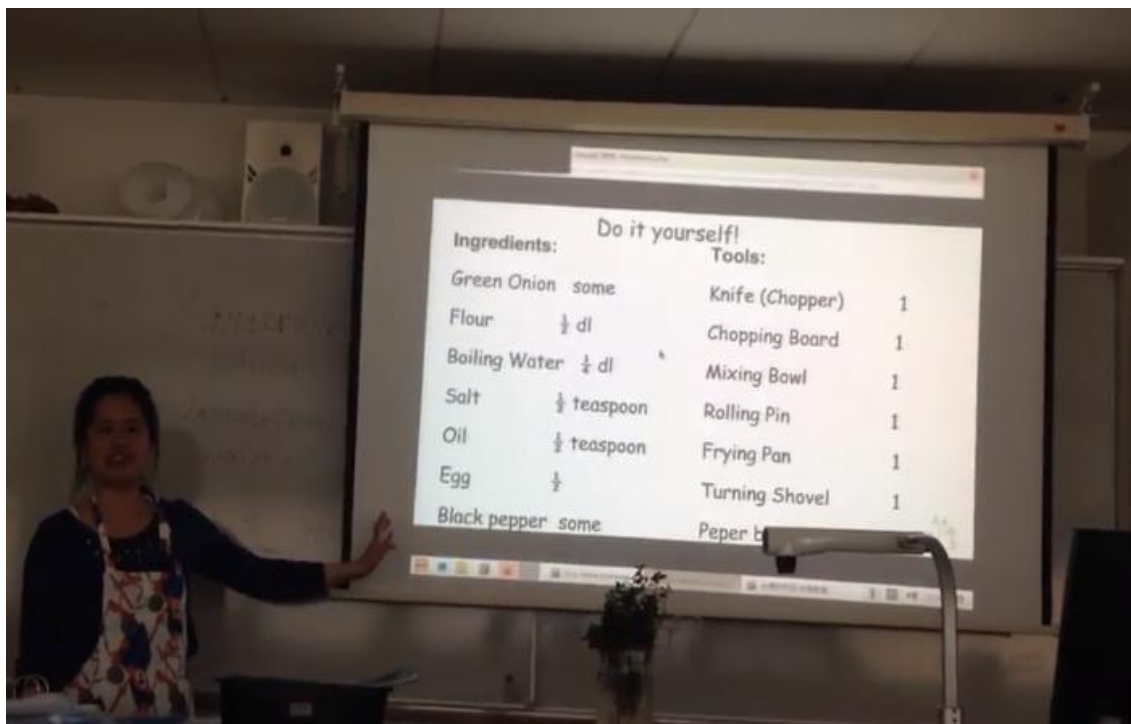


FIGURE 4 Teaching and Learning Ingredients and Steps in Cycle 2

*Teacher's speech:* Samsung (三星) is a place (in Taiwan). The origin of (green onion) pancake. It is not your (brand) cellphone, Samsung.

*Teacher's action:* Point at the slides and make a joke of the brand, Samsung. (Smile)

*Student's response:* One of the students said the word Samsung again.

## FIGURE 5 A Planned Joke in Cycle 2

Students' communication skills develop under the multicultural environment through the medium of English. Teachers and students in both cycles were striking a balance of L1 (Finnish) and L2 (English) but learning through L3 (Taiwanese) content. How teachers asked students questions would decide how students construct their knowledge in class. In order to enable students to be more curious about Taiwan and Taiwanese cuisine I not only cast questions but made comparison of their own culture. For example, comparing excerpt of Cycle 1 and Cycle 2 below (see Table 14), the alternative way to ask students the question about Taiwan motivated students to create more ideas about Taiwan or Taiwanese culture.

TABLE 14 An Excerpt in Cycle 1 and Cycle 2

	Cycle 1 (0:41)	Cycle 2 (1:03)
Teacher's Speech	You know that where is Taiwan, right?	Ask students if they have already heard of Taiwan and ask 'What is your first impression when talking about Taiwan?'
Students' Action/Response	N.A.	Some students have known or heard of Taiwan. They replied 'In Asia, Chinese food'.

As can be clearly seen, how teachers used the additive language in different ways played an important part in class. In addition to teachers' change, students' reactions had a great difference in both cycles. In Cycle 1 (6:00), when I asked students if they know the snail shape by drawing the shell of a snail in the air, they just nodded their head and did not say any word. Nevertheless, in Cycle 2, I adjusted my way of asking questions. In (14:00), I asked 'Do you still remember how to chop the food?' At the moment, one student answered *yeah* and another one student answered by using his gesture of cutting food in a correct way to me. From this example, we could understand that communication can be applied in a much wider dimension; non-verbal (e.g. body language, gestures), which can be positive evidence in teaching and learning.



Moreover, I found some obstacles and it seemed difficult to solve communicative teaching problems in both cycles because teachers were not able to anticipate or control students' situations (e.g. students' shyness of practicing speaking English, see more in Table 13) and their reactions in class. However, when I carefully read students' questionnaire of Cycle 2 (see Appendix 3), most students thought they were able to use key words to communicate such as add, put, mix and roll while cooking, using their words to share their experience and asked questions when they needed. Only half of students indicated that they could listen to other's need and understand what other people needed.

#### 6.1.4 Culture

TABLE 15 Culture in Cycle 1 and Cycle 2

Culture	Cycle 1	Cycle 2
Plan		
Key Definition(s)	1. Generally speaking the way people live, value things and food they eat.	1. From intercultural awareness to intercultural understanding (Coyle, 2006b: 9-10) (1) Choice of green onion pancake (2) Origin and ways of making Taiwanese pancake (3) Connection with teacher(s)' /students' past experience (4) Understand opportunity development
Material	1. From Johanna's class observation (two times) 2. Instruction 3. Slides 4. Personal teaching style	1.1 Students' and teacher' feedback from cycle 1 1.2, 2.1 Slides 1.3, 3.1 Online source (e.g. video clips) 1.4 Teachers' and students' experience 1.4 Video recordings in class from Cycle 1
Plan Activity	1. Q&A 2. Making green onion pancake	1.1.1, 1.2.1, 2.1.1 Interaction (Q&A) in class 1.3.1, 3.1.1 Video watching to see Taiwanese food from foreigners' perspective 1.4.1 Experience sharing

		1.4 2 Making their own Taiwanese food
Do		
Teacher's Action	<p>(3:20) Introduce the agricultural society by using the slide.</p> <p>(9:27) Reply to Johanna's question.</p>	<p>(1:03) Look at students and wait for a moment.</p> <p>(8:21) Point at the slides and make a joke of the brand Samsung.</p> <p>(14:20) Invite students to pay attention to this step.</p> <p>(51:07) Come toward the student who says he is going to have a fail pancake. Re-make the pancake for the students.</p> <p>(53:40) Use the rolling pin to help students make it thinner.</p>
Teacher's Speech	<p>(1:17) Johanna asked 'What language do you speak?' I replied that we speak Mandarin Chinese and Taiwanese. Mandarin Chinese is our official language but most people in Taiwan in southern part of Taiwan, they speak Taiwanese.</p> <p>(1:33) However, we still have some aboriginals in Taiwan, they are about 14* groups and they have their own language.</p> <p>(3:20) Our ancient society which is based on farming and our ancestors they were all do* the farm.</p> <p>(9:27) Johanna asks 'Is it this kind of onion you usually use in your country?'</p>	<p>(8:21) Samsung (三星) is a place. The origin of pancake. It is not your cellphone, Samsung. (through)</p> <p>(14:20) What is the second step?</p> <p>(51:07) I think you can do it again. Take the rolling pin. I think it is difficult to make it fail.</p> <p>(53:40) The thinner, the better because later on you could fry them quickly.</p>
Students 'Action /Response	N.A.	<p>(8:21) One of the students said the word Samsung again.</p> <p>(14:20) One student raises his hand and answered 'place flour and salt in a bowl and make a hole.'</p> <p>(30:34) Ask both Johanna and I</p>

		<p>the situation of the dough. (<i>for</i>) (46:56) 'Take out one of the dough, what does that mean?' Then add more flour on the table. (<i>of</i>) (51:07) Can I do that like this, it is kind of fail. (<i>for</i>) (53:40) Ask question: How thin should it be? (<i>for</i>)</p>
Observe and Reflect		
Key Definition(s)	<p>1. Food and festival approach (p.64) 2. Otherness and selfness (p.64)(Wilson, 1982)</p>	<p>1. From multicultural setting in CLIL awareness to understand other culture by being taught through content, cognition and communication. (Taiwanese, Finnish and English....etc.) (1) From subject cultures and disciplines viewpoint- home economics class (Coyle, 2015: 93; Meyer et al., 2015: 51) (2)To develop conceptual understanding through different contexts (<i>Ibid</i>)</p>
Identified Problems	<p>1.1 Ingredients of other Taiwanese food might not easy to get 1.2 Lack of other visual source to support 1.3 Put too much stress on agricultural society 1.4 Students could not get the punch line of a joke. 2.1 Forgot to share my childhood memories with students 2.2 Did not elaborate the importance of those steps.</p>	<p>1.1 Lack of diversity of the choice of Taiwanese food (e.g. pearl milk tea) 1.2 Lack of the opportunity for students to understand more about Taiwanese food/snack then choose what they want to make. 1.3 Did not have time to tell students the different ways of cooking in western culture clearly 1.4 Students' low interest in origin part 1.5 Forgot to share with students the real taste in my childhood memory 1.6 Lack of a systematic assessment or critical of cultural awareness part.</p>
Plan for the Next Time	1.1.1 Maintain the same as previous	1.1.1 Try to design other Taiwanese food recipes for stu-

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<p>1.1.2 Get local ingredients from Taiwan if possible</p> <p>1.2.1 Find out other useful source on Internet.</p> <p>1.3.1 Focus on the origin of green onion pancake</p> <p>1.4.1 Be confident practice teaching as many times as possible</p> <p>2.1.1 Remember to share personal experience to reinforce their memory.</p> <p>2.2.1 Search related information online</p>	<p>dents</p> <p>1.2.1 Have time to separate classes one for introduction and let students to use the computer room to search</p> <p>1.3.1 Just tell the most obvious different part of western and eastern cooking styles.</p> <p>1.4.1 Shorten the time and focus on the main idea of it.</p> <p>1.5.1 Mark on the slide in order to remind myself to tell</p> <p>1.6.1 Design an oral quiz about cultural awareness and understanding for students to answer in class or use posters to draw what they think about Taiwan in groups</p>
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It is interesting to find out that both cycles were exactly in the same cultural context (e.g. Taiwanese teacher, Finnish students, Taiwanese cuisine and teaching in English) but had different teaching and learning outcomes in planning, implementing and reflecting periods. As table 15 indicated, there were several present evidences to support as follows.

Firstly, narrowing down the scope of cultural content could better students' understanding in a short lesson. As aims of lesson plan (see Appendix 1) and slides (see Appendix 6) of Cycle 1 manifested, planning introducing agricultural society in Taiwan was unnecessary for teachers and students. This was because it took time for teacher to explain during class and at the end of the lesson, there was no clear assessment designed (see Appendix 6) to ensure students' understanding in this context and no feedback (see Figure 6) concerning this part.

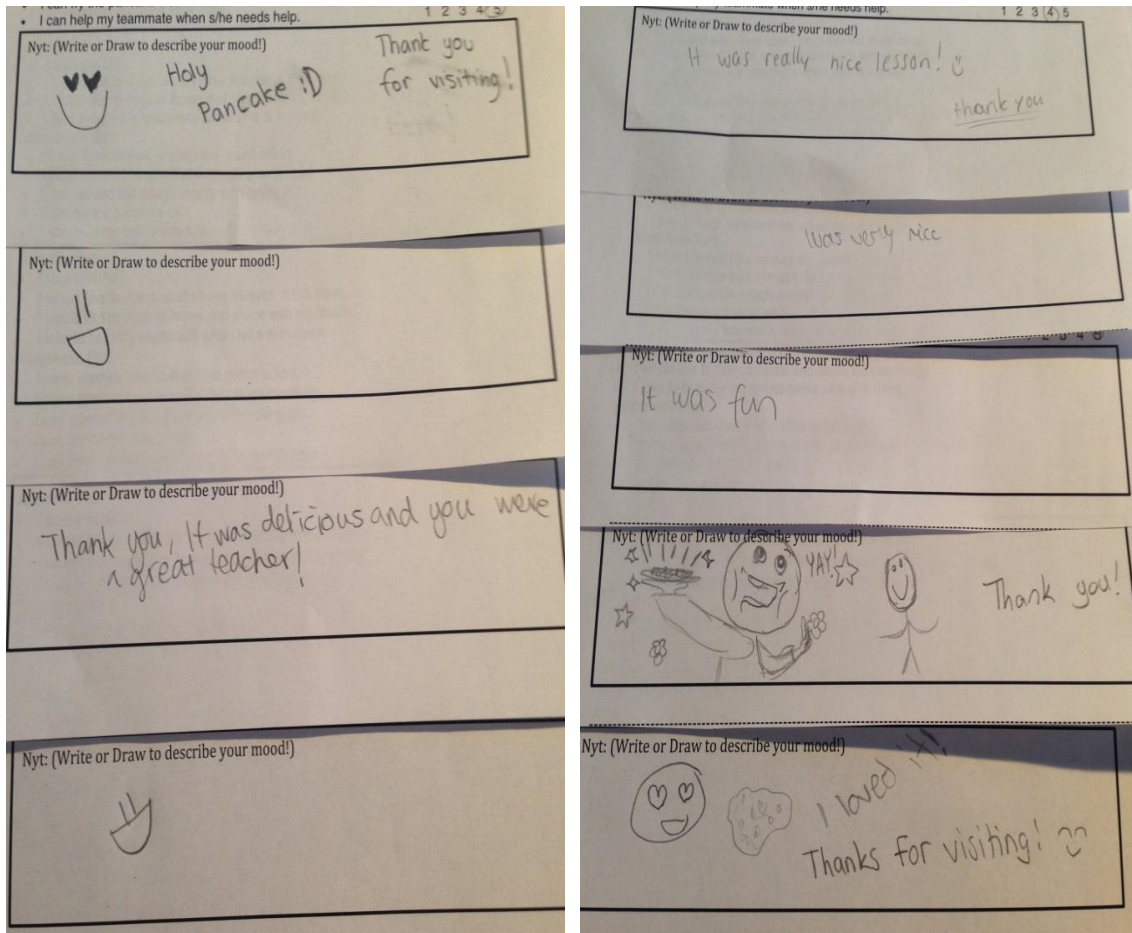


FIGURE 6 Students' Feedback in Cycle 1

Secondly, using teachers' and students' previous experiences in home economics lessons could accelerate teaching and learning in both cultural contexts (Finnish and Taiwanese). As lesson plan of Cycle 2 provided (see Appendix 1), students had the experience of making Finnish pancake already and Johanna had the experience in involving in the previous lesson of making Taiwanese pancake in Cycle 1. Therefore, while teaching facts of Taiwan and introducing Taiwanese food in Cycle 2, I was able to make connection with Finland and Finnish pancake together to reinforce students' impression through activities such as Q&A (see Table 15) and video watching online from foreigner's perspective (see Appendix 7). Especially in Q & A section, teachers and students concluded that there were similarities of Taiwan and Finland (see Figure 7), students' curiosity aroused more cultural questions. In addition, when students were making their pancakes, they were able to make their own shape of pan-

cakes after they understood the different shape of Finnish (rectangle) and Taiwanese (round) pancakes.

Taiwan vs. Finland	
East Asia	Nordic Europe
23 million people on 36,000 km <sup>2</sup>	5 million people on 338,000 km <sup>2</sup>
Mandarin	Finnish
Traditional Chinese (e.g. 台灣)	Finnish (English character, ö ä)
Freedom of religion	Lutheranism
16 aborigines	Sami
1911 founded (104 years old)	1917 founded
Taipei (capital city)	Helsinki

FIGURE 7 Comparison of Taiwan and Finland in class

However, there were difficulties in terms of cultural differences in both cycles. In Cycle 1 reflection, my awareness of self-culture and other-culture was not enough after I did my final report. I mentioned that:

*[...]. For example, the first problem was the measurement. In the past, Johanna always used to measuring ingredients with deciliter (dl) instead of gram (g). Therefore, students were asking how many cups of flour they should use this time. [...]. From this point, I found out that I was unfamiliar with the measurement they usually used and I should be more sensitive to the situation when I introduced the ingredients to make green onion pancakes.*

I did not notice the measurement usage until I taught in person and understood the differences of cultural differences. In Cycle 2 reflection, it was paramount but not easy to create a concrete system to evaluate students' understanding of multicultural environment, which was a key of the spirit in CLIL lessons. In addition, the difficulty mentioned in Cycle 1 was solved in Cycle 2 (see 6.1.3) but the difficulty in Cycle 2 might be still challenging for teachers in the following cycles.

#### 6.1.5 Power of Harmonious Integration

Table 16 4Cs Integration in Cycle 1

4Cs in	Teacher's action	Teacher's speech
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Cycle 1		
Content	(0:41) Show the first slide and introduce the topic today. (1:01) Point at the screen and introduce Taiwan.	(0:41) You know that where is Taiwan, right? (clarify) (1:01) Taiwan is an island and this is our main land. The capital city is Taipei. (3:50) In this place, we call it '三星' (Samsung), not Samsung of your cell-phone brand. (2:52) Today we are going to do Taiwanese green onion pancake.
Cognition	(2:01) Invite students to answer. (4:48) Start to explain the procedure. Show the real photo and dissect the procedures.	(2:01) How many people do you have in Finland? (recall) One student replied: five million (4:48) First of all, you have to chop green onion and then add flour in a bowl...
Communication	(3:50) Smile because of the joke she makes fun of herself. (6:00) Draw the shape of snail in the air and make some students laugh.	(6:00) After making a dough, make it into snail shape. Do you know the snail? (for)
Culture	(3:20) Introduce the agricultural society by using the slide. (9:27) Reply to Johanna's question.	(1:17) Johanna asked: What language do you speak? I replied that we speak Mandarin Chinese and Taiwanese. Mandarin Chinese is our official language but most people in Taiwan in southern part of Taiwan, they speak Taiwanese. (1:33) However, we still have some aboriginals in Taiwan, they are about 14* groups and they have their own language. (3:20) Our ancient society which is based on farming and our ancestors they were all do* the farm. (9:27) Johanna asks: Is it this kind of onion you usually use in your country?

Table 17 4Cs Integration in Cycle 2

4Cs in Cycle 2	Teacher's action	Teacher's speech	Students' action/response
Content	(1:03) Look at students and wait for a moment.	(1:03) Ask students if they have already heard of Taiwan and ask 'What is your first impression when talk-	(1:03) Some students have known or heard of Taiwan.

	<p>(2:12) Tell students the other name of Taiwan.</p> <p>(3:40) After hearing one student say that (Taiwan) is very small. Induce students to know more about Taiwan. Introduce the origin of pancake.</p> <p>(5:25) Point the map on the screen.</p> <p>(5:54) Point the photo on the screen.</p> <p>(7:40) Introduce the origin of Taiwanese Green Onion on the slide.</p>	<p>ing about Taiwan?’</p> <p>(2:12) We are Republic of China. (<i>cf. People’s Republic of China</i>) We have our own president and China they have their own president.</p> <p>(2:13) Teacher’s answer: Different constitutes.</p> <p>(3:40) Do you know Pacific Ocean?</p> <p>Teacher’s action: After hearing one student say that (Taiwan) is very small. Induce students to know more about Taiwan</p> <p>Yeah, it is very small. But how small it is?</p> <p>(5:25) Okay, Taiwan in a nutshell. We have capital city in the northern part of Taiwan. Southern part for tropical (product) and diversity animals, Eastern part for aboriginals and western part for industrial factory.</p> <p>(5:54) So let’s move on today’s topic.</p> <p>(7:40) Before we start to make the pancake, I would like you to know the origin of pancake in Taiwan.</p>	<p>They replied ‘In Asia, Chinese food’.</p> <p>(2:12) What does it mean?</p> <p>(5:54) Chinese. Taiwanese Green Onion pancake.</p>
Cognition	<p>(6:00) Ask students questions.</p> <p>(14:00) Take up the green onion and the knife to help students recall the skill of chopping food.</p> <p>(15:11) Point at the photo on the screen.</p> <p>(18:37) Using</p>	<p>(1:03) Ask students if they have already heard of Taiwan and ask ‘What is your first impression when talking about Taiwan?’ (identify)</p> <p>(4:57) Do you know how old is your country? (recall)</p> <p>(6:00) Do you still remember last time you made Finnish pancakes? What is the character of it? (recall, clarify)</p> <p>(14:00) Do you still remem-</p>	<p>(1:03) Some students have known or heard of Taiwan. They replied ‘in Asia, Chinese food’.</p> <p>(2:12) One student asked ‘What does it mean?’(clarify)</p> <p>(4:57) One replied 75 years old/another</p>



	<p>the photos on the slides. (organize) (30:34) Reply to student's question. (46:56) Ask the student questions. Look at the instruction carefully but continue to help student's dough. (1:26:30) Ask students to write or draw down their feelings right away.</p>	<p>ber how to chop the food? (recall) (14:01) First you have to make your hand like a snail to put on the green onion and then chop into pieces. (15:11) It is a little bit difficult but let's look at: after the dough is flat, you just scroll them and then try to make a shell shape. Is it clear? (15:12) Then you knead the green onion again and see the shape. (18:37) Let's review the steps. Number one... (30:34) If the dough is too sticky for you, add some oil inside and try to use your hand to take it out from the bowl (identify). Johanna's response: Maybe a little bit flour. (46:56) What is the next step? Okay, now you can spread with the rolling pin. You learn it. (clarify). (1:26:30) If you have time, you can draw a picture describe your mood after eating a pancake. 'What is your feeling about it?' (metacognitive).</p>	<p>replied that it's over one hundred. (14:00) Yeah, some students replied. One student showed by using the gesture to the teacher. (apply) (15:11) : um clear (18:37) Repeat and say the steps with the teacher. (1:26:30) Sit in a group and began to write their feedback while eating their pancakes.</p>
Communication	<p>(1:03) Look at students and wait for a moment. (8:21) Point at the slides and make a joke of the brand Samsung. (14:20) Invite students to pay attention to</p>	<p>(8:21) Samsung (三星) is a place. The origin of pancake. It is not your cell-phone, Samsung. (through) (14:20) What is the second step? (51:07) I think you can do it again. Take the rolling pin. I think it is difficult to make it fail. (53:40) The thinner, the better because later on you</p>	<p>(8:21) One of the students said the word Samsung again. (14:20) One student raises his hand and answered 'place flour and salt in a bowl and make a hole.' (30:34) Ask</p>

	<p>this step. (51:07) Come toward the student who says he is going to have a fail pancake. Re-make the pancake for the students. (53:40) Use the rolling pin to help students make it thinner.</p>	<p>could fry them quickly.</p>	<p>both Johanna and I the situation of the dough. (<i>for</i>) (46:56) 'Take out one of the dough, what does that mean?' Then add more flour on the table. (<i>of</i>) (51:07) Can I do that like this, it is kind of fail. (<i>for</i>) (53:40) Ask question: How thin should it be? (<i>for</i>)</p>
Culture	<p>(1:57) Show the national flag. (2:50) Johanna's action: Ask the difference of the language Taiwan (Mandarin) and Chinese. (20:03) Point at the picture of green onion cake on the slide. (40:20) Tell Johanna the fact of green onion. (53:59) Take a spoon to give some black pepper on it.</p>	<p>(1:26) Are we Chinese? (1:27) Joo (yes)! (1:57) Have you seen this (national flag) before? (2:50) The language we used is the same but the intonation is a little bit different. For the spoken and written part are totally different. (e.g. 台灣 vs. 台湾) (6:00) Do you still remember last time you made Finnish pancakes? How about the flour, the taste? What is the character of it? Because of the sugar inside*. Johanna's speech: 'There is no sugar inside the pancake but it is the jam has sugar.' (20:03) The egg is for more taste. (40:20) Johanna suggested a student make green onion pancake in rectangle* shape. We usually make the green</p>	<p>(1:26) No. Are you? or (awareness) Taiwanese? (1:57) Maybe (6:00) One student replied it is square. The other said it is sweet. (20:03) Want to know more about what is egg for. (40:20) Listen to teachers' instruction. (53:59) Ask the teacher, 'What should I do now?'</p>

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onion pancake in round shape.  
(53:59) Use the paper bag and put the pancake into the bag. (awareness to understanding)

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Although the tables are presented in an independent form of each component of 4Cs, there were various examples to illustrate the power of 4C's harmonious integration in this study.

The first example is an integration of content and cognition (see Table 17). In minute 1:03, teacher's action of asking students if they have already heard of Taiwan and looking at students for a while to help students recall and identify their previous learning experience. From this instance, content is as a fundamental point to link other components together and cognition is the most potential to be promoted and enhanced. Another example (see Table 17) took place in minute 2:12 in the same cycle. After I introduced another name of Taiwan (Republic of China), students appeared curious about the name and the difference of China (People's Republic of China) so one of students asked a question 'What does it mean?' to clarify his doubt. My explanations in minute 2:13 helped students tell the differences of its meaning and the political status between the two countries.

Secondly, the integration of content and communication (see Table 16 & Figure 5). In minute 3:50 of Cycle 1, I told a joke related to the content in order to make students have another chance to reinforce their impression on the original place of Taiwanese green onion pancake through connecting to students' daily life product (Samsung, a brand of smart phone). In addition to that, the advantage of using personal style humor is not only to ease teachers' nervous in class but also lower down students' anxiety.

Thirdly, culture integrated with other 3Cs. From Cycle 1's culture domination to the integration of other 3Cs in Cycle 2, culture has changed its own role. As Table 16 presents, Johanna raised a few questions in terms of background knowledge about Taiwan. Her curiosity helped students explore and under-

stand more about Taiwanese culture. This also indicated that content and culture were in closer relation than the other Cs. In Cycle 2 (see Table 17), the integration of other 3Cs was more transparent to understand through teacher's speech and action and students' response. For example, students' understanding about content and ability to communicate were developing during the process of teaching and learning through the intercultural context. Besides, students' cognition from Cycle 2 had more advanced development from interaction with teachers and peers.

Finally, the harmonious integration of 4Cs. Content was constructed on what students were going to learn through communication. This change made a significant perspective on the role from teacher-led (Cycle 1) to student-centered (Cycle 2). For cognition, I planned and implemented students' lower-order thinking on understanding the differences between Finnish and Taiwanese pancakes and continuing the skill of making Finnish dough applied in Taiwanese green onion pancake in slides (see Appendix 6). On the other hand, the developing of higher-order thinking was planned and implemented on students' individual work (e.g. how they organized the process) and pair work when they made food in a group of four. This instance of harmonious integration of 4Cs can be summarized that students developed their content knowledge, cognition, communication and communication skills (e.g. verbal or non-verbal) through the intercultural and its product (e.g. making pancakes) in class. Figure 8 illustrates the 4Cs connects and units together as a result of the harmonious integration.



FIGURE 8 Harmonious Integration of 4Cs in Cycle 2

## 6.2 Developing Pedagogical Tact in 4Cs

In the study, 4Cs is used as a support to build up three dimensions of pedagogical tact in both cycles. In this section, I will present each table (see Table 18, Table 19, and Table 20) of three developing pedagogical tact in Cycle 1 and Cycle 2 at the beginning and then draw on significant findings of each dimension of pedagogical tact in the following sub-section 6.2.1, 6.2.2 and 6.2.3.

### 6.2.1 A Sense of Vocation

Table 18 A Sense of Vocation in Cycle 1 and Cycle 2

A sense of vocation	Cycle 1	Cycle 2
Plan	<ol style="list-style-type: none"> <li>1. Start to think what kind of food to teach (e.g. traditional food, night market food etc.)</li> <li>2. Observation of Johanna's class</li> <li>3. Observe teaching pedagogical moments</li> </ol>	<ol style="list-style-type: none"> <li>1. Use observation notes to understand the procedure in class and how the teacher implement pedagogical tact</li> <li>2. Apply the core curriculum of home economics in lesson plan</li> <li>3. Have and add visions for CLIL lesson plan by using 4Cs</li> <li>4. Plan/add formative feedback to check students' understanding</li> <li>5. Enhance students' motivation and improve the disadvantage in Cycle 1(e.g. update slides and add video clips)</li> </ol>
Do	<ol style="list-style-type: none"> <li>1. Johanna's role of class (e.g. questions about language; solve the teachers' problems)</li> <li>2. Gestures (e.g. draw the shape of snail to indicate what students are going to make.)</li> <li>3. Tell Johanna the fact of</li> </ol>	<ol style="list-style-type: none"> <li>1. Preparation (e.g. write down today's topic)</li> <li>2. Ask students to recall a lesson</li> <li>3. Johanna's correction of misunderstanding of Finnish pancake</li> <li>4. Deal with teacher's and students' questions</li> </ol>

	ingredients (e.g. the ration of water and flour is 2:1)	<ol style="list-style-type: none"> <li>5. Time management (in vain)</li> <li>6. Match the goal of curriculum</li> <li>7. Instruction remind</li> <li>8. The German teacher informed me to check the situation of another group</li> </ol>
Observe and Reflect	<ol style="list-style-type: none"> <li>1. Johanna's feedback</li> <li>2. Reflect other teachers' sense of vocation (e.g. hand out instruction sheet after introducing the whole process)</li> <li>3. How to be a qualified home economics teacher?</li> </ol>	<ol style="list-style-type: none"> <li>1. Self-evaluation</li> <li>2. Help students reflect the difference of food they made today</li> <li>3. Disadvantage (e.g. nervousness &amp; time management)</li> <li>4. Unexpected situations (e.g. dough)</li> <li>5. Recall previous teaching experience as student teacher</li> <li>6. Improvement for the next time</li> </ol>

A sense of vocation is how teachers notice educational relation and react at the same time. This pedagogical ability takes time to develop and needs different models for teachers to require but can be unfolded in CLIL class. In this section, I will provide several critical findings about how this sense of vocation developed through using the essence of 4Cs of both cycles.

As can be seen in Table 18, a sense of vocation was consonant in both cycles. Firstly, in observation of Cycle 1, Johanna was a positive model who gave me an inspiration how to teach content and to prepare lessons (see 6.1.1) but was also a negative model in cognition and communication. The negative model described as below.

'Actually, the instruction of teaching steps cost only 15 minutes and I could feel that students were eager to do it by themselves. There was also a pedagogical problem I would like to mention here, students used to getting the Finnish or English instruction before [the] teacher gave some vital instructions. Therefore, students always did not pay much attention to the teacher.' (Excerpt from Final Report)

As the excerpt indicated, I was aware of a pedagogical problem in terms of students' cognition and communication. Students' eager of making food resulted in paying no attention to teacher's instruction. It also made students lose the chance to organize the information and to communicate with others. Both positive and negative model were practical and helpful for me as a threshold of sense of vocation.

Secondly, a sense of vocation became stronger after several times participations in Cycle 2. In order to become a real qualified home economics teacher and practically implement the principle of 4Cs in class, I asked Johanna how to become a qualified home economics teacher in CLIL class as follows.

*'[...] You need to study in University for five years and I chose H University (pseudonym) to study. After graduating, I have been a substitute teacher for several years. Until six years ago, [...], I got the job. In my opinion, pedagogy courses taken in the university were quite important for me. You must have ability to prepare the material by yourself.'* (August 24<sup>th</sup>, 2015 observation diary)

As can be seen, the sense of vocation has been enlarged into wider and deeper perspectives, from pedagogical moments in a lesson to the whole teacher education for CLIL in home economics. It is also worthwhile to note that both Johanna and I we always prepare for the teaching material by ourselves since it contains in one basic component of 4Cs, content.

Thirdly, cognition and culture supported a sense of vocation growing during class. Take Cycle 2 (see Table 17) for instance, in minute 6:00, I began to ask students to recall if they still remembered last time they made Finnish pancakes and what the character of it. One of the students replied that it was *square*. and another said it is *sweet\**. At the moment, I responded 'Because of *sugar\** inside'. However, Johanna interrupted and tried to clarify that 'Actually, there is *no sugar* inside Finnish pancake but *jam* has sugar inside.' It is worthwhile to mention that even though I could immediately react to students' reply but students and I still need the correction of misunderstanding about culture from Johanna. Another cognitive example took place in the same cycle in minute 14:00 (see Table 17). I required students to recall previous lessons in order to apply a basic

technique how to chop food (e.g. green onion). I took up a bunch of green onion and a knife to imply the next step of chopping. Some of students answered *yeah* and one of them showed in class by using the gesture to the teacher right away. From this instance, I could understand how much they have learned in class and how much I had to explain further during class. Still another culture example was presented in Cycle 1 (see Table 16). In minute 1:17, Johanna's question about what language Taiwanese people usually speak let students know more about the difference between Taiwan and China, which I might neglect while introducing basic information of Taiwan.

Fourthly, with regarding to communication, especially body language (non-verbal) from teacher's speech and action while teaching. Take Cycle 1 for example (see Table 16). While dissecting and explaining a critical step in minute 6:00, I told students that 'After making dough, make it into snail shape. Do you know the *snail*?' with an action of drawing the shape of a snail in the air and making some students laugh. Although there was only one form of reaction (laughing) from students, this non-verbal communication can be viewed as one way to examine teachers' sense of vocation, knowing how to make abstract concepts concrete.

Fifthly, pedagogical problems and difficulties of 4Cs can be considered as an evaluation of sense of vocation. Both Cycles (see Table 11, Table 12, Table 13 and Table 15) presented identified problems and plan for the next time based on the essence of principle of CLIL, 4Cs. Whilst in Cycle 1, it was more like self-improvement and more related to a sense of vocation.

*'I invited the students to give me some feedback on questionnaires and had a short discussion with Johanna. She considered that the first time to teach in home economics was good and it was nice to let students understand different countries' cultures and had the chance to make food of their own.'* (Excerpt of reflection log)

As this reflective anecdote showed, it is clear to understand that at that moment my teaching practice has motivated students to reflect on the different food they made in class. In addition, Johanna's oral feedback right after class gave me encouragement for the second teaching practice.



From these various illustrations provided in this section, a sense of vocation can be fully explained and gained by using 4Cs as a support and more importantly with the assistance of Johanna and need from students.

### 6.2.2 Thoughtfulness

Table 19 Thoughtfulness in Cycle 1 and Cycle 2

Thoughtfulness	Cycle 1	Cycle 2
Plan	1. Consider which part might need more detailed instructions and which movement required more techniques (e.g. with photos).	1. Take students' personal developing progress into consideration.
Do	<ol style="list-style-type: none"> <li>1. Cultural awareness</li> <li>2. Make a joke (e.g. Samsung, not Korean brand of cellphone)</li> <li>3. Ask students if the speed of teaching is too fast or not.</li> <li>4. Johanna's behaviors (e.g. open the window to get more air inside)</li> </ol>	<ol style="list-style-type: none"> <li>1. Roll call and notice one absent because of sickness</li> <li>2. Language exchange</li> <li>3. A planned personal experience to share (in vain)</li> <li>4. Use a napkin to demonstrate</li> <li>5. Give the rest chopped onion to a pupil who always did the job slowly</li> <li>6. Johanna invited me to tell what I just said to a student again in English.</li> <li>7. See the situation (dough) with students carefully (e.g. add more flour to a student's bowl)</li> </ol>
Observe and Reflect	1. Teaching suggestions (e.g. create some short clips for difficult steps for pupils to easily understand how to make Taiwanese pancakes)	<ol style="list-style-type: none"> <li>1. Transform students' mimic as a help of pronunciation</li> <li>2. Consider students' mental development as an important issue especially in teenager stage. (e.g. unexpected behavior of eating a bit of raw dough)</li> </ol>

Thoughtfulness is another form of realization of pedagogical tact and can be generally categorized into two types, caring and humor. Caring is manifested in how teachers deal with pedagogical moments with mindful considerations while humor is ameliorated in class with verbal or non-verbal interactions such

as exaggerate gestures or punch line of jokes. In this section, I will give several influential findings how thoughtfulness developed through using the essence of 4Cs of both cycles.

Table 19 indicates pedagogical thoughtfulness in the study. As can be inferred, cognition and communication were used as scaffolders to build up thoughtfulness before the class and during the class of both Cycles. In Cycle 1, I jotted down on my lesson planning notes.

*'[...]. Third, I had to make some photos to help my students understand difficult steps, which may not be seen in western cooking methods. Therefore, while I practiced at home in advance, I considered which part might need more detailed instructions and which movement required more techniques.'* (Excerpt from Lesson Planning, Cycle 1)

The example provided the evidence of caring. I took students' interests and development into consideration by using photos on the slide (see Appendix 6) and used those photos to create a photo quiz activity (see 6.1.2). In Cycle 2, I came up with another idea for my lesson plan because the participants were all 7<sup>th</sup> graders.

*'During the (teaching) process, students' progress may be different; however, the personal developing differences should also be taken into consideration. [...]. In addition, the teacher uses questionnaire in the end of the lesson to check to what extent is the student has been achieved.'* (Excerpt from Lesson Planning, Cycle 2)

From this account, I concerned not only students' mental and physical development but their learning outcomes. In addition, the planned sharing joke and experience sharing in both cycles showed the humor of thoughtfulness (see 6.1.3 & 6.1.5).

Another vivid evidence of caring can be showed at the beginning of a lesson in Cycle 2 with the support of language change.

*'[...], I stood in front of the class and solemnly announced that today we were going to make Taiwanese food but as what I have said that I would teach in a foreign language and hope students would feel free to use the foreign language or not. I would like students to feel comfortable at first and if they had any question later, they were allowed to interrupt me any time and ask in the language they*

*wanted because I could answer in English and Johanna could response in Finnish. I noticed that at the moment students were nodding their heads and seemed agreed with that. For me, letting students feel no offensive and willingly to learn things is more significant to me. (Excerpt from reflection during class, Cycle 2) [Emphasis embeded]*

As can be seen some key words such as 'feel free', 'feel comfortable', 'allow interrupting', 'feel no offensive and willing to learn' indicate that they are realization of caring in thoughtfulness to comfort students' anxiety in class. As a consequence, with this considerate and warm opening and involving in different situations with students (see Table 19) such as adding flour to a student's bowl, re-making the pancake for a student, checking the progress carefully, students were indeed more open-minded in the process of making food with teachers' and other students' assistance.

The third example of thoughtfulness worthy to be mentioned is with various support of communication; cultural awareness and a sense of vocation (see 6.2.1). For instance, in minute 1:24 in Cycle 1 (see Table 17), I attempted to answer Johanna's question and said in front of class.

*'If you can speak a little Taiwanese, you will be much closer to local people. This is because most southern part of Taiwanese inhabitants they do speak Taiwanese only and most Taiwanese people.'*

As above speech manifested, I provided the information about language for use in order to get close to local Taiwanese people. This also indicated that I have thoroughly considered that Johanna and students might have the chance to visit Taiwan in the future and make them understand the difference between Mandarin Chinese and Taiwanese.

In conclusion, we can understand that pedagogical thoughtfulness has been realized in practical and concrete situations with the support of 4Cs and a sense of vocation.

### 6.2.3 A Relationship between Teachers and Students

Table 20 A Relationship in Cycle 1 and Cycle 2

A Relationship between Teachers and Students	Cycle 1	Cycle 2
Plan	<ol style="list-style-type: none"> <li>1. A strong commitment to introduce my home country's food</li> </ol>	<ol style="list-style-type: none"> <li>1. Participate in students' first class until the teaching practice</li> <li>2. Have change the concept of CLIL (e.g. a good CLIL lesson needs efforts from both teacher and students)</li> </ol>
Do	<ol style="list-style-type: none"> <li>1. Interaction with students is the most concerned.</li> <li>2. Share a personal experience to students</li> </ol>	<ol style="list-style-type: none"> <li>1. Students' excitement</li> <li>2. Language interchange to lower down the offensive feelings</li> <li>3. Involvement in each group when they need help</li> <li>4. Students' reply by gestures and facial expression</li> <li>5. Students' asking for help from Johanna</li> <li>6. Language barriers solved</li> <li>7. A student's frustration of making a fail pancake (with immediate help)</li> </ol>
Observe and Reflect	<ol style="list-style-type: none"> <li>1. Johanna's positive feedback.</li> <li>2. Teacher's reflection (e.g. lack of recording of interaction and plan to do so next time and being more familiar with students.)</li> <li>3. Students' self-evaluation what they have learned from the course</li> </ol>	<ol style="list-style-type: none"> <li>1. Students drew satisfied emoticons on feedback boxes.</li> <li>2. Accompanied students and learned from each other</li> <li>3. Students were willing to try their best while making food and interacted with teachers occasionally</li> <li>4. Focus on students' responses.</li> <li>5. Remove the language barrier (e.g. non-verbal movement)</li> <li>6. Johanna's and students' positive support</li> </ol>

A relationship between teachers and students can be counted as the most valuable of the three developing pedagogical tact because it maintains previous two dimensions of pedagogical tact, a sense of vocation and thoughtfulness as prerequisites to understand the value of a relationship between teachers and stu-

dents as a consequential result. As Table 20 provided, there are several significant evidence to understand how this pedagogical tact gradually formed through 4Cs as a support and the other two pedagogical tact as basements.

First of all, under the culture (see 6.1.4) and sense of vocation circumstance (see 6.2.1) in Cycle 1.

*'Today I observed a home economics class in V. school [...]. Actually, I have been there for several times to observe classes because I am personally interested in cooking Finnish and Taiwanese food and would like to understand more about how the teacher teach home economics in content and language integrated learning (CLIL) setting.'* (Excerpt from the observation diary on March 9<sup>th</sup>, 2015)

As can be inferred, I teach out of personal commitment. I introduced my home country's cuisine and I would like to put what I have learned in CLIL course into practice. However, I was not aware of the relationship between teachers and students until Cycle 2.

*'[...] I loved today's lesson because I knew what they were going to do and even I was not sure the exact next step, I could ask some students who was willing to speak English with me and so that I could know what was going on and try to educate them to do the same thing (napkin stuffs).'* (Excerpt of observation note, September 2<sup>nd</sup>, 2015)

&

*'A good CLIL lesson usually needs time and efforts from both teachers and also students. [...]. From students' side, they have been familiar with the teacher since their first class. In addition, they had made Finnish pancake several weeks ago and had basic knowledge about making dough.'* (Excerpt from preparation note, Cycle 2)

From these two accounts, through breaking language barriers in participations comparing to Cycle 1's experience with no interaction with students, I had gradually acquired the concept of the relationship of teacher and students.

In addition, the second example is a continuum of the preparation note above to show the effect on companion. My companion with students from the beginning of students' first lesson in home economics class also helped develop the relationship with teachers and students.

*'[...] When a school of students entered into the classroom, they were all excited about making Taiwanese food today and some of them even asked 'We are going to make Taiwanese food today, right?' I replied with a big smile 'Yes, we are going to make Taiwanese Food, a Taiwanese pancake.'* (Excerpt from reflection, Cycle 2)

As this account shows, it is comprehensive to see that my companion with students from the first CLIL lesson until demonstration worked because *'they were all excited about making food today'* and I replied them in confirmation. In addition, I allowed students to use language they wanted in order to lower down the anxious feelings with teachers (see 6.2.2). It is worthy to mention that this behavior indeed enhanced students' willingness to learn in CLIL class. For example, in minute 31:26 in Cycle 2 (see Appendix 8), a student asked me if the dough was good enough to continue the next step. This information could be viewed as a relationship with students through the effort of making better dough since I have built up the relationship with students at the beginning and always looked after their process and progress. The mutual trust enables teachers to guide students when they are in need. Another example was in 36:07 in Cycle 2 (see Appendix 8), a student made a request in the middle of making the food for me and I tried to not only save the failed pancake but also built a better relationship with the student. I came toward the students to show my pedagogical thoughtfulness and a sense of vocation because I knew how to save the pancake. This example completely illustrates how I developed a relationship with students on the basis of the sense of vocation and thoughtfulness.

The third example has been told in results section for several times but still needed more connections to this critical pedagogical tact. It started with a communication skill that students developed in class through non-verbal reaction in Cycle 1 and Cycle 2 (see 6.1.3 & 6.2.1). Students' reaction of 'snail' shape in Cycle 1 implied that there was still one-way teaching at the moment. However, in Cycle 2, the non-verbal reaction from students created more interactions while making food (see Appendix 8). It turned out to be that the purpose of language learning and using met the need not only of the expectation of com-

munication but for more interpersonal relationship development such as allowing students to be able to listen to teacher and peers' instruction or suggestion.

The fourth example is from both teacher's and students' feedback. As I have mentioned in 6.2.1, I concerned my teaching performance (a sense of vocation) more than students' learning outcomes in Cycle 1. However, in Cycle 2, I found that examining students' satisfaction of the lesson through their oral and paper form feedback first, especially the picture they drew on the feedback box (see Figure 9) is more valuable for these feedback indicate to what extent they loved what they have done today.

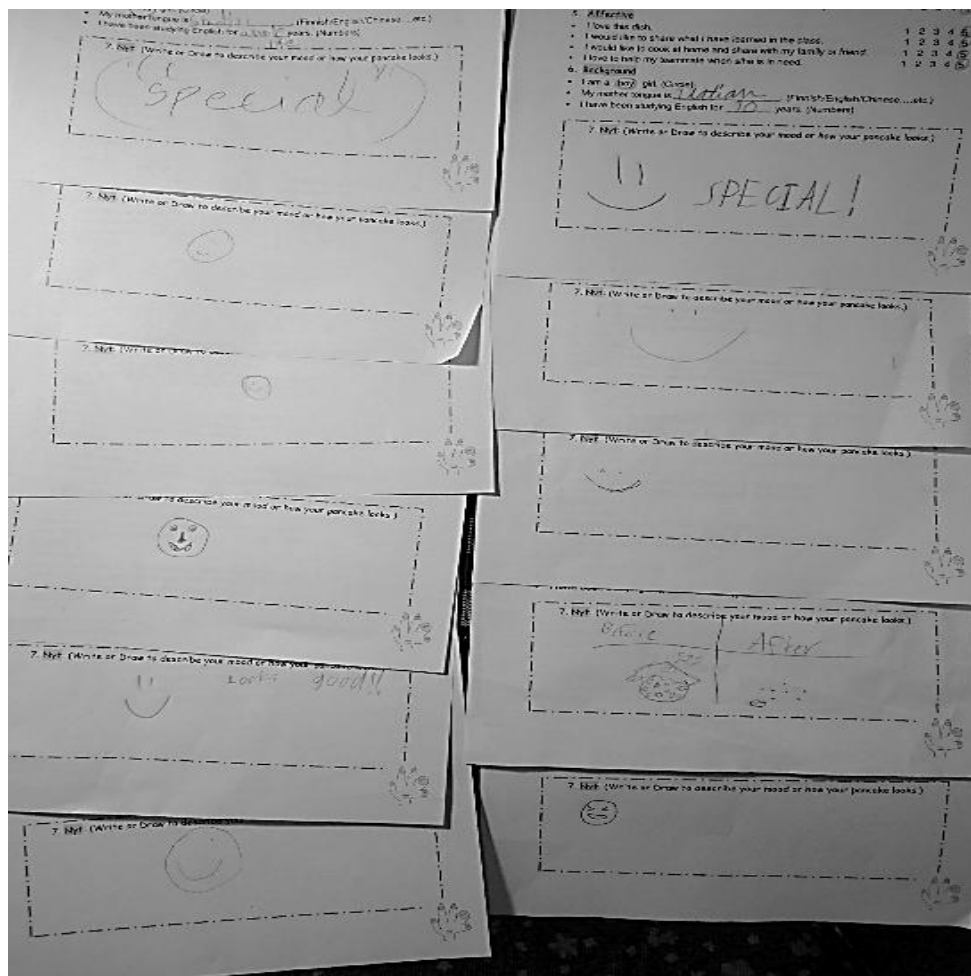


FIGURE 9 Student's Feedback in Cycle 2

Figure 9 represented that students' mood and feelings in this lesson. Most of them were contented to the lesson by saying 'special' and drawing 'smile' emoticons to express. In addition, students' willingness to involve in class and to interact with teachers and students occasionally meant the relationship with

teachers and students was constructed on 4Cs, teachers' sense of vocation and thoughtfulness in class.

Finally, Johanna's positive feedback via email after Cycle 2 also drew on the relationship between teachers and students.

*'Your lesson was so refreshing and successful. The presentation was clear enough with those photos and recipe written step by step so clearly. Your computer work was marvelous. I hope I could do the same. You were happy and smiling when teaching all the time. Great! Only time ran so fast that the cleaning did not have time enough and it came busy in the end. You are becoming a very good teacher!'*

As can be seen from this text, Johanna considered and confirmed that my sense of vocation and pedagogical thoughtfulness have made a huge progress during both Cycles. This encourages me to conclude highly value of the three dimensions of pedagogical tact with 4Cs' support (see Figure 10).

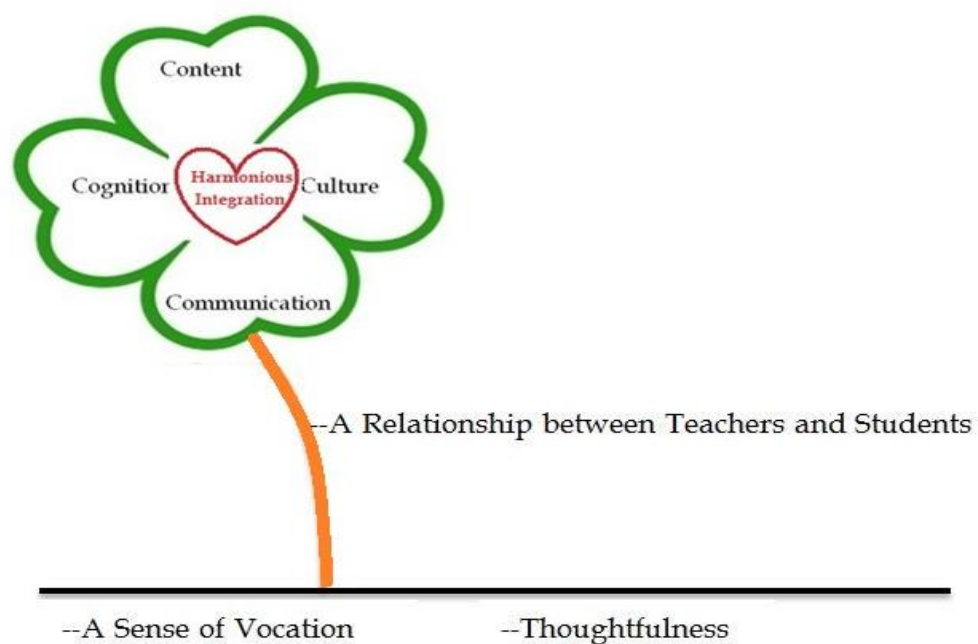


FIGURE 10 Relationship of 4Cs and 3 Dimensions of Pedagogical Tact

Figure 10 presents that the three dimensions of pedagogical tact are not merely developed under the circumstance of 4Cs and 4Cs' connection but actually play indispensable roles in CLIL lessons.



## 7 DISCUSSION AND CONCLUSION

This action research investigated how I, as an international teacher, used the principles of CLIL, 4Cs, as an innovative methodology for pedagogical tact development. As a consequence, the 4Cs applied in my CLIL lessons and used as support to develop three dimensions of pedagogical tact were rather successful and invaluable. The discussion chapter begins by showing a brief answer to the two research questions before drawing on wider implications and conclusion of this study.

For the first research question of the present study - *How can the 4Cs be used to develop in CLIL lessons?* - five well-known but different aspects were drawn on in both Cycles. Content was no longer *food* concerned in home economics class for teachers to prepare and for students to learn how to cook but a natural way to better understand cultural context at the same time. Cognition was not just for teachers to install information to students but to design both formative and summative assessment and to increase students' involvement and in class. Communication was the way teachers asked had influence on students' understanding, especially in non-verbal interactions and students' communication skills developed though teachers might encounter difficulties in anticipating communicative obstacles. Culture should be narrowed down to the scope of cultural content so as to help students' understanding in a lesson. Using teachers' and students' previous experiences of home economics could accelerate teaching and learning in cultural contexts. Finally, the harmonious integration was not just applied to ease the teachers' nervousness, lower down students' anxiety or arouse students' curiosity but to capture a great conceptual change from teacher-led to student-centered class.

In answer to the second research question - *How can the 4Cs support the development of pedagogical tact in CLIL?* - three developing dimensions were discussed. These three developing dimensions of pedagogical tact were a sense of vocation, thoughtfulness and a relationship between teachers and students. A sense of vocation was supported under the process of observation of positive

and negative models, active participation in class, the component of the 4Cs and their integration. Teachers acquired this tact became increasingly professional at pedagogical moments. Thoughtfulness was supported by the 4Cs and a sense of vocation. Thoughtfulness also manifested in these two features - caring and humor in comforting students' anxiety and taking students' interest and development into consideration. Finally, the most important pedagogical tact of the three dimensions is the relationship between teachers and students. On the basis of the previous two pedagogical tact, teachers and students build up a relationship. Teachers were able to guide students to the right track and students' interpersonal relationship was also developed at the same time.

### 7.1 Understanding the Relationship between 4Cs and Pedagogical Tact in CLIL Home Economics Classes

This study found out the importance of teacher-student relationship through using the 4Cs and developing pedagogical tact in CLIL home economics classes. Although recent studies highlight CLIL as a dual-focus fusion, an innovative methodology-based theory (Agolli, 2013; Coyle, 2008; Meyer, 2010; Schuitemaker-King, 2012) and 4Cs of CLIL are viewed as the essential lesson-planning toolkit (Coyle, 2005b), actually it is pedagogical tact that nourish the 4Cs and make it go beyond methodological concerns to pedagogical considerations. The three dimensions of pedagogical tact for teachers developed in two cycles were like the metaphor of a clover to bloom (see Figure 10). A seed of clover was planted underground. A sense of vocation and thoughtfulness were soil underground to nourish the seed. When the seed had enough nutrition, the seed developed a stem by breaking through the surface of the ground and became a stem – a relationship between teachers and students. To make a bridge between the stem and a bud of the clover, it took time to take care and protect itself from harm, and one day a leaf sprout and then the next. Finally, when the four leaves developed well, the bud of the clover connected the essence of clover (4Cs) and had strong support of the root and stem (3PTs).

That is, the significant competence of utilizing pedagogical tact in the study solves the conflict between content and language (Wolff, 2012) and pedagogical difficulties of each cycle. Through anticipatory reflection, interactive reflection and re-collective reflection (van Manen, 1991a), teachers could better their understanding through each cycle with the help of the pedagogical tact. Teachers' knowledge of both 4Cs and pedagogical tact was manifested in practical actions (van Manen, 2008). The 4Cs and pedagogical tact are repertoire in CLIL and can be applied in relational and situational in home economics class (Kuutti, 2011; van Manen, 2002). However, Nikula et al. (2013) suggested that:

*In classroom research, teacher-led lessons and whole-class interaction are easier to record than small groups of students working and discussion independently, and simply, they also appear more frequently in classrooms despite professions to the desirability of student-center, task-based pedagogical designs. (p.73)*

We could pinpoint that the first cycle was more similar to teacher-led or teacher-centered mentioned above whilst the second cycle was rather student-centered in terms of teaching method and research method. Comparing these two cycles, pedagogical tact and the 4Cs cooperated and developed well in the second cycle and both teachers and students benefitted. It also implied that students-centered lessons and small groups of students working were recommended in this research.

In addition, as teacher's speech did not directly result in students' conceptual change (cf. Morton, 2012), it created more opportunities not only for classroom interaction (Mercer, 1995; Nikula et al., 2013:74) but more specifically the intercultural interactions in class (see Chapter 6.2.3). Moreover, teacher's ontological concepts of teaching changed before and after class and epistemological changed during the class of each cycle (Schegloff, 2006). These also enhanced the relationship between teachers and students in both cycles. How to orient students to the right track testified the core spirit of van Manen's pedagogical tact (1991b) and we realized that from low-cognition question-asking (Nikula et al., 2013), communication was overriding the importance of learning (Vollmer, 2008: 273), intercultural awareness and understanding in home economics

learning and teaching (Coyle, 2005a; Marsh, 2008). Although Hare (1992) reviewed and commented on van Manen's book, *The Tact of Teaching*, pedagogical excellence and technical expertise were different and viewed as challenges; it turned out to be a turning point in this study. From being an English teacher and home economics teacher (Kuutti, 2011: 11; J. Moate, 2011b), in non-pre-selected CLIL Finnish students (cf. Bruton, 2011), through designing and tailoring lessons to truly reflecting on each cycles in dynamic class (van Manen, 2008), the action of implementation of 4Cs and pedagogical tact could always go hand in hand.

## 7.2 Limitations

There are several limitations of the study. One limitation of this study include the application of the 4Cs and pedagogical tact only in low-cognition home economics subject which might be considered to impede academic language development because of teachers' or students' language proficiency. As Llinares et al. (2012: 222) pointed out one of four main roles of interpersonal language in CLIL class, the role of the expression of evaluation and attitude towards the academic content could not be investigated in this area. Besides, there were no clear or limited learning outcomes in the various social contexts (cf. Beardsmore, 2008; Schuitemaker-King, 2012). In addition, the study also manifested intercultural education difficulties (Lanas, 2014: 173) and challenges appeared in both cycles (e.g. communication and cognitive problems) and it actually did not disappear in the following cycle since every time students were from different backgrounds. Therefore, even if I have changed my ways of teaching, it was impossible to understand if students' conceptual changed or not (Dalton-Puffer et al., 2010). Moreover, the aim of action research was intended for more self-purpose than for the benefit of Finnish CLIL community (J. M. Moate, 2011). The unclear of students' benefit and social value at the beginning of the study might block the possibility of local schools and government concerned.

What is more, in terms of research design, there were still some inevitable challenges. First of all, before the start of the first cycle, I spent a long period of time visiting and observing classes few schools around central Finland which had CLIL courses and tried to build up a network with CLIL teachers. It took almost eight months to finish both cycles. Time-consuming or time management in this research seemed a pitfall. Secondly, the video recorder set in class lacked the focus on students' and whole class interaction (Clarke, 2001), which meant that it might lose the angle from students to students and students to the whole class. Thirdly, the overlapping findings came out because during the cycles reflections of Cycle 1 might be overlapped with the planning of Cycle 2. Fourthly, questionnaires designed in English cannot be fully understood by some of Finnish students, which may be difficult for teachers to understand their learning outcomes and for students to express their true feelings. Finally, in data analysis section, the down side of coding was without explicit boundaries and sometimes self-doubt (Marshall, 2002: 60). Teachers as researchers lacking confirmed confidence to operate analysis might also limit other possibilities of findings.

### 7.3 Implications

Under original purpose of globalization and internationalization, teachers and students live in a multicultural environment and learn how to learn together. As we understand from this study, using additive languages as media is common in every CLIL lesson but it is not only one of ultimate goals in CLIL education. The study highlights the significance of the relation of pedagogical tact and 4Cs in CLIL lessons. Through mutual interaction (teachers with students and students with students) and more participation in class (Coyle, 2006a), teachers and students can be benefited from not only product-oriented in the end of class but also process-oriented integration (Dalton-Puffer et al., 2010).

In addition to students' learning outcomes, it is good for teachers to be wary when reading and receiving CLIL education. Cross-cultural experiential

learning (Wilson, 1986) can be considered as an essential experience for CLIL teachers. The pre-requisite of cross-cultural pedagogical tact (e.g. a sense of vocation and thoughtfulness) in other multicultural society is necessary in order to enhance the significant learning (Fink, 2013) in college CLIL teacher education.

This study can be applied in my home country Taiwan. In Finland, CLIL programme is grassroots in big cities and towns since 1990's (Dalton-Puffer et al., 2010) whilst Taiwan is more like top-down implication promoted by Taiwanese Ministry of Education (MOE) in tertiary education since 2011 (Yang & Gosling, 2014: 398). Although the goal of Taiwanese MOE is to cultivate graduates with professional knowledge in their specializations, the implementation of CLIL is only expected to use English as instructional language in class. On the other hand, in private educational system, there are seven international baccalaureate (IB) schools from primary to university in Taiwan for more than 20 years but still use English as main additive language in class. Here, I would like to suggest that Taiwanese government have the concept of core spirit of CLIL education (Coyle et al., 2010) and overview the need of CLIL teachers both in public and private schools and also establish teacher-training institutions first, especially '*whose language* are going to be taught?' although ECML already promoted their goal from 2016 to 2019 – Language at the heart of Learning (Council of Europe, 2016). In addition, knowing and understanding how to adopt and adapt CLIL as educational approach to Taiwanese mainstream education are two beginning steps. And then while the government are training teachers in CLIL education system, teachers who are responsible to teach should require additive languages proficiency and pedagogical tact (RW.ERROR - Unable to find reference:10; Turner, 2013) depend on the social context and should reflect on intercultural topics such as accepting multiple voice, retaining complexities (Lanas, 2014: 174), openness to international students, and always holding a positive attitude toward implementing complete CLIL education (Wolff, 2012).

The study also highlights the challenge usually discussed in CLIL. First of all, the package of teaching material is not easy to complete in a short period of

time, it takes a period of time to plan, adopt and realize in order to meet both need of curriculum and students' mind and head development. Creative material invention and sustainability in innovative approaches (Ratniece & Ratniece, 2013) like this study in the two cycles are indispensable. Besides, the different planned activities or tasks also offer opportunities for students to involve in social interaction and construct their understanding within interdisciplinary subjects. On the other hand, teachers provide those meaningful activities in class also give themselves chances to create different types of appraisal to examine their effective teaching. Secondly, going back to the first point of teaching material, this action research provides a reflective way to examine a development in understanding of how the course are constructed and to what extent can students and teacher can develop their understanding in the context (Carr & Kemmis, 2005). Teachers can revise their teaching material and revisit the way that students accept the lesson through video or audio recording every time. Finally, in promising future, pedagogical tact can be utilized in teacher education in terms of dialogue and conversation in CLIL setting class in interdisciplinary subjects. As Meyer (2010) mentioned that *teacher and students' talk view as sustainable in the CLIL classroom*. It implies that the importance of communication and pedagogy diversity in CLIL contexts. With the help of teachers' developed pedagogical tact, pre-service teachers can do more practice in class with their supervisors.

For further research, I would like to suggest cooperative teaching in diverse cultural context in order to have more intercultural interactions in three consequential periods of reflection and more information from students' dialogues and unfinished conversations in teachers' multicultural competence (Lanas, 2014: 175). For example, teachers can engage in collaborative practices to create cultures of enquiry in home economics or other subjects and ask 'how to fit / into the research in a wider social context?' (McNiff & Whitehead, 2009). In addition, there are more dimensions of pedagogical tact or competences (Morton, 2012; Target, 2010) for teachers to explore and achieve the goal of becoming all teachers become CLIL teacher (Wolff, 2012). Moreover, applying

other approaches (e.g. discursive pragmatics) to investigate different perspectives of pedagogical tact and 4Cs is another way (Llinares, 2015: 63) and these three developed pedagogical tact might be possible to be applied in special needs in CLIL (Roiha, 2014) regardless the subjects. In terms of questionnaire designing, as study shown that bilingual brain needs less effort (Van de Craen et al., 2007), I would like to suggest that questionnaire should include Finnish and English versions for students to understand freely. What is more, the way to evaluate the whole lesson (Llinares, 2015:67-68; Meyer, 2010) can be changed into more creative styles. For group evaluation, teachers can test their understanding by allowing students to draw the mind map of today's lesson and illustrate their feelings on same paper. For individual evaluation, teachers can observe students' learning and working process and let them write down their working process and also reflections.

For me, the three developing pedagogical tact will continue to develop in my following CLIL classes based on 4Cs when I go back to teach in Taiwan and sincerely hope one day these tact can be fully well-developed in my classes and I would like to seek for more possibilities in implementation its spirits. For CLIL teachers and researchers concerned CLIL education, persistence in developing refined CLIL lessons and resilience in challenges and obstacles every time has given courage and renewal of CLIL.



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## APPENDICES

## Appendix 1 Lesson Plan

Cycle 1	Topic	Taiwanese Green Onion Pancakes		
	Level	8th & 9th graders	Time	90 mins
Aims				
<ol style="list-style-type: none"> <li>1. To make pupils understand some information about Taiwan.</li> <li>2. To let pupils know the origin of agricultural society in Taiwan and green on-ion pancakes.</li> <li>3. To have pupils make their own pancakes and would like to share what they have learned to his /her family or friends.</li> </ol>				
Pupils' Previous Knowledge				
<ol style="list-style-type: none"> <li>1. Know the names of tools in kitchen.</li> <li>2. Have enough experience working in pairs or individual.</li> </ol>				
Teaching domains (Bloom's taxonomy)				
Cognitive domain		Psychomotor domain		Affective domain
<ol style="list-style-type: none"> <li>1. Provide the basic information of Taiwan to pupils</li> <li>2. Listen to and organize the procedure of making pancakes</li> <li>3. Know how much ingredient to use.</li> </ol>		<ol style="list-style-type: none"> <li>1. Know how to make a Taiwanese pancake</li> <li>2. Learn how to work and help each other while making their food.</li> <li>3. Be able to measure the ingredient</li> <li>4. Learn how to chop the green onion.</li> <li>5. Know how to make dough</li> <li>6. Be able to spread the dough evenly with rolling pin.</li> <li>7. Can fry the pancake well.</li> </ol>		<ol style="list-style-type: none"> <li>1. Be willing to learn different cultures</li> <li>2. Be open-minded to share personal experience to others</li> <li>3. Be willing to help and share the workload with team members when they are in need</li> </ol>
Assessment				
<ol style="list-style-type: none"> <li>1. Use the questionnaire to check what extent is the pupil has been achieved (self-assessment).</li> </ol>				
Learning Outcomes				

1. Pupils can understand Taiwan.
2. Pupils know the agricultural society and the origin of green onion pancakes.
3. Pupils can make green onion pancakes.
4. Pupils would like to share what they have learned to his/her family or friends.

Cycle2 Topic	Taiwanese Green Onion Pancakes			
Level	7th graders (7K)	Time	90 mins	
Aims				
<ol style="list-style-type: none"> <li>1. To make pupils have basic ideas of Taiwan.</li> <li>2. To let pupils know the origin of green onion pancakes.</li> <li>3. To lead pupils to make green onion pancakes.</li> <li>4. To have pupils make their own pancakes and would like to share what they have learned to his /her family or friends.</li> </ol>				
Pupils' Previous Knowledge				
<ol style="list-style-type: none"> <li>1. Know the names of tools in kitchen.</li> <li>2. Have made Finnish pancake already.</li> <li>3. Have basic knowledge about the relationship yeast and flour.</li> <li>4. Have enough experience making their own food (over 10 times).</li> </ol>				
Teaching domains (combination of Coyle's and Bloom's taxonomy) <i>What I plan to do to pupils and what I expect to pupils to achieve</i>				
Cognitive domain	Content /Culture domain	Psychomotor domain	Communication domain	Affective domain
<ul style="list-style-type: none"> <li>• Provide the basic information of Taiwan to pupils</li> <li>• Listen to and organize the procedure of making pancakes</li> <li>• Know how much ingredient to use.</li> </ul>	<ul style="list-style-type: none"> <li>• Introduce the topic</li> <li>• Where is Taiwan</li> <li>• The origin of green onion pancake</li> <li>• Become aware of the different pancakes between two cultures</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to make a Taiwanese pancake</li> <li>• Learn how to work and help each other while making their food.</li> <li>• Be able to measure the ingredient</li> <li>• Learn how to chop the green onion.</li> <li>• Know</li> </ul>	<ul style="list-style-type: none"> <li>• Language <i>of</i> learning: <ul style="list-style-type: none"> <li>○ Key vocabulary such as add, put, knead, pour, mix...etc.</li> <li>○ Numbers of measurement</li> <li>○ Recite the whole instruction in class</li> </ul> </li> <li>• Language <i>for</i> learning: <ul style="list-style-type: none"> <li>○ Learn how to share personal experience to others</li> <li>○ How to ask question: What does it mean? or Do you mean?</li> </ul> </li> <li>• Language <i>through</i> learning: <ul style="list-style-type: none"> <li>○ Listen to teacher and peers' instruction or</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Be willing to learn different cultures</li> <li>• Be open-minded to share personal experience to others</li> <li>• Be willing to help and share the work-</li> </ul>

		<p>how to make dough</p> <ul style="list-style-type: none"> <li>· Be able to spread the dough evenly with rolling pin.</li> <li>· Can fry the pancake well.</li> </ul>	<p>need.</p> <ul style="list-style-type: none"> <li>○ Make sure of peer's need.</li> </ul>	<p>load with team members when they are in need</p>
Assessment				
<ul style="list-style-type: none"> <li>· Use the questionnaire to check what extent is the pupil has been achieved. (Self-assessment)</li> <li>· The teacher checks their understanding during the process and makes sure that they know how to make green onion pancakes on the last second slide in class. (Teacher-assessment)</li> </ul>				
Learning Outcomes				
<ul style="list-style-type: none"> <li>· Pupils have basic ideas of Taiwan.</li> <li>· Pupils know the origin of green onion pancakes.</li> <li>· Pupils can make green onion pancakes.</li> <li>· Pupils would like to share what they have learned to his /her family or friends.</li> </ul>				



## Appendix 2 Instruction Sheet

Fantastic Taiwanese Food---Green Onion Pancake Teacher: Hsu, Pei-Fen

## Ingredients:

Flour	200g
Egg	1
Salt	½ teaspoon
Oil	½ teaspoon
Black pepper	some
Boiling Water	100g
Green Onion	20 g

## Tools:

Frying Pan	1
Turning Shovel	1
Knife (Chopper)	1
Chopping Board	1
Plate	1
Mixing Bowl	1
Rolling Pin	1

## Steps:

1. Chop green onion into small pieces. (Pic. 1)
2. Place flour and salt in a bowl dig a hole in the middle. (Pic.2)
3. Tip in all the boiling water and stir with wooden folk until it's not so hot.
4. If the dough is still sticky, add some oil on your hand until it can be separated from your fingers.
5. Divide the dough into two or three small portions. (Pic. 3)
6. Take one of the dough and use the rolling pin to spread them evenly.
7. Put the green onion pieces and a pinch of salt on the flat dough.
8. Scrolling the dough and make it snail-shaped. (Pic 4)
9. Rolling the green onion dough again make sure it is evenly flat.
10. Turn on the stove to power 6 first and put oil in the frying pan.
11. When the oil is heated, turn to power 2 and put the first dough in the pot.
12. Fry the dough until it turns brown then turn the other side to fry.
13. Add black pepper and eggs on the top of the pancake will be good to eat~



Pic. 1



Pic 2



Pic 3



Pic 4

## Appendix 3 Questionnaire and Feedback Box

**Cycle 1**

## Survey Questions

(Circle it)

This survey questionnaire will be divided into three parts:

Disagree  $\rightarrow$  Agree

## Cognitive Part

- I understand the topic today. 1 2 3 4 5
- I understand what the teacher said and the instruction on the board. 1 2 3 4 5
- I remember the steps after class. 1 2 3 4 5
- I can make my own green onion pancake at home. 1 2 3 4 5

## Affective Part

- I love this dish. 1 2 3 4 5
- I would like to share what I have learned in the class. 1 2 3 4 5
- I would like to cook at home and share with my family. 1 2 3 4 5
- I love to help my teammate when s/he is in need. 1 2 3 4 5

## Kinesthetic Part

- I have learned how to chop the green onion. 1 2 3 4 5
- I have learned how to make dough successfully. 1 2 3 4 5
- I can spread the dough evenly with rolling pin. 1 2 3 4 5
- I can fry the pancake well. 1 2 3 4 5
- I can help my teammate when s/he needs help. 1 2 3 4 5

Nyt: (Write or Draw to describe your mood!)

## Cycle 2

## Taiwanese Green Onion Pancake Survey Questions

This questionnaire will be divided into seven parts.

(Circle it! 5=hyvää) 😊

## 1. Cognitive

- I can understand the topic today. 1 2 3 4 5
- I can understand what the teacher said and the instruction on the slide. 1 2 3 4 5
- I can remember the steps now. 1 2 3 4 5

## 2. Content/Culture

- I know where Taiwan is and have basic ideas about it. 1 2 3 4 5
- I understand the origin of green onion pancake in Taiwan. 1 2 3 4 5
- I have understood the pancakes from Taiwan are different from Finland. 1 2 3 4 5

## 3. Psychomotor

- I can measure how much I use for the ingredient. 1 2 3 4 5
- I have learned how to chop the green onion. 1 2 3 4 5
- I have learned how to make dough successfully. 1 2 3 4 5
- I can spread the dough evenly with rolling pin. 1 2 3 4 5
- I can fry the pancake well. 1 2 3 4 5
- I can help my teammate when s/he needs help. 1 2 3 4 5

## 4. Communication

- I can use the key words such as add, put, mix, and roll while cooking. 1 2 3 4 5
- I can use my words to share my experience. 1 2 3 4 5
- I can use my words to ask questions when I have questions. 1 2 3 4 5
- I can listen to others' need and understand what they need. 1 2 3 4 5

## 5. Affective

- I love this dish. 1 2 3 4 5
- I would like to share what I have learned in the class. 1 2 3 4 5
- I would like to cook at home and share with my family or friend. 1 2 3 4 5
- I love to help my teammate when s/he is in need. 1 2 3 4 5

## 6. Background

- I am a boy girl. (Circle)
- My mother tongue is \_\_\_\_\_. (Finnish/English/Chinese....etc.)
- I have been studying English for \_\_\_\_\_years. (Numbers)

7. **Nyt:** (Write or Draw to describe your mood or how your pancake looks.)

## Appendix 4 Possible Pedagogical Tact in Cycle 1

## Cycle 1

Time	Teacher's Speech	Teacher's Action
0:15	Is everyone here? No one is missing.	Greetings roll call, and count the number of pupils.
0:41	You know that 'Where is Taiwan, right?'	Show the first slide and introduce the topic today.
0:49	Yeah, somewhere close to China.	Show the second slide with a world map.
0:57	Taiwan is an island. [...] The capital city is in the northern part of Taiwan, Taipei. [...] We have aboriginals in eastern part of Taiwan.	Point at the map shown on the slide and introduce some important key information about Taiwan.
1:17	Johanna asks: What language do you speak? I reply that we speak Madrian Chinese and Taiwanese.	Use the map of Taiwan to indicate the language used in Taiwan.
1:24	If you can speak a little Taiwanese, you will be much closer to local people. This is because most southern part of Taiwanese inhabitants they do speak Taiwanese only and most Taiwanese people	Explain the two language differences.
1:37	We also have about 14* aboriginals (actually is 16 now) in Taiwan and they speak their own languages.	Point at the map.
1:59	We have a quick overview about Taiwan.	Show the fact on the slide
2:01	How many people do you have in Finland?	Invite pupil to answer. One pupil replies: five million.
2:23	Do you know how big is your country?	Look at pupils but without any response.
2:45	My country was founded in 1912. How about you? You found in (which year)?	Point at the line on the slide and waiting for some pupils' response.
3:50	In this place, we call it '三星' (Samsung), not Samsung of your cell-phone brand.	Smile because the joke she makes fun of herself
4:05	Do it in pairs.	Use gestures to notice pupils later on they have to work together.
4:17	It is important that we use the boiled water.	Point at the word, 'boiled' on the slide again.
4:48	Start to explain the procedure.	Show the real photo and dissect

		the procedures.
5:08	Do not forget to dig a hole in the center of flour.	Use the photo on the slide to give a tip.
6:00	After making a dough, make it into 'snail' shape. Do you know the snail?	Draw the shape of snail in the air and make some pupil laugh.
6:17	Ask pupils if it is too fast?	Use eye contact and wait for pupils' reply.
6:23	Johanna: I can give you (the recipe) and you can start.	Johanna helps hand out the recipe.
7:40	Yeah, I think you can start.	Reply to pupil's question.
7:59	Johanna: I open the window so that we can get more light inside.	Johanna goes to the window and opens it.
8:07	Come here and take your green onion for your group.	Separate the packs of green onion for groups.
8:56	When I was young, I usually ate this as breakfast and I bought it from the vendor on the road.	Answer Johanna's question.
9:27	Johanna asks: 'Is it this kind of onion you usually use in your country?'	Reply to Johanna's question.
9:40	Actually how much they are going to use the green onion depends on personal's preferences.	Explain to Johanna why we use the green onion instead of the general onion.
10:30	Johanna: I try to measure how much is one deciliter.	Take the scale out and measure how much they should weight.
11:10	Tell Johanna the ration of flour and water is 2:1.	Reply to Johanna's question.
11:30	Discuss the measurement exchange.	Listen to Johanna's explanation.
15:49	Johanna asks: Did you go to other school to observe, too?	Answer Johanna's question. (I have been to observe English and CLIL classes in Norssi and Kortepohja school.)
18:03	We put salty stuff on the dough like soy sauce.	Discuss with Johanna how Chinese restaurants always do.
...	...	... (no teacher in the video)

## Appendix 5 CLIL Final Report in Cycle 1

All connections are meaningful when it ended up as an achievement (pilot study). I appreciated every correspondent from a lower secondary school, Viitanniemi school in Jyväskylä. The vice principal, Anne and home economics teacher, Johanna, always gave me the most support and recommendations when I need some suggestions and help. In addition, my supervisor, Josephine, in this course led me to explore more from inside to outside of CLIL. One time, when I observed at home economics as usual, I was asked by Johanna if I would like to teach my own country's food in her last class in this semester. I replied that I would think about it and reply her through email later. During this process, I remembered what my supervisor said in class that we will not understand what is CLIL until we really start to do it and involve ourselves as well. Therefore, I decided to take the challenge and prepare for my first time teaching in Finland.

When I first considered what kind of Taiwanese food I should prepare for the course and I began to think of some traditional food I ate when I was a child. Take drinks example, pearl black tea, flour tea, white gourd tea, grass jelly tea and so on, all are my favorite choices. However, these ingredients are not quite easy to get although they are really easy to cook; therefore, I turned to some ideas for snacks. For example, glutinous rice ball with red/mung bean soup, green onion pancakes, stinky tofu, egged shaped pancakes, and so on. I chose one of them, green onion pancakes; it was not only because the ingredient is extremely easy to be prepared but also it reminded me my childhood memory and I also had an experience learning on last winter restaurant day and reviewed several times at home. As a matter of fact, on the process of searching Taiwanese Traditional Food, I also found that Cable News Network (CNN), which had been selecting the top 40 Taiwanese Traditional Food (<http://chloeyachun.blogspot.fi/2013/03/cnn.html>). It is amazing that it concludes all Taiwanese Food of my best favorite and it is from foreigners' perspectives. Therefore, I had a strong commitment to advertise my home country's food and also apply my perspective of CLIL in much deeper aspect. But how to install one part of 4Cs, culture, into course for my demonstration is another problem to be solved in this study. It was a coincidence when I was considering this question; Johanna in class presented one of students' reports of background knowledge of food in Italy before she introduced two Italian dishes in her lesson. That was really an inspiration for me to add more information to my presentation. Therefore, before my performance to present, there were about seven days for me to prepare.

First of all, I had chosen green onion pancake because I would like to introduce that in early agricultural society, it was based on almost household farming. Due to onion farmers in the countryside were as readily available crops, farmers in addition to three meals a day in the field where farming was more than the rest of time was eating pancakes made by my dear wife as a snack. Now, Taiwan's most famous pancakes are



"Samsung (三星) pancakes". Secondly, I briefly provided some basic information about my home country such as geography and political status. I still remembered that at this moment, I was asked what languages we speak. I replied there are two different languages we usually speak in Taiwan now, Mandarin Chinese and Taiwanese; however, our official language is only Mandarin Chinese. I also told them that if you can speak a little Taiwanese, you will be much closer to local people. This is because most southern part of Taiwanese inhabitants they do speak Taiwanese only and most Taiwanese people, just like Finnish people, I think, if foreigners can speak their own language, it will become more intimate with each other. Third, I had to make some photos to help my students understand some difficult steps, which may not be seen in western cooking methods. Therefore, while I practiced in advance at home, I considered which part might need for instruction more and which movement required more techniques.

On the presentation day, when I got to the cozy classroom again, Johanna and students had already got ready and spoke something in Finnish. Then I settled down the camera to video-taking myself while the demonstration. My opening and the whole teaching process was according to the slide I made and modify with Johanna about several days before presentation. It really helped me a lot because when I was too nervous standing in front of people or interrupted by questions, I could immediately go back to the topic or picture. Actually, the instruction of teaching steps cost only 15 minutes and I could feel that students were eager to do it by themselves. There was also a pedagogical problem I would like to mention here, students used to getting the Finnish or English instruction before teacher gave some vital instruction. Therefore, students always did not pay much attention to the teacher. However, this time, Johanna intended to distribute the instruction after my explanation of how to make green onion pancakes. It really let students get more concentration on my slide. After that, I divided them into six groups of two students.

Then, the real problem I had to tackle with started when students tried to learn how to make it through pair-working. For example, the first problem is the measurement. In the past, Johanna always used to measuring ingredients with deciliter (dl) instead of gram (g). So, students were asking how many cups of flour they should use this time. After consulting with Johanna, she took out the portion scale and let student go to the front desk to weigh the flour they needed. From this point, I found out that I was not familiar with the measure scale they usually used and I should be more sensitive to the situation when I introduced the ingredients to make green onion pancake. Secondly, the problem arose when students worked in pairs, they spoke in Finnish so that I could not understand what they were talking about and I was also wondering if I should ask them what they were thinking at the moment, what was their next step or any questions until now. Nevertheless, I did not ask because I observed some students were too shy to speak in English when I had observed in class before. Therefore, this situation also made me consider why I would like to cooperate with Finnish teacher, to get more information from students' dialogues and also to provide more English input to students through learning tasks at the same time. The third problem I faced during the demonstration was I did not know how to be a qualified home economic teacher. What is the criteria for being a home economic teacher? Therefore, I felt quite confused when

demonstrating and instructing students. That was also a reason that I needed Johanna and also did the demonstration for myself to understand how to apply pedagogical tact in home economics CLIL class.

Even though I had problems and questions sometimes, I still finished leading them to make successful green onion pancakes with Johanna. During the process, I went into each group to observe and help as much as possible. I also shared my childhood memory with green onion pancakes when they were enjoying eating their pancakes wrapped with paper instead of knives and forks. Moreover, I had video taking myself (Watch on Google drive sharing document) and parts of teaching and learning situations, photos in each steps and the process of students' practice, students' survey question feedback. Those were precious and would help me in the following research.

## Appendix 6 Slides

## Cycle 1



**Taiwan of the World**

A Quick Overview  
-Geography & Political

- 23 million people
- 36,000 sq. km (13,900 sq. miles)
- main island of Taiwan, the archipelagoes of Penghu (the Pescadores), Kinmen (Quemoy), and Matsu, and a number of other islands.
- 15 indigenous group officially recognized
- Official language: Mandarin Chinese
- Found in 1912. (**Democratic Republic**)

Can You Find Us?



**The Origin of Pancake in Taiwan**

Early agricultural society was based on almost household farming. Due to onion farmers in the countryside were as readily available crops, farmers in addition to three meals a day in the field where farming was more than the rest of time was eating pancakes made by my dear wife as a snack, and now Taiwan's most famous pancakes are "Samsung(三星) pancakes".

**Do it yourself!**

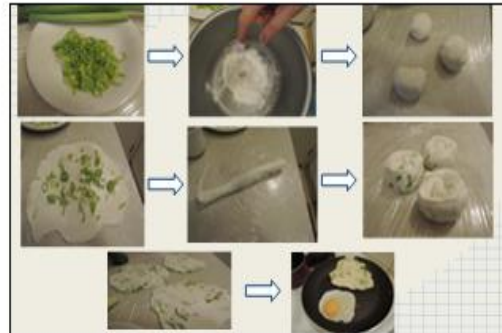
Ingredients:		Tools:	
Flour	200g	Frying Pan	1
Egg	1	Turning Shovel	1
Salt	$\frac{1}{2}$ teaspoon	Knife (Chopper)	1
Oil	$\frac{1}{2}$ teaspoon	Chopping Board	1
Black pepper	some	Plate	1
Boiling Water	100g	Mixing Bowl	1
Green Onion	20 g	Rolling Pin	1

**Steps**

1. Chop green onion into small pieces.
2. Place flour and salt in a bowl.
3. Tip in all the boiling water and stir with wooden folk until it's not so hot.
4. If the dough is still sticky, add some oil on your hand until it can be separated from your fingers.
5. Divide the dough into two or three small portions.
6. Take one of the dough and use the rolling pin to spread them evenly.

### Steps

7. Put the green onion pieces and a pinch of salt on the flat dough.
8. Scrolling the dough and make it like a pie.
9. Rolling the green onion dough again make sure it is evenly flat.
10. Turn on the stove to power 6 first and put oil in the frying pan.
11. When the oil is heated, turn to power 2 and put the first dough in the pot.
12. Fry the dough until it turns brown then turn the other side to fry.
13. Add eggs will be good to eat~




## Cycle 2

Republic of China (R.O.C)

# Taiwan

A Brief Introduction



Hsu, Pei-Fen September 28th  
Viitaneimi School Home Economics 7K

## The Origin of Pancake in Taiwan

Early agricultural society was based on almost household farming. Because green onion farmers in the countryside were as readily available crops, farmers in addition to three meals a day in the field had time eating pancakes made by their dear wives as a snack, and now Taiwan's most famous pancakes are "Samsung(三星) pancakes". only experienced

### Taiwan in the World

East Asia An overview

23 million people on 36,000 km<sup>2</sup>

Mandarin


Traditional Chinese (e.g 台灣)

Freedom of religion

16 aborigines

1911 founded (104 years old)

Taipei (capital city)



## Do it yourself!

Ingredients:		Tools:	
Green Onion	some	Knife (Chopper)	1
Flour	$\frac{1}{2}$ dl	Chopping Board	1
Boiling Water	$\frac{1}{2}$ dl	Mixing Bowl	1
Salt	$\frac{1}{2}$ teaspoon	Rolling Pin	1
Oil	$\frac{1}{2}$ teaspoon	Frying Pan	1
Egg	$\frac{1}{2}$	Turning Shovel	1
Black pepper	some	Peper bag	1

(of Pupils' Finnish Pancake experience)

## Taiwanese Green Onion Pancake

You'll never forget it if you just try ONCE!

Crispy

Hot

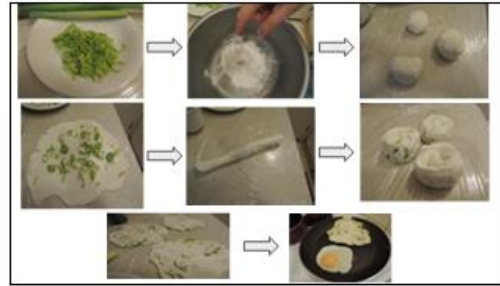
Fresh



## Steps

1. Chop green onion into small pieces.
2. Place flour and salt in a bowl and make a hole.
3. Pour all the boiling water and stir with wooden fork until it's not so hot.
4. If the dough is still sticky, add some oil on your hand until it can be separated from your fingers.
5. Take the dough and use the rolling pin to spread them evenly. [\(pic 1\)](#)
6. Put the green onion pieces and a pinch of salt on the flat dough. [\(pic 2\)](#)





#### Steps

7. Scroll the dough and make them like shell shape. (pic 3)
8. Roll the green onion dough again make sure it is evenly flat. (pic 4)
9. Turn on the stove to power 6 first and put oil in the frying pan.
10. When the oil is heated, turn to power 2 and put the first dough in the pot.
11. Fry the pancake until it turns brown then turn the other side to fry.
12. Adding eggs will be good to eat~



#### References

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2. <http://www.worldatlas.com/webimage/countrys/asia/taiwan/twmaps.htm>
3. <http://eng.taiwan.net.tw/m1.aspx?sNo=0012061>
4. Thanks for Johanna's and Yi-Tung Cheng's photos, Wu Han-Yu's recipe and Ming-Yu Hsieh's help on Restaurant Day during 2014-2015.

## Appendix 7 Video in Cycle 2

<https://www.youtube.com/watch?v=FYpyquAvYLM&feature=youtu.be&list=PL6OcG7Lj1RONKOVFEMbH159QpTsnYgYV3>



## Appendix 8 Pedagogical Moments in Cycle 2

Time	Teacher's speech	Teacher's action	Johanna's Action/response	Pupils' Action/response	Others (Teachers' feelings)
(Part I)0:25	Later on if you have any questions, please feel free to ask no matter what kind of language you use.	Be willing to invite pupils to involve	NA	Okay!	NA
0:41	Greet pupils 'Good afternoon, every one. How are you today?'	Smiling to ask pupils how is their day before class	NA	Answer 'Good or fine. One by one.'	NA
0:46	NA	Look at the environment	Turn off the light	NA	NA
1:03	Ask pupils if they have already heard of Taiwan and ask 'What is your first impression when talking about Taiwan?'	Look at pupils and wait for a moment	NA	Some pupils have known or heard of Taiwan. They replied 'In Asia, Chinese food'	NA
1:30	Cast a question to (the teacher) herself and also pupils. 'Are we Chinese?'	Look forward to seeing pupils' response.	NA	One of pupils asked 'Are you?' and then he said 'no' or 'Taiwanese'	NA
2:12	We are Republic of China.	Tell pupils the other name of Taiwan.	NA	One pupil asked 'What does it mean?'	NA
2:13	We have different constitute of nationality. Different presidents.	Replied pupils' question and then gave examples for pupils.	NA	NA	NA
2:50	The language we use is the same but the intonation is a little bit different. For the spoken and written part are totally different.	Explain to Johanna and pupils. (台灣 vs. 台湾)	Ask the difference of the language Taiwan (Mandarin) and	NA	NA



			Chinese.		
3:15	Taiwan in the world. Can you figure out where it is?	Invite pupils to find out where Taiwan is on the world map.	NA	One pupil answers no and the other says near China. One pupil even said it is very small on the map.	NA
3:40	Yeah, it is very small. But how small it is?	After hearing one pupil says that (Taiwan) is very small. Induce pupils to know more about Taiwan.	NA	NA	NA
4:57	Do you know 'How old is your country, (Finland)?'	Go to near pupils seats to hear their answer.	NA	One pupil answered 75 years while the other replied over 100 years.	NA
6:00	Do you still remember last time you made Finnish pancakes? What is the character of it?	Ask pupils questions.	NA	One pupil replied it is square. The other said it is sweet.	NA
6:43	Because of the sugar inside*.	After one pupil answers 'sweet', the teacher continues to explain.	Correct both pupil's and the teacher's response. 'There is no sugar inside the pancake but it is the jam has sugar.	NA	NA
7:36	The origin of Taiwan.	Say the sentences.	NA	Mimic the word, 'origin' and try to say 'the orange of Taiwan'.	NA

8:21	Samsung (三星) is a place. The origin of pancake. It is not your cell-phone, Samsung.	Point at the slides and make a joke of the brand Samsung.	NA	One of the pupil say the word Samsung again.	NA
12:07	Do you notice something inside the video (we watched)?	Ask pupil a question after watching a clip about Taiwan.	NA	NA	NA
12:53	Have you ever seen the green onion in supermarket?	Show the green onion to pupil.	NA	NA	NA
14:00	Do you still remember how to chop the food?	Take up the green onion and the knife to help pupils recall the skill of chopping food.	NA	Yeah, some pupils replied. One pupil showed by using the gesture to the teacher.	NA
14:20	What is the second step?	Invite pupils to pay attention to this step.	NA	One pupil raises his hand and answered 'Place flour and salt in a bowl and make a hole.'	NA
(Part II)2:09	After the dough is flat, you just scroll them and try to make a shell shape.	Use the napkin to demonstrate how to make a shell shape to pupils.	NA	Pupil replied by nodding their heads.	NA
3:37	Let's review the steps.	Using the photos on the slides.	NA	Repeat and say the steps with the teacher.	NA
5:03	The egg is for more taste.	Point at the slide.	NA	Want to know more about what is egg for.	NA
5:24	Today is individual work, but....for some ingredients, you can share together.	Show the slide, 'Do it yourself' to pupil.	Here is the boiling water already (for whole class). You can come and take.	Few pupils reply that they understand.	NA

8:15	Reply one pupil's question.	Look at the pupil and explain to him with green onion.	NA	One pupil asks 'Do we share the green onion?'	NA
9:38	This (The green onion) is for you.	Give the rest chopped onion to the pupil who always does his job slowly.	NA	Receive the onion.	NA
11:12	Ask pupils one by one if they have any questions.	Walk into each group and see their situation.	NA	Some asked 'What is the next step after chopping the green onion?'	NA
12:58	Tell one pupil that the next step is to add some salt.	Speak the Finnish word 'Suola'.	NA	Look at the English instruction for a while.	NA
13:53	Don't take (salt) too much a day.	Reply to one pupil's question.	NA	Say that salt is good (for me).	NA
14:39	I would like to have them remember the steps as much as possible in class.	Reply to Johanna's response.	I make more recipes for them because they can take it home.	NA	NA
14:57	Yes, just do it.	Reply one pupil's question with Johanna.	Reply pupil's question.	Ask question: 'Pour it (hot water) in the whole?'	NA
15:17	If the water is not too hot for you, you can use your hand to take out the dough.	Answer pupil's question.	So, say it again. (Try to invite me to explain again.)	Come to Johanna's side and ask for help and replies in Finnish.	NA
15:34	If the dough is too sticky for you, add some oil inside and try to use your hand to take it out from the bowl.	Reply to pupil's question.	Maybe a little bit flour.	Ask both Johanna and I the situation of the dough.	NA
21:10	I told her to spring	Reply her ques-	NA	Ask what is	NA

	some green onion and salt.	tion.		the next step in Finnish.	
22:35	It is a little bit sticky.	Try to save her pancake on the table.	Help other pupils on other side.	Pay attention and look carefully.	NA
24:20	I told one pupil that he should make the most use of the dough by cleaning all the flour in the bowl with spatula.	Help him take all of the dough from the bowl.	NA	Continue his job.	NA
25:20	We usually make the green onion pancake in round shape.	Tell Johanna the fact of green onion.	Johanna suggested pupil make green onion pancake in rectangle* shape.	Listen to teachers' instruction.	NA
26:19	Tell the pupil that it is good to put all of green onion on the top of dough. As long as you can scroll it, it is fine.	See the situation with pupils.	Use Finnish to instruct pupils the next step.	Pupil saw a boy spreading all the green onion and laughed.	For the teacher, the language barriers may not be the most influential part when I interacted with pupils.
30:30	I told him he should use his hand to knead the dough.	Observe one pupil seems does not like to use his hand to work.	NA	Oh, I am not using my hands again. Perfect idea...I am going to hide everything in the hole...	NA
31:00	Yes, and you should try to spread the shell shape evenly and it is very good dough.	Notice a pupil is standstill for a while and answer his question when I turned back to	NA	So I do this?	NA

		look at him.			
31:26	Don't eat! 'Yeah, I think the dough is quite good but still needs some flour.'	Tell gently to a pupil he should not eat the raw dough and smile looking at him, too. Add more flour in the pupil's bowl.	NA	The pupil smiles. 'Is it good enough?', 'I already used a bunch of flour.'	NA
31:56	What is the next step? 'Okay, now you can spread with the rolling pin.' 'You learn it.'	Ask the pupil questions. Look at the instruction carefully but continue to help pupil's dough.	NA	The pupils says 'Take out one of the dough, what does that mean?' Then add more flour on the table.	NA
34:18	Yeah, put the oil in the pan.	Answer one pupil's question.	NA	One pupil asks 'Do I put the oil in the pan?'	NA
34:36	You should press the green onion.	Help one pupil press the green onion pancake.	Okay, you have to press it.	Press the green onion pancake as I tell him.	NA
36:07	I think you can do it again. Take the rolling pin. I think it is difficult to make it fail.	Come toward the pupil who says he is going to have a fail pancake. Re-make the pancake for the pupil.	NA	Can I do that like this, it is kind of fail.	NA
37:38	Yes. Maybe (you need) more time. You should wait.	Go to another group right away and check the pupils' situation carefully.	NA	Pupils do not say anything but look a little anxious.	The assistance from Germany tells me that I need to go to another group to check the

					situation.
38:40	The thinner, the better because later on you could fry them quickly.	Use the rolling pin to help pupils make it thinner.	NA	Ask question: How thin should it be?	NA
38:59	Use the paper bag and put the pancake into the bag.	Take a spoon to give some black pepper on it.	NA	Ask the teacher, 'What should I do now?'	NA
42: 53	NA	Look around the whole classroom.	Everyone starts to clean the table.	Be ready to do the cleaning.	NA
45:02	I think they have already known how to make good dough.	Talk with Johanna.	Yes, both (of them) are very handy.	Do the final step, fry the pancake and do the cleaning at the same time.	NA
48:40	Before you put in the pan, spread it evenly first. 'Wider and then put it in the pan.'	Help the pupil who is still on the previous process of spreading the pancake.	NA	Is it big enough? Is it bigger enough?	NA
51:41	NA	Take the oil back and walk away to see other pupil's situations.	NA	Continue press and cook his pancake.	NA
53:08	I think so but you can try if it is stronger than your black pepper. No? Not (spicy?) Haha...	Reply to Johanna's answer, invite her to try the black pepper and react after she tried the black pepper.	Ask the question 'Is it stronger than our black pepper?' and try to taste the black pepper from Taiwan after the teacher's suggestion. 'Now I feel it.'	NA	NA
54:21	NA	Look at the pu-	Johanna	NA	NA

		pil Johanna is talking to and also care about other pupils.	tells the pupil to use warm water to clean the table.		
1:02:09	'Pupil's name. Go back to your table.'	Ask one pupil to go back to his table and continue his job.	NA	Go back to his place.	NA
1:09:38	It is spicy. Don't put too much.	Tell pupils who are going to add black pepper on their pancakes.	Just (put) a little bit because it is spicy.	Add some black pepper and say that I am from Asia.	NA
1:11:30	If you have time, you can draw a picture describe your mood after eating a pancake. 'What is your feeling about it?'	Ask pupils to write or draw down their feelings right away.	NA	Sit in a group and eat their pancakes.	NA.
1:11:52	And if you need a recipe, you can raise your hand. 'You collect (recipe) for me, thank you.'	Ask pupils if they need the recipe. Say 'Thank you' to one of the pupils because he collects all the recipe for the teacher while cleaning.	NA	I want one. I also want one.	NA.
1:18:39~ 1:19:30	Do you understand? 'Now you can help me (to translate into Finnish.)'	Walk toward to the group of pupils discussing the questions on the questionnaire and try to see if they need help or not.	Call a pupil's name and ask him to come to translate the questionnaire to other classmates.	Discuss together.	NA.

## Appendix 9 Consent Letter

### Consent form for parent/guardian

*Dear parents/guardian:*

This purpose of this letter is to invite your child to participate in my teaching practice in (Content and Language Integrated Learning) CLIL on September 28th. Participation in this class is voluntary. In the class, I am going to teach him/her a Taiwanese cuisine in foreign/ additional language (English) and will video myself and also your child during the class. At the same time, he/she are free to ask me questions in foreign/ additional language (English) as usual. He/She can also withdraw at any point without explanation and with no effect in any way. If he/she wants, he/she can request the destruction of any data that have been gathered from him/her without explanation and with no effect in any way.

All data from the research will be anonymous. They will be kept secure, confidential and not released to any third part: his/her name will not be connected to the research results or released to anyone outside the project, and will only be used in an anonymous form for my research and teaching purposes. If he/she are photographed or video recorded, it may be possible to recognise him/her from the recording.

Please read the sentences and X in the  as follows:

1. I have read the information letter about the research.
2. I agree for my child to take part in the research activities outlined.
3. I give consent to my child being photographed and video recorded.
4. I give my permission for the visual images, photos and videos, to be used for this research and teaching purposes in written publications (e.g. thesis).

If you are all agree about the above, please sign this form that means you have already understand the purpose of this teaching practice/research, as explained in this letter and accept the conditions for handling the data you provide.

In addition, there are no risks associated with this teaching practice/research. This teaching practice/research has been through the ethics review process at the Institute of Education, University of Jyväskylä, and it has been approved.

Pupil's name: \_\_\_\_\_



Parent/Guardian's signature: \_\_\_\_\_

Date: \_\_\_\_\_

Consent form for pupils (participant)

*Dear pupils:*

Please read and sign your name if you agree with the following sentences.

- I am happy to take part in this study.
- I have been told ALL about this study.
- I have asked ALL of the questions that I wanted to ask.
- ALL my questions have been answered clearly.
- I understand that it is OK to STOP at any time and there will be NOT any negative consequences.

Pupil's signature: \_\_\_\_\_

Date: \_\_\_\_\_