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MEDIATING LANGUAGE FLUENCY DEVELOPMENT: AN ACTION RESEARCH
STUDY IN A HIGH-SCHOOL AP CHINESE SECOND- OR FOREIGN-LANGUAGE
TASK-BASED LANGUAGE TEACHING CLASSROOM

A Dissertation Presented
to
The Faculty of the School of Education
Learning and Instruction Department

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
Jing Liang
San Francisco
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Dissertation Abstract

Mediating Language Fluency Development: An Action Research Study in a High-school AP Chinese Second- or Foreign-language Task-Based Language Teaching Classroom

Fluency development is critical in language learning; however, the teacher's role as a mediator in a learner's fluency development rarely has been explored in Task-Based Language Teaching (TBLT) classrooms. This study investigated how a teacher, as the human mediator who can be certain that stimuli in the learning environment will be available and benefit the learners, implemented mediation under the guidance of Mediated Learning Experience (MLE) theory in aiding learners' speaking cognitive and utterance fluency development in one AP Chinese high-school TBLT classroom in the Bay Area. MLE theory, developed by psychologist Reuven Feuerstein, provided a mediation framework for this study.

This study used action research and mixed methods. Its design followed the test-intervention-test procedure and collected data from 10 days of mediation interaction audio-recording transcripts, teacher's observation and reflection log, lesson plans, unit plans, MLE teacher self-rating checklists, and pre- and posttest speaking samples from 21 participants.

The study's results first suggest what types of mediation might influence fluency development after finding mediation of intentionality and mediation of feeling of competence were practiced most and much more frequently than other mediation types during the whole mediation period. Second, this study indicated that questioning could be used as a mediation technique across different types of mediations. Finally, the study highlighted two possible factors

that affect mediation implementation. One is if the mediator can modify lesson plans to meet mediation needs; the other is that the mediator's personality can affect their mediation strategy choices.

To investigate whether mediation is effective, this study measured three utterance fluency variables that correlate to cognitive fluency development: the number of silent pauses, the number of self-corrections, and mean syllable duration (MSD). The pre- and posttests data showed that both the learners' number of silent pauses and MSD statistically significantly decreased in the posttests, which suggests that meditation intervention improved learners' utterance and cognitive fluency development. Although the decrease in the number of self-corrections on the posttest was not statistically significant in this study, it does not invalidate the research findings because self-correction is a variable that may require a much longer time to change.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

<u>Jing Liang</u>	<u>10/25/2022</u>
Candidate	Date

Dissertation Committee

<u>Dr. Xornam Apedoe</u>	<u>10/25/2022</u>
Chairperson	

<u>Dr. Patricia Busk</u>	<u>10/25/2022</u>
--------------------------	-------------------

<u>Dr. Sedique Popal</u>	<u>10/25/2022</u>
--------------------------	-------------------

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CHAPTER I

STATEMENT OF THE PROBLEM

For learners of a foreign language, fluency is often the end goal. Yet, fluency is difficult to achieve (Tavakoli & Wright, 2020), which is especially true for English speakers who are learning Chinese because the two language families are very dissimilar. For Advanced Placement (AP) Chinese language learners, developing language fluency is urgent and critical because speaking proficiency is one of the language proficiency skills that will be assessed in the AP Chinese exam. Supporting AP Chinese language learners to develop fluency is a task that is challenging but necessary for Chinese language classroom teachers.

Fluency has been a less explored area in second-language teaching (Tavakoli & Hunter, 2018). Tavakoli and Hunter's (2018) research found that nearly half of the second-language teachers surveyed had limited or very little knowledge of teaching fluency to their students. Furthermore, fluency is a complex and confusing construct that is difficult to define (Foster, 2020; Nergis, 2021; Segalowitz, 2016; Tavakoli & Hunter, 2018; Wood, 2010) because it is multidisciplinary and involves many complex aspects like psychology, linguistics, and social dimensions (Segalowitz, 2010). In general, there is a broad sense of fluency and a narrow sense of fluency. The broad sense of fluency represents a learner's general oral-language proficiency; the narrow sense of fluency refers to the ease and automaticity of a learner's oral performance (Lennon, 1990; Tavakoli & Hunter, 2018). In a traditional teacher-centered classroom, the teaching method to develop learners' fluency is to transmit language knowledge and then organize students to do rote learning or drill practice. Constructivist teaching, however, addresses learners making meaning out of what they encounter (Miller-First & Ballard, 2017). The 1970s

saw the beginning of a transition in learning theory from behaviorism to cognitivism (Cooper, 1993). In classrooms, shifting from teacher-centered traditional classrooms to constructivist teaching was found in various disciplines including second- or foreign-language classrooms (Reagan, 1999).

Task-based Language Teaching (TBLT), a teaching approach derived from constructivist learning theory, has been practiced as an effective foreign-language learning approach to developing language fluency (Ahmadian & Mayo, 2018; Coombe & Shehadeh, 2012). The basis of TBLT is tasks. R. Ellis (2018) described a task in TBLT as having the following four characteristics: (a) it is a meaning-focused activity, (b) it is similar to a task people carry out in real life, (c) the language used to perform a task is negotiable, and (d) it is a communicative act in its own right. Studies in the TBLT field have explored many different variables that can affect learners' fluency development: types of tasks (Foster & Skehan, 1996; Robinson, 2011; Skehan, 1996), task conditions like having planning time or not (Foster & Skehan, 1996), task sequencing (Bygate, 2001; Lynch & Maclean, 2001), or specific instructional techniques (Van de Guchte et al., 2015). All these different aspects, however, share one thing in common: they are under teacher implementation. As the task implementer, what role do teachers need to adopt in the TBLT classroom to improve learners' fluency? Few studies have explored fluency development from the teacher's role in the TBLT classroom.

Teachers play an essential role in any constructivist learning environment. Although constructivist learning theory emphasizes helping students construct their knowledge during the learning process, placing students in a rich learning environment does not develop automatically their language fluency, which can be seen clearly with adult immigrants' experiences. They may

have been immersed in the host country for many years but still may not speak the host country's language fluently if they have not been taught the host language. Multiple researchers claimed that constructive learning is not efficient if it lacks guided instruction (Kirschner et al., 2006; Mayer, 2004). Guided instruction, also known as scaffolding (Fisher & Frey, 2010), is one kind of mediation. It means that a teacher's role in a constructivist learning classroom should be a mediator. Many people also describe a teacher's role in a constructivist classroom as a facilitator (Subagia, 2020). Some researchers view facilitation and mediation as alternative concepts (Greenberg, 2000), whereas others treat facilitation as a weak version of mediation (Selepe & Moll, 2016). This study will take the latter perspective, facilitation as a weak version of mediation, to avoid confusion between the two terms: facilitation and mediation. In this latter perspective, the teacher's role as a facilitator means the teacher will present the learner with an appropriate learning environment, learning situations, and learning tasks, leaving learners to explore and construct new knowledge. The teacher's role is more like the learner's learning process manager during the facilitating process (Selepe & Moll, 2016). Taking the teacher's role as a mediator means that the teacher's role is more than a manager (R. Ellis, 2009). The teacher will be involved more actively in learners' learning process through guiding, scaffolding, negotiating, regulating learning, or deliberately mediating specific culture, knowledge, skills, or values to learners (Selepe & Moll, 2016). Without mediation, studies found that many learners in free discovery constructivist classrooms do not acquire the concepts and procedures and do not know learning strategies (Kirschner et al., 2006; Mayer, 2004). Therefore, to support learners in constructing knowledge successfully in a constructivist classroom, a teacher must be a mediator

between students and their learning environments to help students search for and construct knowledge (Brooks & Brooks, 1999).

In the TBLT classroom, Bygate (2015) pointed out that because a task is not a mechanism, the teacher needs to mediate the learners to enter into the space created by tasks. Thus, the teacher must support and accompany learners during their learning process. The role of a teacher as a mediator, who mediates task performance in a TBLT classroom, however, has remained unexamined (Lynch & Maclean, 2001; Samuda, 2001). There are no known studies that have explored fluency development from the perspective of how the teacher as the mediator helps learners to develop their fluency in a TBLT classroom.

Mediation is both an old and new concept in education. It is an old concept because many teachers already have practiced mediation in their classrooms, although they might not be aware of it or named it as mediation (Flavian, 2019). The concept of mediation, however, is new because many people have not even heard about it. In addition, researchers are still exploring how to apply mediation in education (Haywood & Lids, 2007; Flavian, 2019), and the challenge is to know how much or what kind of mediation should be provided to increase positive learning outcomes (Mayer, 2004).

Psychologists like Jean Piaget (1896-1980), Lev Vygotsky (1896-1934), and Reuven Feuerstein (1921-2014) all had different understandings of mediation and its role in learning. In Jean Piaget's (Piaget & Cook, 1952) learning theory, children learn through direct experience from the environment. In his theory, the mediator's role is to provide a direct learning environment to learners while the child interacts with the environment to learn (Kozulin & Presseisen, 1995).

Vygotsky (1978) explored how society mediates children's cognitive development through symbolic tools (signs, linguistic, and mathematical systems). He also developed the concept of Zone of Proximal Development (ZPD), which refers to the distance between what a learner can do independently and what a learner can achieve with support. Although Vygotsky created the concept of ZPD, he did not have an opportunity to explore how human beings, as mediators, mediate learning to achieve the learning potential of ZPD. Scaffolding as a form of mediation, which explores human beings as mediators, derives from Vygotsky's idea of ZPD but was not created directly by Vygotsky himself (Maggioli, 2013).

R. Feuerstein's mediation theory modified Piaget's theory and extended to explore Vygotsky's mediation theory (Lidz, 1991; Kozulin, 2004; Presseisen & Kozulin, 1992). R. Feuerstein's mediation theory examines the role of the human mediator in children's cognitive development (R. Feuerstein et al., 2010). The role of the mediator in his theory expanded from choosing the proper stimulus to creating a learning environment for learners. It also involved planning the mediation and then performing and assessing the process. R. Feuerstein's mediation theory, however, has not been implemented widely in education practice because many educators do not know his theory (Cheng, 2011, 2012).

When practicing mediation in second- or foreign-language oral-acquisition classrooms, most researchers will use Piaget's (Piaget & Cook, 1952) or Vygotsky's (1978) mediation models (Abuzahra et al., 2016; Gözüm & Aktulun, 2021; Turuk, 2008). When they use R. Feuerstein's (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2012) model, they usually use it to combine with Vygotsky's mediation model (Li & Li, 2015; Poehner, 2007). Also, mediation research mainly focuses on studying speaking accuracy but not speaking fluency (Ebadi &

Asakereh, 2017; Poehner, 2008). Only a few studies explored fluency development in this field, like Levi (2012) and Safdari and Fathi (2020). Their research results, however, are conflicting. Levi (2012) claimed that mediation improved fluency development, but Safdari and Fathi (2020) found that mediation did not affect fluency development.

Fluency development is critical to learning in a language classroom, but the teacher's role as a mediator in a learner's fluency development rarely has been explored in TBLT classroom teaching. In addition, the few mediation studies have conflicting results about fluency development. Therefore, this action research study investigated how to implement mediation in the TBLT Chinese classroom to develop AP Chinese language learners' language fluency under the guidance of R. Feuerstein's mediation theory and investigated the effect of mediation on learners' fluency development.

Purpose of the Study

The purpose of this study was to investigate how to use the mediation model, built under the guidance of the Mediated Learning Experience (MLE) theory, to improve language fluency in a Task-Based Language Teaching (TBLT) second- or foreign-language classroom. Because very little prior research has assessed the mediation model in TBLT language classrooms, this study utilized action research to assess if the model is adequate. I conducted this action research in an AP Chinese foreign classroom in a public high school in the Bay Area. I was the researcher and the instructor who practiced being the mediator.

Action research is often conducted by practicing professionals to solve a problem or answer professional practice questions (Willis, 2014), involving developing and implementing an action to learn if it makes a difference in professional practice or studying a particular context or

setting to build knowledge that can lead to action in practice (Willis, 2014). Action research is used when the solution to a research problem is challenging to identify because a universally accepted solution does not exist (Willis, 2014). In the TBLT and mediation research in the second- or foreign-language research field, a general solution for practicing mediation to improve fluency development does not yet exist. Therefore, I utilized action research to explore how to perform mediation in an AP Chinese TBLT classroom to promote learners' fluency. The study used Kemmis and McTaggart's (1988) four-moment action research model, through the teacher-researcher's reflection, planning, action, and observation, to practice mediation for language fluency development under the guidance of R. Feuerstein's mediation theory.

Theoretical Framework

To practice mediation to improve a learner's language fluency, two key constructs must be examined: mediation and second-language fluency. There are many different mediation models and fluency models. R. Feuerstein's Mediated Learning Experience theory and Segalowitz's cognitive bases of language fluency model were used for this study.

R. Feuerstein's Mediated Learning Experience theory

Israeli cognitive psychologist Reuven Feuerstein (1921 – 2014) was Jean Piaget's student in the early 1950s. He created the Mediated Learning Experience (MLE) theory (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2012) that modified Piaget's (Piaget & Cook, 1952) cognitive development model and supplemented Lev Vygotsky's (1978) mediation theory.

In Jean Piaget's (Piaget & Cook, 1952) widely known learning model, learners learn through their direct experience with the stimulus because cognitive change is a transition from one developmental stage to the next one, and each stage is age-specific, determined by a child's

maturation and their direct interactions with the environment (Rubtsov, 2020). This learning model, however, has two missing pieces: (a) it is missing the sociocultural aspect of the learning perspective and (b) it ignores human mediators from children's learning process, so the learning process in his model is a direct interaction between the child and the environment (Kozulin & Presseisen, 1995). Vygotsky and Feuerstein later separately and independently explored these two areas and built different but connected mediation models.

Vygotsky explored sociocultural mediation in the learning processes. From Vygotsky's (1978) perspective, children do not explore their environment directly but through methods of action like using symbolic psychological tools (signs, linguistic and mathematical systems) that exist in a given culture (Kozulin & Presseisen, 1995). Learners develop their psychological function in their social and cultural environment. They are mediated by others who use psychological tools and mediated by others into using psychological tools so that human beings function as no more than carrying tools during the mediation process in Vygotsky's mediation model (Presseisen & Kozulin, 1992).

R. Feuerstein (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2012) investigated mediation by focusing on the human being as a mediator. In R. Feuerstein's model, humans act as a mediator between the environment and the child to ensure that stimuli in the learning environment will be available and benefit the learners. The role of the human mediator is the creation of cognitive prerequisites of learning for learners (Kozulin, 2004). R. Feuerstein (R. Feuerstein et al., 2010) pointed out the possibility that learners may not even be able to notice the stimuli in their learning environment because they are incapable of receiving the stimuli, cannot understand the stimuli, or because the stimuli do not appear at the right time or space for

learning. The human mediator, however, “creates in a person an approach, a form of reference, a desire to understand phenomena, a need to find order in them, to understand the order that is revealed” (R. Feuerstein et al., 2010, p.37). Through this mediation process, the learner will have a Mediated Learning Experience (MLE). Feuerstein thought that only providing a learner MLE will ensure that stimuli will be available and benefit the learner. Also, both the quantity and quality of MLE affect learning happening. The longer a person is experiencing MLE, the greater the possibility the learner will benefit from direct experience with stimuli (Todor, 2013).

Some researchers consider R. Feuerstein’s mediation theory as an extended exploration of Vygotsky’s mediation theory (Kozulin, 2004; Presseisen & Kozulin, 1992). Vygotsky developed the famous mediation concept of the Zone of Proximal Development (ZPD). ZPD refers to the distance between what a learner can do independently and what a learner can achieve with aid. Scaffolding as a form of mediation, which involves human beings as a mediator, derives from Vygotsky’s idea of ZPD but was not directly created by Vygotsky himself (Maggioli, 2013). Lidz’s (1991) study showed that R. Feuerstein’s MLE theory had incorporated the ZPD concept. Lidz (1991) compared scaffolding with one of the MLE mediation categories – mediation of competence – and pointed out the similarity between the two. Both “scaffolding” and “mediation of competence” address a mediator to use different ways to help learners meet challenges and be confident and competent to solve a problem. Therefore, R. Feuerstein extended Vygotsky’s mediation theory (Kozulin, 2004; Presseisen & Kozulin, 1992).

In R. Feuerstein’s (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2012) theory, not every kind of human mediation will provide learners mediated learning experience, only mediation that meets the 12 criteria that he identified can create an MLE (See Table 1 below). R.

Feuerstein (R. Feuerstein et al., 2010) identified two groups of MLE criteria. The first group includes three parameters that are most essential and fundamental, and their function is to modify the plasticity that characterizes human beings. The second group includes nine parameters that direct modifiability according to cultural and interpersonal differences.

Table 1

R. Feuerstein's Mediated Learning Experience Criteria

Group I: Essential and Fundamental	Group II: Situational or Phase-specific
MLE 1: Mediation of intentionality and reciprocity	MLE 4: Mediation of a feeling of competence
MLE 2: Mediation of meaning	MLE 5: Mediation of regulation and control of behavior
MLE 3: Mediation of transcendence	MLE 6: Mediation of sharing behavior
	MLE 7: Mediation of individuation and psychological differentiation
	MLE 8: Mediation of goal-seeking, goal-setting, planning, and goal-achieving
	MLE 9: Mediation of the search for challenge, novelty and complexity
	MLE 10: Mediation of the awareness of being a modifiable entity
	MLE 11: Mediation of optimistic alternative
	MLE 12: Mediation of a sense of belonging

Each of R. Feuerstein's 12 parameters of MLE criteria are explained below.

MLE 1: Mediation of intentionality and reciprocity

Intentionality refers to a mediator's attitude that should be purposeful and directed to a specific goal the mediator wants to accomplish (R. Feuerstein et al., 2010, 2012). It is the mediator's active attempt to influence the learner and to involve learners in learning (Lidz, 1991). Reciprocity refers to whether the learner can share the mediator's intention and transform

that intention into action (R. Feuerstein et al., 2010, 2012). Therefore, this type of mediation is employed to convey to the students that the mediator intends to help them improve (Hasson, 2018).

Learning interaction is shaped by mediated intentionality. A mediator will change intentionally the stimuli to make the stimuli more salient, powerful, imposing, understandable, and important to the learner. The mediator also will adjust the rate of stimuli flow or modify the mediation methods to meet the learners' needs and keep learners ready to learn (R. Feuerstein et al., 2010). For example, the mediator will intentionally use color, form, or content to attract learners' attention to make the learning object noticed by the learner. Or the mediator will change their tone of voice, frequency of word usage, or use body language to make the mediator's intention known by the learner. Or the mediator will choose intentionally the best time and way to present the learning object to the learner (R. Feuerstein et al., 2012). In a word, this mediation includes communication to learners about the purpose of the task and attempts to maintain learners' involvement in the task (Lidz, 1991).

MLE 2: Mediation of meaning

Mediation of meaning means mediating value for the existence of interactions (R. Feuerstein et al., 2010). It moves the content from a neutral position to a valuable position (Lidz, 1991). During this process, the mediator can respond to learners' questions by asking, "why is it important?" or "why must we learn it?" and so on, to create a motive for learners to accept and absorb the mediation and use it (R. Feuerstein et al., 2010). To mediate meaning, the mediator can first determine which meaning or value they want to emphasize, then embed the meaning or value in a task. Conveying meaning to learners will help them understand why they need to

know how to complete the task. Also, the mediator will develop learners' desire to seek meaning (R. Feuerstein et al., 2012).

MLE 3: Mediation of transcendence

Through the mediation of transcendence, learners will go toward the goal that goes beyond their direct and immediate needs, and they will connect what they are doing now to what they have done or what they will do in another time (R. Feuerstein et al., 2010, 2012). Mediating transcendence creates in learners a system of needs that are distant from what they need at this moment. This needs system will lead the learner's cognition to be modified to adapt to new situations (R. Feuerstein et al., 2010). For example, the mediator will help learners understand the meaning of the learner's present experience in terms of what they might experience in a different time, space, or context by telling the learner how fundamental their current learning is to their future learning or by comparing what learners' current new experience to an experience the learners are familiar with (R. Feuerstein et al., 2010).

MLE 4: Mediation of a feeling of competence

Mediation of a feeling of competence refers to mediating learners to believe that they are competent in learning. To help learners build a sense of competence, the mediator will help learners overcome difficulties, become familiar with new content, and challenge and encourage them to reach beyond their current functioning (R. Feuerstein et al., 2010).

During implementation, a mediator can manipulate the task to increase learners' probability of mastery, praise learners to boost their feeling of competence (Lidz, 1991), or provide mediation tools to help learners cope with tasks (R. Feuerstein et al., 2010). For example, suppose a learner has limitations in perception and attention, the mediator can use the

mediation techniques to direct the learner's attention and perception by saying something like, "Follow what I'm doing!" Or the mediator can identify what the learner observed by saying, "please name the shape, the size, and color," by comparing, "Find the object that is different from all the others," or have the learner describe what they see precisely, "How would you describe this to someone who has never seen it?" (R. Feuerstein et al., 2012). This mediation process will help learners overcome unclear perceptions or attentional issues.

MLE 5: Mediation of regulation and control of behavior

Under this mediation category, the mediator engages learners in regulating their behavior by deciding whether they are ready to do something. This mediation includes restraining or accelerating responses (R. Feuerstein et al., 2010). For the former, mediators can help learners develop self-regulation behavior like suspending response until they have checked out the situation they are exposed to. For the latter, mediators can encourage learners to react quickly and timely (R. Feuerstein et al., 2010). For example, to mediate impulsive behavior, the mediator can teach the learner to think about if they have the necessary tools, information, or adequate skills before deciding or starting their action (R. Feuerstein et al., 2015).

MLE 6: Mediation of sharing behavior

This mediation aims to mediate learners' readiness and ability to relate with their peers, like adjusting to one another, learning from each other, or supporting each other (R. Feuerstein et al., 2010). For example, teachers can model how to share with others by sharing their concerns, feelings, or experiences with their students. The teachers also can mediate sharing behavior through indirect ways like reading aloud a book to students. Through reading aloud, the teacher

shares the experience of the text and content the book contains with the students (R. Feuerstein et al., 2015).

MLE 7: Mediation of individualization and psychological differentiation

This type of mediation helps learners create a sense of being separate people who think and express themselves in their own unique ways (R. Feuerstein et al., 2010). Individual learners will be given opportunities to finish things and think and express things. Mediators make sure not to impose others' aspects of experience on the learners (R. Feuerstein et al., 2015).

MLE 8: Mediation of goal-seeking, goal-setting, planning, and goal-achieving

R. Feuerstein (R. Feuerstein et al., 2010) hypothesized that the presence of a goal is the beginning of one's thinking and action. Therefore, a mediator can use mediational strategies like enlarging learners' awareness of what is possible or attainable to develop learners' ability to set goals or invest in plans to achieve goals.

MLE 9: Mediation of the search for challenge, novelty, and complexity

This mediation mediates learners' ability to confront the challenges, adapt to the novel, and face the world's complexity (R. Feuerstein et al., 2010). Mediation strategies include encouraging curiosity and acceptance and encouraging courage to meet challenges (R. Feuerstein et al., 2010).

MLE 10: Mediation of the awareness of being a modifiable entity

This mediation mediates the notion that human beings possess a continuous identity that is modifiable (R. Feuerstein et al., 2010). It is employed to communicate to learners that they have improved compared with the starting point (Lidz, 1991). Mediators can use the mediation

strategy by pointing out that one has changed for the better due to taking specific actions or making particular efforts to achieve their goals (R. Feuerstein et al., 2010).

MLE 11: Mediation of optimistic alternative

An optimistic alternative will stimulate learners to realize their learning goals. Hence, a mediator mediates learners to search for an optimistic alternative or mediates the expectation for positive outcomes by encouragement like “it will be fun” or “it will taste good” (R. Feuerstein et al., 2010).

MLE 12: Mediation of a sense of belonging

A mediator can help learners develop a feeling of belonging or connecting to a community. A sense of belonging will affect one’s cognitive ability and psychological health (R. Feuerstein et al., 2010).

From the above 12 MLE categories, Todor (2013) concluded that the essence of MLE is helping to increase learners’ learning motivation and cognitive abilities. Brown (2002) pointed out that R. Feuerstein’s mediation theory is motivational psychology that looks into the motivation that the mediator encourages.

The function of most types of mediation in MLE is to motivate learners in their learning. A need can become a motive if directed at an object (Allen, 2010). Mediating intentionality motivates learning by engaging learners in the stimulus. Mediating meaning inspires learning by making learners’ learning experiences meaningful. Mediating transcendence connects learners to their own experiences or motivates learners to deal with increasingly complex situations. At the same time, while mediating learners’ engagement with stimuli, connecting to their experiences, or understanding why they are learning, meditation can have an effect on learners’ learning

attitude, interests, and linguistic self-confidence and help learners see the practical value of language learning. Mediating optimistic alternatives and a sense of competence also can encourage learning by helping learners build confidence. Learners' attitudes, cultural interests, linguistic self-confidence, and perceived practical value of language proficiency are components of second-language learning motivation (Dörnyei et al., 2006). Motivation is a factor that is associated with second-language learners' language fluency development (Segalowitz, 2010). Therefore, although MLE is not customized for second-language acquisition, it might be used to motivate learners to improve their fluency.

Another important implication of MLE theory is how it can work on modifying cognitive functions, which is also a difference between R. Feuerstein's and Piaget's theories. Piaget (Piaget & Cook, 1952) treated cognitive change as transitioning from one fixed developmental stage to the next. Each stage is age-specific and determined by the child's physical maturation. R. Feuerstein (R. Feuerstein et al., 2010) believed that cognitive change is possible through mediational interactions. His mediation theory suggests that genetic, organic, and social factors only represent a piece of cognitive development, whereas mediated learning experiences are the primary determinant of one's cognitive development. This view of mediation challenged Piaget's learning theory and expanded Vygotsky's mediation theory, which mainly focused on social and cultural factors' effect on cognitive development. From Vygotsky's (1978) perspective, children do not explore their environment directly but through methods of action like using symbolic tools (signs, linguistic and mathematical systems) that already exist in a given culture. R. Feuerstein explored mediation by focusing on human beings as mediators. From R. Feuerstein's perspective, the role of the human mediator creates cognitive prerequisites for learning (R.

Feuerstein et al., 2010, 2015). By selecting, reducing, repeating, scheduling, and interpreting environmental stimuli for learners, mediators can moderate the influence of unfavorable environmental factors like cultural differences, the emotional balance of the learner, or social conditions like poverty to make learning stimuli available for learners (R. Feuerstein et al., 2010, 2015; Kinard & Kozulin, 2008).

MLE aims to change learners' "deficient cognitive functions" (R. Feuerstein et al. 2012, p. 2). R. Feuerstein (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2012) started to develop MLE theory in the 1950s when he was helping disadvantaged children and adults overcome learning barriers. Those barriers could be genetic causes, acquired brain damage, lack of learning opportunities, shortcomings in environmental conditions (Lebeer, 2014), or cross-cultural differences in cognition and their effect on immigrant and ethnic minority students (R. Feuerstein et al., 2010; 2015). R. Feuerstein believed that providing MLE could help learners overcome their "deficient cognitive functions" that will interfere with learning. R. Feuerstein (see R. Feuerstein et al., 2012) explained that the phrase "deficient cognitive functions" in MLE theory is not used to label learners' disabilities in learning but is used to cover "many very specific behaviors – for examples blurred and sweeping perception or inability to select relevant cues in defining a problem" (R. Feuerstein et al., 2012, p. 3). Although second- or foreign-language learners do not have actual cognitive deficiencies, functionally, it is as if they do. For example, in the second-language (L2) input stage, cues presented in L2 input can be blocked from intake by the learner's learned attention that formed when the learner was acquiring the first language (L1) (N. Ellis, 2015). If a learner has learned that cue A is associated with outcome X, it will be more difficult to associate another cue B with X later on (Kruschke &

Blair, 2000). When this association happens, L2 input will be blocked from being taken in by the learner, and L2 output will be blocked from producing. Therefore, blocking caused by learned attention formed in L1 acquisition becomes a cognitive barrier for L2 learners. If instructors want to help learners learn L2, they need to help learners prevent blocking or work through blocking. Schmidt (1990) thought conscious awareness at the level of “noticing” is necessary to convert the input to intake, and those who notice most learn most. MLE’s starting point emphasizes the mediator to mediate learners to notice stimuli in their learning environment. Therefore, mediating learners to notice stimuli in their learning environment can prevent cognitive blocking or work through cognitive barriers in their L2 fluency development.

Mayer (2004) emphasized that the way to conduct constructivist learning is by focusing on techniques that guide students’ cognitive processing with a specified educational goal. Through analyzing MLE theory, it can be concluded that mediation under the MLE framework could be a technique that guides learners’ cognitive processing by working on breaking through learners’ cognitive blocking or barriers to achieving learners’ goal of fluency development. What could cognitive processes be in L2 learners’ fluency development? This question is explored in the next section.

In summary, MLE, which can be used as a kind of motivational psychology, looks into motivation encouraged by the mediator to develop L2 learners’ fluency because motivation is a crucial factor in promoting fluency development. In addition, mediation under the MLE framework can support learners’ fluency development by working through cognitive barriers in their fluency development.

Segalowitz's second-language fluency model

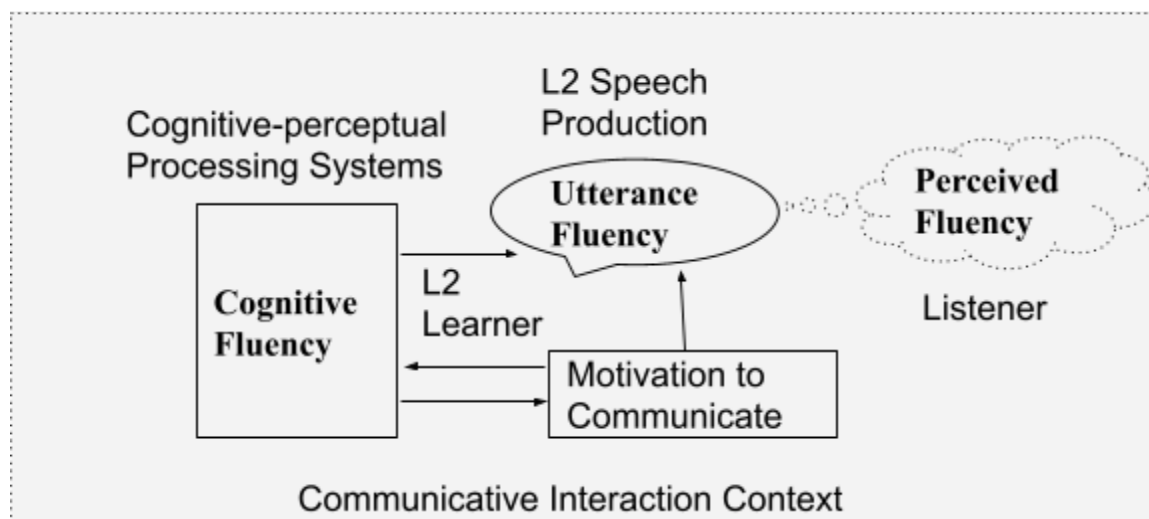
Fluency is a complex language construct that spans multiple dimensions of learning, including psychology, linguistics, and social relationships. Segalowitz (2010) offered a model of second-language fluency development that understands fluency from a multidisciplinary and cognitive science perspective.

Segalowitz's (2010) model of L2 language fluency includes three essential aspects: cognitive fluency, utterance fluency, and perceived fluency. Cognitive fluency is the cognitive process responsible for oral performance (Segalowitz, 2016). It consists of learners' ability to control the cognitive systems underlying speech production (Nergis, 2021). The main cognitive processes underlying oral performance include automaticity and attention to language (Segalowitz, 2010). Language automaticity means learners can perform the language fast, efficiently, effortlessly, and not limited by short-term memory capacity. Under language automaticity, language components like grammatical structure selection and lexical retrieval are mainly automatic (Schmidt, 1992). Attention to language means learners can flexibly redirect the focus of attention to recruit appropriate language to form a speaking message (Segalowitz, 2010). Fluent speakers can package information into appropriate language smoothly during speaking interaction. Therefore, attention to language is another cognitive process underlying language-fluency development.

Utterance fluency in Segalowitz's (2010) model described the observable oral performance by using measurable speech features like syllable rate, duration, rate of hesitations, and pauses. Utterance fluency is the quantifiable aspect of speech fluency that reflects the speaker's cognitive fluency (Nergis, 2021).

Perceived fluency refers to subjective judgments of the speaker's oral fluency (Segalowitz, 2010). It is the listener's reaction to the cognitive fluency of the speaker (Nergis, 2021), and it is a subjective measure of utterance fluency from the listener's perspective (Segalowitz, 2016).

The components of Segalowitz's (2010) fluency model are represented in Figure 1.



Note. This figure is an adaptation of the fluency model by Segalowitz, 2010, p.164, Figure 7.1.

Figure 1. Segalowitz (2010) Second-Language Fluency Framework

This model shows fluency as a harmonious synthesis (Ong, 2012). From this model, what affects utterance fluency (the measurable part of fluency) has three components: cognitive fluency, social context, and motivation. These different parts also interact with each other. If a learner cannot perform cognitive operations fluently, it will cause L2 delivery (utterance) performance disfluency (Segalowitz, 2016). If a learner's cognitive-perceptual system is sharpened, their cognitive operations will become faster and more efficient, resulting in more fluent speech output: utterance fluency (Segalowitz, 2010). At the same time, a learner's learning

motivation will engage them in more language usage, reinforcing cognitive-perceptual processing to enhance cognitive fluency (Segalowitz, 2010). This enhancement also will show in learners' speech output: utterance fluency.

Therefore, the implications for L2 fluency-development instruction from Segalowitz's (2010) fluency model are the following: (a) if the instruction can enhance cognitive fluency, it can improve L2 utterance fluency, (b) some specific cognitive processes like automaticity and attention to language underly fluency development, and (c) enhancing motivation will have a positive influence on language fluency development.

Segalowitz's (2010) language-fluency model supports using MLE as an intervention for fluency development. Based on Segalowitz's model, the cognitive barriers in language-fluency development may be caused by the deficiency of second-language-related fluency cognitive function processing like automaticity or attention to language, which means that if MLE helps learners develop language automaticity and attention to language, it can promote learners' cognitive-fluency development that will show in learners' utterance-fluency performance later. Also, if MLE can enhance learners' motivation, it will affect fluency development. The examination of the MLE theory in the previous section shows that MLE aims to help learners modify their cognitive functions and increase their motivation in learning. Therefore, the MLE theory seamlessly fits the implications of fluency development from Segalowitz's fluency model. Based on MLE theory and Segalowitz's fluency model, if the mediator can motivate the learner and enhance the learner's cognitive functions under cognitive fluency, the learner's speaking fluency will be improved. Therefore, in this action research study, the teacher as the mediator will mediate learners' fluency development under the MLE framework to motivate learners and

help them overcome fluency-development cognitive barriers by mediating the cognitive process functions underlying learners' cognitive fluency.

Background and Need

Although fluency is a crucial feature of oral performance (Tavakoli & Hunter, 2018), the teaching of fluency often is neglected in classroom practice (Rossiter et al., 2010, Tavakoli & Hunter, 2018) due to its complex, multifaceted nature that makes it challenging to be taught (Tavakoli & Hunter, 2018).

In a traditional classroom, fluency development usually relies on rote practice. It often starts with the teacher presenting new language knowledge and then having students work on drills or memorization practice. Constructivist teaching, however, has become popular in second- or foreign-language classrooms due to education pedagogy changes under the influence of the dominant educational theory changes. The change also is a reflection of the teaching reality in U.S. high-school language-teaching classrooms. In U.S. high schools, the student body population usually is very diverse because students have different family backgrounds and different language proficiency levels in one classroom. Using the AP Chinese classes that I have taught as an example, typically, in one class, students' language proficiency level can range from heritage Chinese language speakers, who have spoken Mandarin Chinese since they were born, to students who have learned Chinese for only 2 to 3 years before they enrolled in the class. The diverse students' proficiency backgrounds can make it difficult for teachers to transfer language knowledge even if they want to because it is hard to meet every student's needs. Therefore, constructivist learning becomes a better way to engage students and meet their different needs in a Chinese language classroom in which students have diverse learning backgrounds.

Fluency studies in TBLT learning classrooms

According to current psycholinguistic theory, language fluency depends on the learners' implicit linguistic system (VanPattern, 2002). The implicit linguistic system is an intuitive and unconscious language system, which contrasts with an explicit language system, a metalingual and conscious language system (N. Ellis, 1994; R. Ellis, 1994). Task-based Language Teaching (TBLT) is a teaching approach derived from constructivist learning theory and addresses language learners' implicit language-system development, engaging learners in meaning-focused communication to develop their communicative-language abilities through performing tasks (R. Ellis et al., 2020). A task in TBLT carries the goal of communicating meaning and is connected to the real world (Skehan, 1996).

Studies (e.g., R. Ellis, 2018; R. Ellis et al., 2020) have shown that many variables affect learners' fluency development in the TBLT classroom. Some researchers have tried to identify what types of tasks can foster learners' development of their language fluency (Foster & Skehan, 1996; Robinson, 2011; Skehan, 1996). Some explored the relationship between fluency development with task conditions like having planning time or not (Foster & Skehan, 1996). Other researchers explored whether task sequencing affects language fluency (Bygate, 2001; Lynch & Maclean, 2001) or if specific instructional techniques are helpful (Van de Guchte et al., 2015). These various aspects, from task conditions, instructional techniques, planning conditions, to task sequencing, affect language-fluency development. All these aspects share one thing in common: they are under teacher implementation. There are no studies, however, that have explored fluency development from the perspective of how the teacher as the mediator helps learners to develop their fluency in the TBLT classroom.

R. Ellis (2009) emphasized that to implement TBLT successfully, the teacher must be more than a manager and facilitator. A task that can work with learners needs the teacher's mediation. Because a task is not a mechanism, it requires the teacher to mediate the learners to enter into the space created by tasks, and the teacher needs to support and accompany learners during their learning process (Bygate, 2015). How can the teacher mediate learners into that space?

The teacher's role as a mediator to mediate learning in TBLT rarely is explored (Rolin-Ianziti, 2010; Van den Branden, 2016). A few studies explored the teacher's role as a mediator in the TBLT classroom. The mediation conducted in these studies, however, did not focus on fluency development but on the teachers' role as a mediator in general. For example, R. Ellis (2009) suggested some mediation principles teachers can follow to mediate students' learning, like tailoring tasks based on students' language proficiency level, knowing clearly what a task is, and being involved in task material development. Van den Branden (2009) observed two Dutch second-language classrooms in Flanders. He summarized several classroom cases to demonstrate that mediation in TBLT will happen when the teacher takes the role of a motivator, organizer, conversational partner and supporter, and interlocutor. Van den Branden (2016) investigated teachers' role as mediators in different TBLT stages and pointed out that teachers are content selectors, decision-makers, learning motivators, and activity organizers in different teaching stages. Although these researchers described what teachers do or should do to mediate in TBLT classrooms, these studies are not empirical studies. Instead, they described the mediation phenomenon in TBLT classrooms either through their observation of mediation practice or by drawing their conclusions through analyzing other researchers' studies. In

addition, these studies addressed mediation in a general way but not specifically on mediating learning to help learners in their fluency development.

A few empirical studies focus on mediation in the TBLT classroom. For example, Samuda (2001) investigated the teacher's role as a mediator in learners' form and meaning connection processes. Her study, however, focused on language accuracy development. Also, her study did not provide guidance for teachers to practice mediation because it did not answer why they should do mediation in this way. Therefore, the research gap in the TBLT field is that no research has studied how to mediate learners' fluency development in a TBLT classroom.

Mediation studies in second-language-acquisition classrooms

In the second-language-acquisition domain, many studies using R. Feuerstein's mediation theory or Vygotsky's mediation theory also are called dynamic assessment research because both R. Feuerstein and Vygotsky's mediation theories address that mediation can help learners achieve learning potential. In addition, assessing learners' learning potential is more important than assessing what they have already learned.

Mediation theory has been used in many second- or foreign-language acquisition empirical studies that include vocabulary development (Dam et al., 2020), reading proficiency development (Kozulin & Garb, 2002), and listening-skill development (Emadi & Arabmofrad, 2015). Mediating second-language speaking-proficiency development also has been studied (Ebrahimi, 2015; Ebadi & Asakereh, 2017; Hill & Sabet, 2009; Poehner, 2008; Safdari & Fathi, 2020). Most mediation studies on speaking proficiency development, however, do not focus on speaking-fluency development but on speaking accuracy (Ebadi & Asakereh, 2017; Hill & Sabet,

2009). There are a few mediation studies that explored fluency development, and they are detailed below.

Safdari and Fathi (2020) studied if mediation works for language accuracy and fluency development in an English as a foreign-language classroom. In their study, the treatment groups' grammar and vocabulary were mediated by the mediation strategy that provides feedback from the most implicit to the most explicit. Feedback is a mediation technique supporting learners' second-language development within their Zone of Proximal (Lantolf & Poehner, 2011). In Safdari and Fathi's study, the comparison group received the same learning content as the treatment group but without mediation. Learners' speaking fluency and accuracy scores in the comparison group and treatment group were collected separately. Also, the study interviewed five participants in the treatment group to learn about their perception of the effectiveness of mediation for speaking accuracy and fluency. The study concluded that mediation could improve language accuracy but does not improve oral-fluency performance. Given there are many different types of mediation, the study can only confirm that the specific mediation used in this study did not improve learners' fluency performance. The possibility of the effectiveness of other types of mediation, however, are not excluded.

Levi's (2012) study concluded that mediation could improve English Foreign Language (EFL) learners' speaking fluency. Levi's study explored if learners' oral proficiency scores in the Israeli English matriculation test could be improved as a result of mediation and by what types of mediation. The study collected data from three groups: one control group that received no mediation treatment and two experimental groups. One experimental group received group-mediation guided by a teacher. The other experimental group was provided self-mediation.

The mediation techniques the study used included the following stages: (a) introducing the oral proficiency test and examining learners' personal goal setting in learning through examining learners' own performance in the pretest, (b) reviewing oral proficiency test rubrics and comparing with learners' pretest performance in video recording to strengthen learners' understanding of the concepts of oral proficiency competence, and (c) learners shared their opinions about their performance as they examined their own performance videotape. The two experimental groups used the same mediation techniques and procedures, but a teacher guided one group's mediation, and the other students did individual self-mediation. The study design followed the test-mediation-test procedure. Learners' oral-proficiency scores, including the communicative ability (the ability to understand message, interaction fluency, and extendedness of answers) and accuracy, were collected using pretest, posttest, and follow-up test. Also, two raters rated the transcribed mediation sessions using the learning-strategies checklist to assess what forms of mediation were more effective for oral-proficiency development. The analysis of covariance comparative analysis of the test scores of the mediation group and control group showed that learners' oral accuracy and communicative ability (including interaction fluency) showed statistically significant improvement in the two experimental mediation groups as compared with the control group. There was a statistically significant difference in communicative ability [$F(1, 43) = 20.62, \eta^2 = .32$] between the group-mediation and the control group, and in communicative ability [$F(1, 43) = 19.72, \eta^2 = .32$] between self-mediation and control group. Both results have a large measure of practical importance. There was also a statistically significant difference in language accuracy [$F(1, 43) = 19.39, \eta^2 = .31$] between group-mediation and control group and in language accuracy [$F(1, 43) = 15.06, \eta^2 = .26$]

between self-mediation and control group. Again, both results are large measures of practical importance. Therefore, Levi's (2012) study results supported Safdari and Fathi's (2020) conclusion that mediation can enhance oral performance accuracy. The findings from Levi's study, however, contradict Safdari and Fathi's study on whether mediation can improve speaking fluency because Levi's study showed that the mediation groups' communicative ability (the ability to understand message, interaction fluency, and extendedness of answers) showed statistically significant improvement after mediation treatment.

Can mediation positively affect second- or foreign-language fluency development or not? The controversial results in Levi's (2012) study and Safdari and Fathi's (2020) study show the research gap in mediation implementation studies in second- or foreign-language classrooms. Why is there a difference?

In Levi's (2012) and Safdari and Fathi's (2020) studies, the mediation procedure designs were different. In Safdari and Fathi's study, mediation was predesigned language-error correction feedback from implicit to explicit between the mediator and learners. The interaction focused on grammar and vocabulary errors. In Levi's study, the mediation includes having students watch their pretest performance video and reexamining their performance in the group or individually through comparing the scoring rubrics with their own performance and through reflection on their own performance. In addition, students performed the original tasks again in the posttest. Based on R. Feuerstein's mediation theory, effective mediation needs to aim at deficient cognitive functions that align with the learning skills that the learner needs to develop. Based on Segalowitz's (2010) cognitive fluency theory, two main cognitive processes underlying fluency are automaticity and attention to language, that is, to develop learners' fluency, learners'

language automaticity needs to be developed and learners' awareness of language needs to be raised. Many fluency studies showed that language automaticity development relies on repetition during the language input and output stages (N. Ellis, 2002). In Safdari and Fathi's (2020) study, the language-correction-feedback mediation process raised learners' awareness of language forms. After learners constructed correct language forms through the teachers' mediation, the mediator had not provided learners with opportunities to interact with the same stimuli repeatedly. Therefore, learners' language automaticity may not have a chance to be developed. Consequently, in that study, learners' language accuracy was improved but not fluency.

In contrast, Levi's (2012) mediation design provides the possibilities of mediating attention to language through self-examination or group discussion and mediating language automaticity development through multiple-task repetition opportunities. For example, after the original oral performance, students watched their original performance video and replicated the initial task. Therefore, the same task was repeated three times in different forms or times. These repetitions may have helped learners develop their language automaticity, which promoted their fluency. Although Levi's research explored if mediation affects fluency development and what types of mediation would benefit learners' oral proficiency development, her analysis did not discuss how mediation treatment has improved both learners' speaking accuracy and communicative ability (including fluency).

In summary, mediation studies showed a research gap in how to mediate fluency development in language classrooms. There is controversial research on whether mediation affects fluency development, and there is insufficient research on how mediation affects fluency development.

Fluency-mediation-process building

Based on R. Feuerstein's mediation theory, mediation aims at helping learners overcome cognitive deficiency to develop learning, and mediation also functions as increasing learners' motivation. According to Segalowitz's (2010) fluency theory, cognitive fluency, utterance fluency, and motivation interact. Current mediation studies on fluency development, however, have not shown they are aware of addressing cognitive functions underlying fluency and purposely use meditation as a motivation tool to increase learners' fluency. Therefore, this action research study purposefully built mediation under R. Feuerstein's MLE theory, addressing mediating cognitive processes underlying language fluency and increasing learners' learning motivation through mediation to develop learners' fluency (see Figure 2).

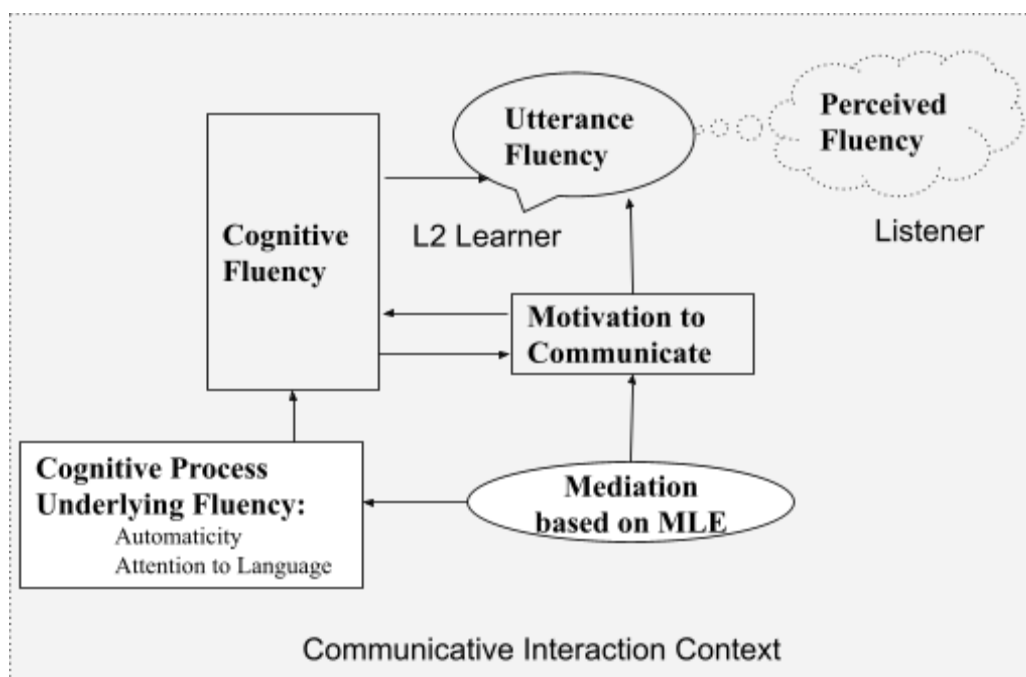


Figure 2. Second Language Fluency Develop Mediation Diagram

The details of the mediation procedure is explained below.

Flavian (2019) created a general mediation process based on Feuerstein's mediation theory. The model includes four steps: data collecting, mediation goal setting, mediation scheme planning, and reflective assessment. Below is the detailed process.

First, mediators collect data about the following three questions: (a) Who are the mediatees? (b) Who are the mediators? and (c) What is the content of the mediated interaction? Gathering information for the first question will help the mediator understand learners' needs better. Information about the second question will help the mediator build self-awareness of their own teaching to conduct efficient learning. The third question is based on conducting the mediation process in a context. Second, the mediator will set goals for the mediated interaction. The goals include overall goals and specific goals like which cognitive functions the mediation needs to focus on. Third, the mediator will develop the mediation scheme. Flavian (2019) suggested that the mediator should decide ahead of time which of R. Feuerstein's 12 parameters of mediation should be used in the mediation in this stage. The mediation, however, must include the three universal mediation parameters: mediation of intentionality and reciprocity, mediation of meaning, and mediation of transcendence. The last stage is the reflective assessment of the mediation. This step will help the mediator learn the effectiveness of the mediation and aid in collecting data for assisting the mediator in planning for the next mediation cycle.

Based on Flavian's (2019) mediation process model, the modified mediation process to mediate fluency development in a language classroom is as follows:

First, collecting data about learners and the mediator in the second- or foreign-language fluency development content. The data about the learners should help the mediator understand

learners' language-learning background. The data about the mediator should help the mediator to be more aware of their own mediation behavior.

Second, setting goals for mediated interaction for fluency development. Based on Feuerstein's mediation theory, mediation also can help learners develop cognitive functions besides mediating learning motivation. According to Segalowitz's (2010) fluency theory, two crucial cognitive processes underlie language-fluency development: automaticity and attention to language. Therefore, to help language fluency development, the mediation goals for mediating language-fluency development will include promoting learners' motivation to improve fluency and developing learners' cognitive functions under fluency development that includes automaticity development and attention to language.

Third, planning mediation according to MLE: selecting and designing appropriate tasks and customizing tasks based on teaching content requirements, mediation needs, and learners' needs. For example, because automaticity and attention to language are two primary cognitive functions that underlie fluency development (Segalowitz, 2010), the mediation design purposely can address mediating these two functions. For example, the mediator can plan sequencing tasks in a repetition way, which can help language automaticity development (Bygate, 2001; N. Ellis, 2002; Lynch & Maclean, 2001; Segalowitz, 2010). Also, the mediator can plan to raise learners' awareness of language techniques like using different colors or fonts in learning material preparation.

Fourth, mediation implementation. The mediator must plan to implement the three universal mediations during the mediation implementation: mediation of intention, mediation of meaning, and mediation of transcendence. Also, the mediator should implement situated

meditations based on the situation happening in teaching. The situated mediations include mediation of a feeling of competence; mediation of regulation and control of behavior; mediation of sharing behavior; mediation of individuation and psychological differentiation; mediation of goal-seeking, goal-setting, planning, and goal-achieving; mediation of the search for challenge, novelty, and complexity; mediation of the awareness of being a modifiable entity; mediation of optimistic alternative; and mediation of a sense of belonging.

Last, the mediator will modify the mediation implementation based on the teacher's observation and students' learning assessment.

Fluency measurement

Fluency measurement has been operationalized differently by researchers and research groups because of the complexity of the concept. Tavakoli and Wright (2020) suggested choosing a fluency measurement based on the specific research purpose. There are subjective and objective ways of measuring it. The AP Chinese exam oral section scoring uses a subjective measurement. The exam readers listen to a spoken recording and decide how the speech they heard is delivered, judging whether the speaking has a natural pace or many hesitations (College Board, 2022). Objective measurement methods are often used in fluency research studies (e.g., Alimorad & Yazdani, 2020; De Jong & Tillman, 2018; Li et al., 2015; Skehan & Foster, 2005; Tavakoli & Skehan, 2005). In these studies, fluency is measured by breakdown fluency, speed fluency, and sometimes also includes repair fluency. Breakdown fluency can be judged by if there are pauses that "break down" the speaking flow. When measuring silent pauses, a silence duration of 0.25 seconds or more is counted as an indication of fluency breakdown (De Jong & Bosker, 2013; Tavakoli et al., 2017). Speed fluency means speech speed. Measurement of speed

fluency includes speech rate and articulation rate. Speech rate means how many syllables per minute in speaking (pauses are included in the total time of speaking) (Tavakoli & Wright, 2020). Articulation rate is a pure measure of fluency, and it measures speech production speed excluding pauses in the total time of speaking (Tavakoli & Wright, 2020). Repair fluency means how learners make repairs while they are self-monitoring their speech process (Tavakoli & Wright, 2020). Measurement of repair fluency includes number of reformation, false starts, self-corrections, repetitions, and hesitations (Tavakoli et al., 2017).

This study used Segalowitz's (2010) fluency model to examine learners' cognitive and utterance fluency development. Segalowitz's fluency model suggests cognitive fluency can be measured by utterance fluency, and utterance fluency was operationalized using measures from speed fluency, breakdown fluency, and repair fluency (Huensch & Tracy-Ventura, 2017). Therefore, this study measured fluency objectively and measured it based on three utterance fluency dimensions: speed fluency, breakdown fluency, and repair fluency.

De Jong et al. (2013) conducted a large-scale utterance fluency and cognitive fluency correlational study. The participants of their study were 208 adult L2 learners of Dutch. They learned that some measures of utterance fluency can better predict cognitive fluency than other measures. Their study found that the number of silent pauses, number of corrections (speaker's self-correction of speaking), and mean syllable duration (MSD; inverse articulate rate, equals to phonation time/total number of syllables) are better predictors of cognitive fluency than other utterance fluency measures like mean silent pause duration or number of repetitions. Among all these variables, mean syllable duration is the strongest predictor.

Kahng (2020) conducted a fluency and cognitive fluency correlational study on 42 Chinese English language learners, and the study results supported De Jong et al.'s (2013) findings. Therefore, in this study, to indicate how well the mediation process influenced cognitive-fluency development, learners' utterance fluency was measured by the number of silent pauses, the number of corrections, and mean syllable duration. The number of silent pauses measures breakdown fluency, MSD measures speed fluency, and number of self-corrections measures repair fluency.

Research Questions

Two research questions guided this action research study.

1. How is mediation used in the AP Chinese second- or foreign-language TBLT classroom to improve learners' utterance (cognitive) fluency?
2. To what extent does mediation improve learners' utterance fluency, as measured by the number of silent pauses, the number of corrections, and mean syllable duration, in the AP Chinese second- or foreign-language TBLT classroom?

Educational Significance

In the second- or foreign-language classroom, the traditional teacher presentation and rote practice teaching model is being replaced gradually by student-centered constructivist instruction that can help students' engage meaningfully in their learning. With this background, this study is essential for three reasons.

First, for many teachers, it is not clear how to carry out mediation in their classroom practice. This study will help teachers understand how to implement a teacher's role as a mediator in a constructivist-learning-theory-based TBLT classroom to promote learners' oral

fluency. Second, the study will provide a Chinese language teacher's mediation action research study as a case study to guide other language teachers in practicing mediation to develop their students' language fluency. The study also will provide teachers in other disciplines with a reference to implementing mediation in their subjects.

Second, this study investigated whether mediation can help develop language fluency. The study's findings provide instructional tools to teachers to help their students develop their speaking performance. Fluency is a crucial feature of their oral performance (Tavakoli & Hunter, 2018). If classroom instruction can help them develop their language fluency, it will lessen their learning burden and speed up their learning process.

In addition, this study conducted empirical research to understand if mediation under Feuerstein's mediation model could help improve learners' language fluency, which contributed to filling the current gap in the research about how to do mediation in a TBLT classroom to develop learners' fluency and whether mediation can promote learners' fluency development.

Definition of Terms

The following terms and definitions were used in this study:

AP Chinese class is the Chinese language class in high schools to prepare students to pursue college-level studies. Through this course, students will have the opportunity to earn college credit or advanced placement if they can pass the AP Chinese exam (College Board, 2019).

Attention to language is one of the cognitive processes underlying language fluency development. It means learners' ability to flexibly redirect the focus of attention to recruit appropriate language to form a speaking message (Segalowitz, 2010).

Automaticity is one of the cognitive processes underlying language fluency development.

Language automaticity means learners can perform language fast and efficiently, effortlessly, not limited by short-term memory capacity (Schmidt, 1992). It can be enhanced by mediating repetition (Feuerstein et al., 2012).

Cognitive fluency is one part of language fluency in Segalowitz's (2010) L2 language fluency model. Cognitive fluency refers to the cognitive process responsible for oral performance (Segalowitz, 2016). It consists of learners' ability to control the cognitive systems underlying speech production (Nergis, 2021). The main cognitive process under fluency includes automaticity and attention to language (Segalowitz, 2010).

Constructivist learning is based on constructivism learning theory and addresses learners making meaning out of what they encounter (Miller-First & Ballard, 2017). The principles in this teaching method emphasize that learning is an active meaning-making process. Learning arises when learners encounter real-world issues, learning is a social activity, and learners take learning responsibilities (Miller-First & Ballard, 2017).

Constructivist teaching is based on constructivism learning theory and addresses facilitating students to construct knowledge through interacting with learning environments actively but not through teacher presentation and drill techniques to transfer knowledge (Knapp, 2019)

Fluency is usually a concept that is used to describe oral language performance (Wood, 2010).

There is a broad sense of fluency and a narrow sense of fluency. The broad sense of fluency represents the learner's general oral language proficiency; the narrow sense of fluency refers to ease and automaticity of oral performance (Lennon, 1990; Tavakoli & Hunter, 2018). This study uses fluency in its narrow definition.

Intentionality and reciprocity is one of the three primary parameters in Feuerstein's mediated learning experience theory. Intentionality means the mediator's intention to mediate. When the mediatee shares in the intention of the mediator and transforms the intention into a conscious act, reciprocity is achieved (R. Feuerstein et al., 2010).

Mean syllable duration (MSD) is one of the variables used to measure L2 oral fluency. It is the inverse of the articulate rate. The calculation formula is $MSD = \text{Phonation time} / \text{Total number of syllables}$ (De Jong et al., 2013). Phonation time is the total speaking time minus silent pausing time (De Jong, 2018).

Mediation is a cognitive change instrument. It is an interactive process to promote learning by helping learners interact with the environment (Flavian, 2019). Mediation happens when mediators, which can be objects, symbols, or human beings, transform natural, spontaneous impulses and generate higher mental functions in learners (Donato & McCormick, 1994).

Mediated Learning Experience (MLE) is a mediation theory that Israeli psychologist Reuven Feuerstein created. The simple definition of MLE is that it is the interaction of the organism with its environment through a human mediator (Kinard & Kozulin, 2008). In this study, MLE is the theoretical framework that guides the investigation of how a teacher, as the human mediator who can be certain that stimuli in the learning environment will be available and benefit the learners, implements mediation in aiding learners' speaking cognitive and utterance fluency development.

Mediation of a feeling of competence is one of the nine situated mediation parameters in Feuerstein's Mediated Learning Experience theory. This parameter of mediation refers to mediating learners to feel that they are competent in learning. To help learners build a sense of competence, the mediator will help learners to overcome difficulties, get familiar with new

content, and challenge and encourage the learners to reach beyond their current functioning (R. Feuerstein et al., 2010).

Mediation of a sense of belonging is one of the nine situated mediation parameters in R.

Feuerstein's Mediated Learning Experience theory. Under this mediation, a mediator can help learners develop a feeling of belonging or connecting to a community (R. Feuerstein et al., 2010).

Mediation of goal-seeking, goal-setting, planning, and goal-achieving is one of the nine situated mediation parameters in R. Feuerstein's Mediated Learning Experience theory. The presence of a goal is the beginning of one's thinking and action. A mediator can use mediational strategies like enlarging learners' awareness of what is possible or attainable to develop learners' ability to set goals or invest in plans to achieve goals (R. Feuerstein et al., 2010).

Mediation of individualization and psychological differentiation is one of the nine situated mediation parameters in R. Feuerstein's Mediated Learning Experience theory. This category of mediation helps create within a learner a sense of being a separate person with an ability to think and express oneself in unique ways. Mediators will encourage learners to express themselves but not impose others' aspects of experience on the learner (R. Feuerstein et al., 2010)

Mediation of meaning is one of the three primary parameters in R. Feuerstein's Mediated Learning Experience theory. It means mediating value for the existence of interactions (R. Feuerstein et al., 2010).

Mediation of optimistic alternative is one of the nine situated mediation parameters in R. Feuerstein's Mediated Learning Experience theory. This mediation mediates learners to search

for an optimistic alternative or mediates the expectation for positive outcomes (R. Feuerstein et al., 2010).

Mediation of regulation and control of behavior is one of the nine situated mediation parameters in R. Feuerstein's Mediated Learning Experience theory. Under this mediation category, the mediator engages learners in regulating their behavior by deciding whether they are ready to do something. This mediation includes restraining responses or accelerating responses (R. Feuerstein et al., 2010).

Mediation of sharing behavior is one of the nine situated mediation parameters in R. Feuerstein's Mediated Learning Experience theory. This mediation aims to mediate learners' readiness and ability to relate with their peers, like to adjust oneself to one another, to learn from each other, or to support each other (R. Feuerstein et al., 2010).

Mediation of the awareness of being a modifiable entity is one of the nine situated mediation parameters in R. Feuerstein's Mediated Learning Experience theory. This mediation mediates the notion that human beings possess a continuous identity and are modifiable (R. Feuerstein et al., 2010).

Mediation of the search for challenge, novelty and complexity is one of the nine situated mediation parameters in R. Feuerstein's Mediated Learning Experience theory. This mediation mediates learners' ability to confront the challenges, and to adapt to the novel and the complexity in the world (R. Feuerstein et al., 2010).

Mediation of transcendence is one of the three primary parameters in R. Feuerstein's Mediated Learning Experience theory. Through the mediation of transcendence, learners will go toward the goal that goes beyond their direct and immediate needs (R. Feuerstein et al., 2010).

Number of corrections is one of the variables used to measure L2 oral fluency. It is the number of a speaker's self-corrections while speaking (Segalowitz, 2010).

Silent pauses is one of the variables used to measure L2 oral fluency. The silent parts that occur between runs indicate hesitation (Park, 2016). The silent pauses that are 0.25 seconds and above are counted as an indication of fluency breakdown (De Jong & Bosker, 2013; Tavakoli et al., 2017).

Task-based language teaching (TBLT) is a language teaching approach. It advocates engaging learners in meaning-focused communication to develop their communicative language abilities through performing tasks (R. Ellis et al., 2020). A task in TBLT carries the goal of communication of meaning and is connected to the real world (Skehan, 1996).

Utterance fluency is one part of language fluency in Segalowitz's (2010) L2 language fluency model. Utterance fluency is the measurable aspect of speech fluency that reflects the speaker's cognitive fluency, and the measurement includes the number of pauses, hesitations, repetitions, and speech reparations (Segalowitz, 2010).

Summary

Fluency development is crucial in a second- or foreign-language classroom. Fluency development instruction, however, is underexplored in language teaching. In the TBLT classroom, studies have shown that many variables affect learners' fluency development, like task types, task conditions, and task sequencing, but there has not been any research investigating how teachers take the role of mediator to mediate fluency development. A few studies investigated the teacher's role as a mediator in the TBLT classroom and focused on the teachers' role as a mediator in general or focused on mediating language accuracy development

but not on fluency development. In the second- or foreign-language research field, there are contradictory results about whether mediation can support fluency development or not.

There are three major mediation models: Piaget's (Piaget & Cook, 1952) model, Vygotsky's (1978) model, and R Feuerstein's (R. Feuerstein et al., 2010) model. R Feuerstein's (R Feuerstein et al., 2010) model modified Piaget's model and supplemented Lev Vygotsky's (1978) model. R Feuerstein's Mediated Learning Experience (MLE) provides a structure of mediation framework and emphasizes the mediator or the teacher's role in mediating learning in the learners. MLE will mediate learners' cognitive functions. Based on Segalowitz's (2010) fluency model, two primary cognitive functions under fluency development are automaticity and attention to language. Therefore, this action research investigated how to implement the mediation model built under MLE theory to mediate learners' cognitive processes under cognitive fluency in aiding TBLT teaching in one AP Chinese class to develop learners' language speaking fluency. In order to indicate how well the mediation process has intervened in cognitive fluency development, learners' utterance fluency development, which is correlated to cognitive fluency development, was measured.

In the following chapters, the literature on three primary constructs in this study is reviewed in chapter II –fluency, TBLT approach, and mediation– and how they work together. The methodology used in this study is presented in chapter III. Study results are reported in chapter IV, and the discussion of the study results and future research recommendations are the focus of chapter V.

CHAPTER II

LITERATURE REVIEW

The purpose of this study was to investigate how to use a mediation model, built under the guidance of the Mediated Learning Experience (MLE) theory, to improve language fluency in a Task-Based Language Teaching (TBLT) second- or foreign-language classroom. Because very little prior research has assessed the mediation model in TBLT language classrooms, this study utilized action research to determine if the model is adequate.

This research included three important constructs: fluency, TBLT approach, and mediation. Understanding these three constructs and knowing how they work together would provide more substantial support for the research. Therefore, the review in the chapter covers the following four sections: language fluency models, fluency studies in TBLT classrooms, mediation models, and mediation theory implementation in second- or foreign-language classrooms.

Language Fluency Models

Fluency is a crucial feature of language learning, but it is a complex and confusing construct because it is multidisciplinary and involves different aspects like psychology, linguistics, and social dimensions (Segalowitz, 2010). Therefore, fluency is difficult to define (Foster, 2020; Nergis, 2021; Tavakoli & Hunter, 2018; Wood, 2010).

Although fluency can be used to describe reading or writing performance, it is usually a concept that is used to describe oral language performance (Wood, 2010). Fluency is a complex and confusing construct because it can contain many aspects. When Foster (2020) described the complexity of the concept of fluency, he pointed out that when you comment that someone can

speak a language fluently, you may mean they are good at it or may just mean they speak smoothly. In early research, fluency was categorized into a broad sense of fluency and a narrow sense of fluency (Nergis, 2021). The broad sense of fluency is used to represent a learner's general oral language proficiency; the narrow sense of fluency refers to the ease and automaticity of oral performance and is different from the other two characteristics of speaking ability: accuracy and complexity (Lennon, 1990; Tavakoli & Hunter, 2018). This narrow sense of fluency can be understood by the difference between the first-language (L1) and the second-language (L2) production processes. In L1 processing, much of the mechanics of speech construction is automatic and happens in a parallel-processing way, which means that processes that are involved in a task can happen at the same time; whereas in L2 processing, especially in the earlier stage of language acquisition, speech production is not automatic yet, so the different processes may not happen in parallel (Segalowitz, 2010). The lack of automaticity and parallel processing makes the speech slower, with frequent pauses and hesitations (Tavakoli & Hunter, 2018).

From the cognitive ability perspective, Schmidt (1992) defined fluency as an automatic procedural skill. He described it as having the properties of being fast and efficient, effortless, not limited by short-term memory capacity, not under voluntary control, and difficult to modify and self-analyze. Schmidt proposed that automatization depends on procedural knowledge rather than declarative knowledge. Declarative knowledge refers to consciously known information, whereas procedural knowledge refers to unconsciously learned knowledge of doing things (Wood, 2010). Based on this model, fluency development is a type of procedural knowledge development.

Schneider and Detweiler (1988), however, had a different understanding of automatization from Schmidt (1992). They think automatization is not entirely a procedural knowledge development; instead, it is a gradual, continuous transition that is not free of attention in the beginning stages. The cognitive model proposed by Anderson (1982, 1989) also supports Schneider and Detweiler's understanding. Anderson developed the Adaptive Control of Thought model (ACT). In Anderson's model, the first stage of skill development is the declarative stage and the second stage is the procedural stage. Then, through repeated recall and use, declarative knowledge can be converted into procedural knowledge. Finally, the third stage is the autonomous stage, in which skill performance will become faster and more automatic.

Ullman's (2001) fluency model described fluency as a declarative and procedural system memory model. There are two memory systems in one's memory capacity. One is a declarative memory system. This system is essential for learning arbitrary, random language knowledge like word meaning and word sounds. It is an explicit memory, and you can consciously recollect previously known information. The other system is the procedural system which underlies implicit (nonconscious) learning. It is in charge of learning new information and controlling long-established rules, motor and cognitive skills, or habits.

In more recent research, Segalowitz (2010) reviewed the different perspectives of fluency and offers a different fluency model. Based on his description, fluency has three aspects: cognitive fluency, utterance fluency, and perceived fluency. Cognitive fluency consists of learners' ability to control the cognitive systems underlying speech production. Perceived fluency refers to listeners' reactions to the cognitive fluency of the speaker. Finally, utterance fluency is the measurable aspect of speech fluency that reflects the underlying cognitive fluency,

and the measurement includes the number of pauses, hesitations, repetitions, and speech reparations (Nergis, 2021).

Fluency is a harmonious synthesis from Segalowitz's (2010) fluency model (Ong, 2012). Skehan (2011) pointed out, Segalowitz's (2010) view of fluency combats the tendency in applied linguistics toward inward-looking language fluency and incorporates features from multiple fields to define fluency. Based on Segalowitz's concept of fluency, this action research will investigate how a teaching approach can affect learners' cognitive fluency and measure cognitive fluency by using utterance fluency like pauses, speech reparations, and speech speed to measure fluency performance.

In summary, as a complex construct, fluency has different models. In Schmidt's (1992) model, fluency is an automatic procedural skill, and fluency development exclusively relies on procedural knowledge development. In Schneider and Detweiler's (1988) model, automatization development is not entirely procedural knowledge because it is not free of attention in the beginning stage. Ullman (2001) described fluency as a declarative and procedural system memory model. Segalowitz (2010) incorporated features from multiple fields to investigate fluency and defined fluency as consisting of three aspects: cognitive fluency, utterance fluency, and performance fluency. This study used Segalowitz's (2010) model.

Fluency Studies in Task-based Language Teaching Classroom

According to current psycholinguistic theory, language fluency depends on the learners' implicit linguistic system (VanPattern, 2002). The implicit linguistic system is an intuitive and unconscious language system that contrasts with a metalingual, conscious explicit language system (N. Ellis, 1994; R. Ellis, 1994). Task-based Language Teaching (TBLT) is a teaching

approach derived from constructivist learning theory that addresses language learners' implicit language system development. It engages learners in meaning-focused communication to develop their communicative language abilities through performing tasks (R. Ellis et al., 2020). A task in TBLT carries the goal of communicating meaning and is connected to the real world (Skehan, 1996). It is the organizational basis for a TBLT approach. R. Ellis (2018) described a task in TBLT as having the following four characteristics: (a) it is a meaning-focused activity, (b) it is similar to a task people carry out in real life, (c) the language used to perform a task is negotiable, and (d) it is a communicative act in its own right. Studies have shown that many variables affect learners' fluency development in the TBLT classroom. This section focuses on what variables affect learners' fluency development in the TBLT classroom, why they affect their development, and what potential variables have not been investigated. I will begin with how TBLT was developed.

History of TBLT

TBLT grew out of Communicative Language Teaching (CLT). The CLT approach to the second- or foreign-language teaching classroom began in the 1970s (Savignon, 2002). In the CLT approach, language is a means of communication, not just sets of linguistic structures (Ellis, 2018). It is an alternative teaching approach to traditional grammar-translation, called PPP, which refers to presentation, practice, and production (Du, 2012). PPP is a teacher-centered approach. It begins with the teacher presenting new language forms, students practicing these forms, and the students producing the target forms (Willis & Willis, 2007). The PPP approach, however, is criticized as isolating language structures from their meaning and real-life application (Willis & Willis, 2007).

Second-language acquisition research from the 1970s and 1980s facilitated the growth of CLT development. From the perspective of Functionalism during the 1970s and 1980s, language is a system for expressing meaning, and the primary purpose of language is communication (Whong, 2011). Some Functionalists even believe that there is no such thing as grammar, and what is called grammar is what linguists impose on language to make sense of it (Whong, 2011). The functionalist perspective of language led to the development of a new teaching approach, CLT, which proposes that it is more important to teach language as a way of communication but not develop learners' ability to produce correct grammatical structures (R. Ellis, 2018).

Interlanguage theory development also supported CLT development. According to Selinker (2014), in second-language learning, learners develop an interlanguage that is “a linguistic/cognitive space that exists between the native language and the language that one is learning. Interlanguages are non-native languages which are created and spoken whenever there is language contact” (p. 223). Learners create interlanguage when trying to express ideas using the second language. Interlanguage has its structure and forms that are not the same as the target language but can vary systematically (Selinker, 2014). These interlanguages have their developmental process, which is not affected particularly by external instruction (VanPatten, 2014). In other words, at its core, interlanguage development relies on implicit learning mechanisms, and these implicit learning mechanisms must be the focus of second-language learning.

Krashen (1985) also claimed that learners could acquire language structure automatically when language communication is successful, and the language input is understood and sufficient. Furthermore, he believed that language learners could pick up a language structure but not learn

it through grammar instruction because language acquisition is subconscious (Krashen, 1985; Krashen & Terrell, 1983).

With the development of the above theoretical and research ideas, as an alternative method to PPP, the CLT approach developed rapidly and has had a broad and profound effect on language teaching worldwide and dominated second-language and foreign-language teaching classrooms.

After decades of classroom practice, however, some researchers have found that second-language learners in CLT programs lack grammatical accuracy. This phenomenon was observed in some French immersion programs (Harley, 1993; Swain, 2000) and some English as a second-language (ESL) intensive programs (Spada & Lightbown, 1993; Lightbown & Spada, 1997). Researchers observed the persistence of errors in learners' interlanguages, although those learners have been given plenty of opportunities to experience comprehensible language input. Therefore, some researchers started to believe that incidental learning is insufficient for second- or foreign-language acquisition (Long, 2007). Some researchers have begun to advocate a Focus on Form instruction (Long, 1991). Unlike traditional grammar instruction, which teaches language forms in isolation, Focus on Form instruction draws learners' attention to language forms as objects in context during meaning-based lessons (Long, 2007). TBLT contains the characteristics of both CLT and Focus on Form instruction.

Fluency studies in TBLT classrooms

Because the task is the base in the TBLT approach, many researchers first focus on the task itself to study fluency development. Skehan (1996) claimed that manipulating task characteristics and conditions affect learners' language fluency development. Many TBLT

researchers support the idea that task types influence language fluency. They believed certain tasks could foster a language learning context to encourage and involve learners to communicate fluently and effectively (R. Ellis, 2018). Therefore, multiple studies have tried to figure out what types of tasks can support learners to develop their language fluency.

Skehan (1996) reviewed many studies of task-based approaches to instruction and concluded that giving learners the right difficulty level of communicative tasks to avoid excessive processing demands will disrupt fluency performance. In addition, nonchallenging tasks should be avoided because they will not promote learners' abilities.

Foster and Skehan (1996) investigated three different types of tasks: a personal information exchange task, a narrative task that requires participants to construct a story based on a set of pictures, and a decision task that has participants act as judges and reach an agreement with their partner on how to sentence the criminals. The experimental study was conducted in a university-level English as a foreign-language pre-intermediate-level classroom. The research results found that the personal-task group demonstrated more fluency than the other two task groups. This study provides insight into the relationship between task types and the cognitive demands a task requires on learners. When participants carry on a personal information exchange task, they will process more familiar information than a story narration task and a decision-making task. Therefore, a personal information exchange task has fewer cognitive demands on learners than the other two tasks. Consequently, one can conclude from this study that alleviating cognitive demands can improve fluency performance. Robinson (2011) also pointed out that complex tasks lead to less fluent language than simpler tasks. In my study, the pre- and posttest speaking topic was describing the Chinese New Year celebration. For some

students, it would be a more personal task because they celebrate Chinese New Year at home. Therefore, this speaking task would be easier for them than for their peers who do not have a personal experience of the Chinese New Year celebration. Therefore, before the mediation intervention, I collected students' family language information, so that I could be aware of whether this factor affects students' speaking-task performance.

Although both Foster and Skehan (1996) and Robinson (2011) noticed trade-off effects between language-fluency development and accuracy and complexity development. Robinson (2011) argued that complex tasks cause less fluent language than simpler tasks but improve language accuracy and complexity. He explained that complex tasks could promote more interaction, attention, and information uptake from input and task performance than simpler tasks. Foster and Skehan (1996), however, found that complex tasks decreased language accuracy because too difficult tasks will make learners over-emphasize fluency but pay less attention to accuracy. Learners only have a specific attentional capacity. If the attentional capacity has been used for language fluency, the attentional capacity that can be used to focus on language accuracy will be smaller. Robinson (2011) and Forster and Skehan (1996) have very different claims about task complexity and its relationship with language-fluency development. Although Robinson thought that complex tasks can motivate learners to improve language accuracy and complexity but not fluency, Forster and Skehan believed that the difficulty of a complex task will draw learners' attention totally to fluency but not to accuracy. Although their claims are controversial, each of their claims is logical in its way because the effectiveness of task performance is relevant to many different factors. What Robinson observed is relevant to the relationship between tasks and learners' motivation, whereas Forster and Skehan's conclusion is

relevant to the relationship between tasks and learners' cognitive capacity. Therefore, to build an efficient mediation model, first, learners' motivation should be considered in language-fluency development. Second, the relationship between tasks and learners' cognitive ability should be considered in language-fluency development as well. In addition, to manipulate tasks, besides choosing what type of tasks, teachers also need to decide how to alter a given task's difficulty level and manipulate the way attention is directed (Skehan, 1996).

Some research results also show that task conditions, like having planning time or not, have different effects on language-fluency performance. For example, Foster and Skehan (1996) investigated four groups with three varying planning conditions. Two control groups were assigned tasks without planning conditions. Two experimental groups were each divided into two, half the participants carried on a task with the undetailed planning, and the other half carried on a task with the detailed planning condition. All the groups' students' performance was recorded on three occasions at weekly intervals. Each time they performed one of the three designed tasks, which was different from week to week. The recording was later transcribed and coded based on a range of fluency variables including reformulations, replacements, false starts, repetitions, hesitations, pauses, and silence. Then, a one-way analysis of variance (ANOVA) was performed for each dependent variable for each task to compare the three groups' performance. The results showed that in regard to the measures of pauses and silence, the no-planning group was the least fluent than the other two groups. The two planning groups had little fluency difference in the personal and the decision tasks. In narrative tasks, the detailed group performance demonstrated greater fluency. These study results indicate that there are fluency-development strategies that teachers can use in instruction. For example, giving students

planning time and teaching them how to perform detailed planning for narrative tasks can promote fluency performance.

Instructional techniques also affect fluency. Van de Guchte et al. (2015) conducted an experimental study in a German as a foreign-language secondary classroom. Two treatment groups were provided with different types of feedback for their grammar task, whereas the control group was not assigned any treatment. One experiment group was treated by using recasts. Recast is an error correction technique in which the instructor repeats the error back to the learner in the correct form. The other experimental group was treated by using prompts, which included clarifying requests, repetition, and giving metalinguistic feedback or elicitations to give feedback. Each experimental group received two interventions. Participants worked on different tasks during each intervention. For each intervention cycle, the study design was pretest-test-posttest-delayed posttest. Two different teachers taught two different experimental groups. During each intervention, the teacher wrote down the number of feedback moments for each participant. Posttests were oral fluency tests. Two raters listened to students' oral recording samples and rated their performance on speech rate and pausing based on the rating scale from 1 to 5 (very low fluency to very high fluency). After all the data were collected, a general linear mixed model (GLMM) statistical analysis was used. The study showed that both experimental groups showed fluency development whereas the control group did not. The results of this study implied that the teacher as a mediator might use instructional techniques like recast and prompts while giving students corrective feedback to help them improve fluency.

Some research also showed that task sequencing like task repetition would enhance language fluency. Bygate (2001) conducted a task repetition experimental empirical study with

university nonnative English speakers in an English as a second-language class. There were three groups: one control group and two experimental groups. All groups performed the same tasks at pretest, which included one oral narrative task and one interview task. One experimental group had varied verbal narrative tasks to complete during the treatment period, and the other group had various interview tasks. After 10 weeks, all the groups received one repetition narrative task, one repetition interview task, plus one new narrative task, and one new interview task during the posttest. All three groups' participants' posttest recordings were collected. Then, the fluency variable and the number of pauses per *t*-unit was calculated and analyzed by ANOVA and post-hoc paired *t* test. The study results showed that for all three groups (treatment and control), fluency had improved at the posttest on the repeated task performance. Bygate (2001) concluded that repetition can be a highly contextualized cognitive rehearsal, so it can release spare cognitive capacity to speakers to increase their fluency. Bygate's research, however, has not answered if there is a principle about how to design repetition tasks.

Lynch and Maclean's (2001) study investigated why and how task repetition improved learners' language performance including fluency development. They conducted a case study of adult English-language learners performing repetition tasks. Qualitative data were collected, and the researchers investigated the effect of the repetition tasks from the perspectives of learners and interactions between learners. The repetition is implemented in the poster carousel task, in which poster presenters need to answer questions from six runs of different poster visitors about their posters' content. This poster carousel task allows presenters to have the opportunity to present their posters six times through oral interpersonal interaction. All the interpersonal interactions were recorded and transcribed. Participants' self-report questionnaires were collected. Through

the qualitative data analysis from syntax, phonology, vocabulary access or selection, Lynch and Maclean concluded that task repetition improved learners' fluency development. Also, the study pointed out that the repetition design was built into the task naturally in their study and the repetition was not rote. Learners, however, also indicated that the repetition process aided them in relaxing during output performance. The implication of this study is that when teachers design task repetition, they need to figure out how to build task repetition in a natural way that will not bore learners.

The various processes, task conditions, instructional techniques, and task sequencing mentioned above, all affect language-fluency development. In addition, these different processes have one common aspect: they are under the implementation of the teacher. Teachers, who implement tasks, make the tasks come to life by reframing and reinterpreting through lesson planning and teaching practice reflection and reformulation (Rolin-Ianziti, 2010). Now, the same questions arise again. If a teacher is a task implementer, how do they reframe and reinterpret tasks? If they need to make a choice, what are the principles they need to be based upon? There are so many different aspects related to teacher implementation, and there are so many different perspectives about how to choose tasks and design tasks. What should a teacher do?

Long (2014) pointed out that the teacher's role in TBLT requires more extraordinary expertise. Also, it is more demanding than their roles in the traditional PPP (presentation, practice, and production) approach. Bygate (2015) indicated that because a task is not a mechanism, it needs the teacher to mediate the learners to enter into the space created by tasks, and the teacher needs to support and accompany learners during their learning process. How can a teacher mediate learners into that space? How does one support and accompany learners during

the learning process? The teacher's role as a mediator who mediates learning in TBLT, however, rarely has been explored in TBLT research (Rolin-Ianziti, 2010; Van den Branden, 2016).

Van den Branden (2016) explored the teacher's role as a mediator in different TBLT stages. In the pretask stage, the teacher selected content and decided the focus of the classroom activity. In the during-task stage, the teacher was the learners' interactional partner, a motivator, organizer, conversational partner and supporter, and interlocutor. In the posttask stage, the teacher was the evaluator, feedback provider, and learning supporter. Van den Branden (2016) also pointed out that when the teacher does the above actions as a mediator, they need to differentiate individual learning needs, monitor learners' learning process, provide a safe learning environment, and so on. Although Van den Branden listed everything that a teacher can do to mediate learning in TBLT classrooms, the differences between a teacher's roles in TBLT and a regular classroom are not apparent. Also, how implementing mediation is more than just knowing one's role. As a content selector, how to select content? Based on what principle? As a learning motivator, how to motivate learning? Are choosing specific tasks or knowing individual learners more essential factors in terms of motivation? Do teachers need to explore a task feature first in order to decide what tasks to choose? Van den Branden (2016) did not answer these questions. Therefore, the mediation described in his study is incomplete and should not be used as a mediation model to guide other teachers' practice.

Some researchers have more precise answers about how to conduct mediation in TBLT classrooms. R. Ellis (2009) compared an unsuccessful "target-orientated" TBLT program in Hong Kong elementary schools with a successful TBLT program in a Thai university and concluded there are some principles that may help implement TBLT successfully: (a) the tasks

must be tailored to students' language proficiency level, (b) teachers need to know clearly what a task is, (c) both teachers and students need to know the purpose of performing the tasks, and (d) teachers who implement tasks need to be involved in task material development. These principles that Ellis suggests in task implementation follow some elements of mediation. Van den Branden (2009) observed two Dutch second-language classrooms. He found that when teachers interact with tasks, they mediate learners' learning by modifying task scenarios and negotiating task objectives and modality of task implementation with learners. R. Ellis (2018) specified the types of interactions that most successfully mediate learning are the ones that can scaffold learners to perform new functions. These researchers described how teachers carry out or should conduct mediation in TBLT classrooms either through their observation or by drawing their conclusions through analyzing other people's studies. Also, the teacher's role as a mediator investigated in these studies was not focused on mediating fluency development. Last, there is no clear process for how a teacher can mediate students' learning in the TBLT classroom in these studies and how and why they should conduct mediation in one way or another. The limitations of these studies point to a gap in the research.

TBLT teaching methodology

A language-teaching approach is a set of underlying beliefs and conceptions about language teaching and learning (Iveson, 2019). The methodology of the TBLT teaching approach refers to the various options for task implementation, which may affect task performance and learning (R. Ellis et al., 2020). The presentation of a method always aligns with the underlying theories of the relevant approach (Iveson, 2019).

As a teaching approach, TBLT does not have a single well-defined methodology of teaching (R. Ellis, 2009), and it also does not have one commonly acknowledged framework of approach (Iveson, 2009). There is a strong version and a weak version of the TBLT approach. In the strong version, tasks are the unit of language teaching, and everything else is supplementary; whereas in the weak version, tasks are a necessary part of instruction, but they attach to or are compatible with a more complex pedagogic context (Skehan, 1996).

The most popular and widely accepted way of implementing the TBLT approach in classrooms is the three-phase framework that includes a pretask phase, an on-task phase, and a posttask phase (Bygate, 2016; Willis & Willis, 2007). During the pretask phase, students are prepared to start the task, including the introduction to the topic and task, a presentation of input materials, learners' free or guided planning, and so forth. During the on-task phase, learners engage in the task, with teachers providing support, clarification, checking, providing input to ensure learners are oriented toward an appropriate task outcome. During the posttask phase, learners' outcomes will be presented, and learners will obtain feedback or do self-correction. Also, learners will have opportunities to practice the relevant form-focused language.

One of the problems of task-based learning is that its curriculum can become a collection of disconnected classroom activities. To avoid this problem, some researchers integrate tasks through a project to provide coherence for developing contextualized language work in TBLT classrooms (Bygate, 2016; Nunan, 1992). This type of task-based project comprises a sequence of tasks based around one specific topic, and each task in the task-based project has its outcome or purpose. Performing this sequence of tasks finally will lead learners to a specific end product that can be shown, displayed, or made public for others to appreciate (Willis & Willis, 2007). Du

(2012) has described the natural connection between TBLT and project-based learning. For example, both of them are student-centered, try to engage learners in real-life association and meaningful learning, and both of them focus on the process instead of merely the product of learning. Therefore, TBLT project-based learning will solve the potential disconnection between tasks within a learning unit.

Multiple TBLT project-based learning curriculums have been implemented in a second-language or foreign-language classroom and have shown positive results (Canto et al., 2014; Du, 2012). Therefore, in this action research study, I will use a project that comprises a sequence of tasks in the TBLT classroom. In each lesson, I will use the three-phase pathway in implementing TBLT. Through this implementation approach, the potential of fragmentation of TBLT practice will be avoided.

In summary, as a constructivist-learning teaching approach, the task-based language teaching approach developed from the communicative-learning teaching approach and has a natural link to project-based learning. Fluency development in the TBLT classroom has been studied from many different aspects: different types of task effects, task conditions like having planning time or not, and task sequencing like task repetition's effect. The role of the teacher as a mediator, who mediates tasks performance, however, has remained unexamined.

Mediation Models

The concept of mediation can be traced to Hegelian philosophy (O'Connor, 1999; Presseisen & Kozulin, 1992). Later on, it was developed by Lev Vygotsky (1896-1934) and Reuven Feuerstein (1921-2014) separately as alternative theoretical approaches that depart from Jean Piaget's four stages of child cognitive development theory (Kozulin & Presseisen, 1995).

When Vygotsky and Feuerstein were forming their conceptions of mediation theory, Jean Piaget's child development theory was the most influential psychological theory of child development (Kinard & Kozulin, 2008). Feuerstein was Jean Piaget's student in the early 1950s. Based on Jean Piaget's (Piaget & Cook, 1952) model, cognitive change is a transition from one developmental stage to the next one. Each stage is age specific, determined by a child's maturation and their direct interactions with the environment (Rubtsov, 2020). Piaget's cognitive development theory, however, has two missing pieces: (a) it is missing the sociocultural aspect of learning perspective, and (b) it ignores human mediators from children's learning process because Piaget described the learning process as a direct interaction between the child and the environment (Kozulin & Presseisen, 1995). Vygotsky and Feuerstein separately and independently explored these two areas that Piaget neglected in his theory and built their different but connected mediation models.

Vygotsky's mediation theory

Vygotsky's mediation theory development was influenced by the German philosophers Hegel and Marx. O'Connor (1999) summarized meanings under the concept of mediation in Hegel's philosophy: mediation is the intellectual mechanism that human beings use to move from contingency to necessity, the process of knowledge has to do with mediation, one cannot know an object without going through mediation, mediation is one form of judgment that determines the possibility of content, and any fact's precondition is a historical production, so it is mediated. According to O'Connor (1999), Hegel also thinks that humans' satisfaction of their needs comes indirectly through work with end products for others but not for themselves. Therefore, "work" is the mediated activity connecting with human consciousness and

self-consciousness (Pesseisen & Kozulin, 1992). Hegel brings mediation, tools, and a social-cultural environment into the vision of human cognitive development. He thinks that the materials humans use for work interpose between humans and the natural object (Pesseisen & Kozulin, 1992). Hegel's ideas greatly influenced Marx, who later influenced Vygotsky's thinking (Kozulin & Pesseisen, 1995).

Vygotsky explored sociocultural mediation in the learning processes, which Piaget neglected in his theory. From Vygotsky's (1978) perspective, children do not explore their environment directly but through methods of action like using symbolic tools (signs, linguistic and mathematical systems), which exist in a given culture (Kozulin & Pesseisen, 1995). Vygotsky (1978) suggested three major classes of mediators: material tools, psychological tools, and other human beings. For Vygotsky, material tools are directed at the processes in nature, and they have an indirect influence on human psychological processes. Psychological tools mediate humans' psychological processes, but human beings are carriers of material and psychological tools (Pesseisen & Kozulin, 1992). Vygotsky (1978) addressed the function of psychological tools, like natural and artificial languages, discourses, and cultural-symbolic systems, during mediation. Therefore, in Vygotsky's mediation model, learners are mediated by others using psychological tools and mediated by others into using psychological tools.

Vygotsky developed the famous mediation concept of the Zone of Proximal Development (ZPD). ZPD refers to the distance between what a learner can do independently and what a learner can achieve with aid. Although Vygotsky created the concept of ZPD, he did not have a chance to explore how human beings as mediators mediate learning to achieve the learning potential of ZPD. Scaffolding as a form of mediation, which studies human beings as a mediator,

derives from Vygotsky's idea of Zone of Proximal Development but was not directly created by Vygotsky (Maggioli, 2013).

R. Feuerstein's mediation theory

Because Vygotsky's thinking is that human beings function as no more than carrying tools in the mediation process, a research opening existed (Presseisen & Kozulin, 1992). This opening was explored by R. Feuerstein (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2012), who studied mediation by focusing on the human being as a mediator. Furthermore, he proposed that the role of the human mediator is the creation of cognitive prerequisites of learning for learners (Kozulin, 2004).

R. Feuerstein (1990) categorized children's learning into two types: one is direct learning based on the immediate interaction between the child and the environment and the other is mediated learning in which the human acts as a mediator between the environment and the child to mediate learning, so the child can have a mediated learning experience. Feuerstein believed that this mediated learning experience is a decisive factor in children's cognitive development.

Kinard and Kozulin (2008) identified the important differences between Feuerstein's thinking and Piaget's: Feuerstein was concerned with the role of human mediators in a child's life and how the interaction with a human mediator can modify a child's cognitive structures, whereas Piaget viewed that children's learning happens when they interact with the environment directly.

The difference between R. Feuerstein's thinking and Piaget's can be understood better in the context of how their theories were developed. Piaget worked with middle-class Swiss children who had a stable life and ordinary educational experiences (Kinard & Kozulin, 2008).

The child group that R. Feuerstein's research is based upon, however, are child survivors of the Holocaust, who were deprived of a normal environment growing up and missed having standard educational experiences, and whose cognitive development lagged behind their age norm. R. Feuerstein's theory was developed to help this group of children learn the new country's language and assimilate them into the new educational system after they immigrated to Israel (Kinard & Kozulin, 2008), which is why Feuerstein would focus on how to help learners overcome their cognitive barriers and achieve their potential learning achievement in his mediation theory.

Connections between R. Feuerstein's and Vygotsky's theories

From some researchers' perspectives, R. Feuerstein's mediation theory is an extended exploration of Vygotsky's mediation theory (Kozulin, 2004; Presseisen & Kozulin, 1992). For example, Lidz (1991) compared scaffolding, which derived from Vygotsky's ZPD concept, with R. Feuerstein's MLE category "Mediation of competence" and pointed out the similarity between these two. Scaffolding means that a mediator will adjust the complexity and difficulty of teaching instruction or interaction to support learners in achieving their potential. Mediation of competence also means a mediator uses different ways to help and support a learner to meet challenges and be confident and competent to solve a problem. Lidz's (1991) study showed that R. Feuerstein's MLE theory already incorporates the ZPD concept.

Presseisen and Kozulin (1992) tested both Vygotsky and R. Feuerstein's mediation theory in learning. They conducted a Vygotsky-based mediation learning research study with a group of adult Russian immigrants. The experiment used verbal (multiple choice) and pictorial tools to carry out mediation. The experiment results showed that the mediation they conducted in the

classroom, however, did not effectively improve the learners' performance that they wanted to mediate. Presseisen and Kozulin (1992) inferred from this experiment that Vygotsky's mediation theory has not been explored thoroughly because it has not included the mediation for the transmission of meaning. Kozulin (2002) also suggested that the issue with Vygotsky's mediation theory is that Vygotsky left the forms of mediation open. The part of mediation Vygotsky left open is where R. Feuerstein's mediation theory has filled in. R. Feuerstein developed specific mediation criteria for having mediated learning experiences happen.

Brown (2002) pointed out that Feuerstein's mediation theory is a branch of motivational psychology, which investigates the motivation that is encouraged by the mediator (Brown, 2002). From Lidz's (1991), Presseisen and Kozulin's (1992), and Brown's (2002) studies, the conclusion can be drawn that Feuerstein's mediation theory is an extended exploration of Vygotsky's mediation theory.

In summary, Vygotsky and R. Feuerstein's mediation models are two essential models of mediation. These two models have many connections. Both of them departed from Piaget's child cognitive development model. Vygotsky developed the ZPD concept and focused on mediation by using psychological tools. R. Feuerstein developed the MLE theory and addressed human beings as the mediator. R. Feuerstein's mediation theory extended Vygotsky's theory, which is a reason that this action research used R. Feuerstein's mediation theory as the framework for mediation practice.

Scaffolding and mediation

To understand the concept of mediation, it is necessary to consider the concept of scaffolding, which has a confusing relationship with the concept of mediation. Today, the term

“scaffolding” is used on many occasions when teacher interventions happen. The scaffolding of educational practice could range from tutoring to facilitation, even to direct instruction (Maggioli, 2013).

The original concept of “scaffolding” was presented by Wood et al. (1976). It was defined as a process that enables a child to achieve a learning goal beyond one’s ability if not being assisted. Many researchers identify scaffolding as a form of mediation that derives from Vygotsky’s idea of Zone of Proximal Development (Maggioli, 2013). Vygotsky himself had never brought up the concept of scaffolding. Vygotsky (1978) defined ZPD as the “distance between the actual development level as determined by independent problem solving and the level of potential development determined through problem-solving under adult guidance or in collaboration with more capable peers.” Maggioli (2013) pointed out that many people relate scaffolding to the ZPD because these two constructs are compatible. Both of these constructs relate to purposeful intervention by a more knowledgeable adult to interfere in a learner’s or novice’s learning. Also, both of these two constructs relate to two different levels of performance: assisted and unassisted.

If the concept of scaffolding is derived from Vygotsky’s ZPD construct, it can be inferred that scaffolding is one mediation form that is based on Vygotsky’s theory of mediation. Based on Vygotsky’s mediation theory, a learner is assisted by an expert who uses conceptual or material tools to facilitate meaning to understand the social forms or regulations associated with a particular activity (Maggioli, 2019). Once the learner can use the mediational tools independently, the learning has developed (Maggioli, 2019).

If the concept of scaffolding connects to ZPD, it means it relates to the concept of mediation. Therefore, some researchers think that R. Feuerstein's mediated learning experience theory further explores Vygotsky's construct of the ZPD (Maggioli, 2013). Maggioli (2013) even included Feuerstein's mediation theory in the scaffolding model he built. Chaiklin (2003), however, suggested educators have adopted the concept of ZPD in an overly simplified form, and the connection of scaffolding with ZPD is an overly simplistic match. From this perspective, examining how to implement R. Feuerstein's mediation theory in teaching rather than simply using the ZPD concept to guide mediation practice becomes more meaningful, which is why this action research practiced mediation under the guidance of R. Feuerstein's mediation theory.

Mediation Theory Implementation in Second- or Foreign-Language Classrooms

Feuerstein's mediated learning theory has been successfully implemented with immigrants from different cultures who have a low degree of knowledge of the host country's language to adapt to schooling in Israel (Todor, 2013). Most studies inspired by R. Feuerstein's MLE theory are theory driven (Kozulin, 2002). There are very few studies about practicing his mediated learning theory in foreign-language classrooms. Brown (2002) thought that Feuerstein's mediation theory had been overlooked in the field of education. There are survey studies about teachers' knowledge of mediation and attitude toward conducting mediation in high-school English as a foreign language (EFL) classrooms in China (Cheng, 2011, 2012). Cheng's studies showed that teachers do not implement mediation in classrooms because they do not know about mediation. Mellati et al. (2015) conducted a survey with 86 ESL teachers in Iran and interviewed 10 of them to investigate teachers' attitudes toward R. Feuerstein's mediation theory. The survey results showed that not every teacher and teaching environment is ready for

conducting mediation theory in language classrooms. There is some empirical research about using Feuerstein's mediation theory in language classrooms. Roehr-Brackin and Tellier (2019) implemented MLE to learn if it can modify learners' language-analytic ability. Dam et al. (2020) conducted MLE with Spanish-English bilingual students to investigate if it effected their vocabulary knowledge in both Spanish and English. Mutlu and Şahin (2019) conducted an MLE in a seventh-grade English class in Turkey to find its effect and what kind of cognitive activities will help develop foreign-language learners' thinking and analyzing skills.

Most mediation studies on second- or foreign-language learning mainly derive their mediation strategies from Vygotsky's mediation theory or combine R. Feuerstein's mediation theory with Vygotsky's. Many of those studies also are called dynamic assessment research. The reason is that both R. Feuerstein's and Vygotsky's mediation theories address the use of mediation to help learners achieve their learning potential. Also, their theory addresses assessing learners' learning potential as more relevant than assessing what learners have learned already. The empirical studies that have been conducted in this field include vocabulary development (Dam et al., 2019), reading proficiency development (Kozulin & Garb, 2002), and listening skill development (Emadi & Arabmofrad, 2015). Mediating second-language speaking proficiency development is studied (Ebadi & Asakereh, 2017; Ebrahimi, 2015; Hill & Sabet, 2009; Poehner, 2008; Safdari & Fathi, 2020). Most mediation studies on speaking- proficiency development did not focus on speaking-fluency development but speaking accuracy (Ebadi & Asakereh, 2017; Poehner, 2008). Only a few studies explored fluency development in this field, like Levi (2012) and Safdari and Fathi (2020).

Hill and Sabet (2009) used mediation to intervene in learners' spoken performance. The purpose of the study was to explore whether transfer of learning could occur between two role-play situations. The assistant in the study provided mediation assistance in the form of questions, prompts, and pairing learners of differing skill levels (higher and lower). The study collected speaking assessment data four times during one year in a university-level first-year speaking and listening class. In each speaking assessment, participants needed to perform two role plays. The task in the second role play was more difficult than in the first one. During the first assessment, the assistant did not provide any mediation. In the second assessment, the assistant used the recast technique to provide mediation assistance and paired learners from higher to lower level. In the third assessment, the assistant used recasting and comprehension checks and paired top learners with lower learners respectively. In the last assessment, mediation assistance addressed the negotiation of intended meaning, and internalization of transfer of learning for learners who had not shown internalization. The researchers collected recordings of students' interactions from each assessment. The interaction data between learners and the assistor showed that learners' speaking performance benefitted from the task sequencing technique, the pairing technique, and recast mediation. The qualitative data in the research results showed that learners' speaking performance skills were improved. This study, however, did not clarify what part of spoken performance has been improved in this study. Is it fluency? Accuracy? Or complexity? The biggest problem with this study is that the connection between the four assessments in the study is not clear. The study was designed so that the mediation treatment happened within each assessment, but the study did not provide any information about what happened between each assessment. Therefore, it is not clear whether what happened

between each assessment had any effect on learners' speaking performance. In order to avoid the unknown gaps between assessments, my study used a pretest-intervention-posttest design.

Ebadi and Asakereh (2017) provided an example of mediation design that avoided the unclear connection between different assessments and mediation stages in Hill and Sabet's (2009) study. Ebadi and Asakereh conducted an EFL learners' case study. The study focused on mediating learners' grammar error correction in speaking performance. In order to address learners' speaking problems, the study procedure they designed was first to diagnose learners' speaking problems and then assist the speaking skills development in the following six sessions. Then, they assessed learners' progress again using the task used in the first session. After that, learners were asked to perform a new and more challenging task to assess whether learners had achieved transcendence. The mediation interaction technique was giving feedback from most implicit to most explicit: from the mediator asking learners to correct their errors to the mediator providing learners with an example. The study used Lidz's (1991) learners' responsiveness to mediation scale to assess how well learners' responded to the mediation. Also, the study coded the frequency of learners' grammar errors under different error categories, and different learners' proficiency levels, before and after mediation treatment. The researchers coded mediation types and the use of frequency during the pretest and posttest. Learners' speech was coded under different private speech types to indicate if learners have developed self-regulation skills. The research results showed that mediation decreased learners' language errors and improved their self-regulation and language performance. What this study focused on, however, is the accuracy development in oral performance, which is representative of mediation studies that investigate

the effectiveness of meditation on learners' second-language speaking performance. These studies usually only address language accuracy issues but not fluency development.

There are very few mediation studies that address oral fluency development. Safdari and Fathi's (2020) is one of them. This study used the mediation techniques that Ebadi and Asakereh (2017) used, but their study attempted to explore if mediation works for both language accuracy and fluency in an English as a foreign-language classroom. In the study, 62 English as second-language learners were divided into a control group and an experimental group. After a speaking pretest, in the experimental group, learners' grammar and vocabulary were mediated by using a mediation strategy that provides feedback from the most implicit to the most explicit. The control group received the same learning content as the treatment group but without mediation. In the speaking posttest, learners' speaking fluency and accuracy scores in the control group and treatment group were collected separately. The fluency variable, that is, speaking speed rate (the number of syllables per minute), accuracy, and the number of error-free clauses were calculated and analyzed by an analysis of covariance (ANCOVA). Also, the researchers interviewed five participants in the treatment group to assess their perceptions of the effectiveness of mediation for speaking accuracy and fluency. The study concluded that mediation could improve language accuracy but does not improve oral fluency performance. There are many different types of mediation. This study only confirms that the type of mediation used by these researchers does not improve learners' fluency performance, but the results cannot exclude the effects of other types of mediation, which is a gap that their study leaves for other researchers.

Levi's (2012) study used different ways of mediation from Safdari and Fathi's (2020) study. Her research showed that it is possible to improve EFL learners' speaking fluency with the mediation used in her research. Levi's study explored if learners' oral proficiency scores on the Israeli English matriculation test would be improved as a result of mediation and by what types of mediation. Levi's study collected data from 73 students in 11th grade who were divided into three groups. One control group received no mediation treatment. One experimental group received group meditation guided by a teacher. The other experimental group was provided self-mediation. The study design followed a test-mediation-test procedure. It collected learners' oral proficiency scores in the pretest, posttest, and followup test. The oral proficiency scores include communicative ability (including the ability to understand a message, interaction fluency, and extendedness of answers) and accuracy score. The mediation techniques the study used included the following stages: (a) introducing the oral proficiency test concept and examining learners' personal goal setting in learning through examining learners' performance in pretest, (b) going through oral proficiency test rubrics and comparing with learners' pretest performance in video recording to strengthen learners' understanding of the concepts, which included in oral proficiency competence, and (c) learners share their opinions about their performance they examined in their performance videotape. The two experimental groups used the same mediation techniques and procedures, but a teacher guided one group's mediation and the other group students had individual self-mediation. All mediation sessions were audio-recorded. All groups also were given a followup test to assess if transcendence had happened after mediation. Two raters rated the transcribed mediation sessions using the learning strategies checklist to investigate what forms of mediation were more effective for oral

proficiency development. The test scores showed that both learners' oral accuracy and fluency improved statistically significantly in two experimental mediation groups but there was no statistically significant difference between group mediation and self-mediation group. The data collected from the checklist showed that group mediation supports learners' oral proficiency development more than students' self-mediation did. Levi's study results supported Safdari and Fathi's (2020) conclusion that mediation can enhance oral performance accuracy. Levi's study, however, contradicts the results of Safdari and Fathi's (2020) study on whether mediation can improve fluency in speaking performance.

In summary, this section's review showed the research gap in mediation implementation in second- or foreign-language fluency development. First, compared with Vygotsky's mediation model, R. Feuerstein's mediation model is a more elaborated mediation model, but it is not well known and rarely has been implemented in second- or foreign-language classrooms; second, there is a conflict in mediation effects in fluency development in empirical studies. Although some research results showed that mediation has a positive effect on fluency development, others have not. Based on this literature review, in my study, I used R. Feuerstein's mediation model to guide mediation practice and to investigate if the mediation practice will have an effect on fluency development in a second- or foreign-language classroom.

Summary

This chapter reviewed language-fluency models, fluency studies in task-based language teaching classrooms, mediation models, and mediation theory implementation in second- or foreign-language classrooms. In the language-fluency models section, different fluency models, including Schmidt's (1992), Schneider and Detweiler's (1988), Ullman's (2001), and

Segalowitz's (2010), were presented. Segalowitz's (2010) cognitive-based fluency model was chosen for this dissertation study because it provides theoretical support for this action research to investigate what cognitive processes under fluency development that mediation can affect. Also, Segalowitz's model provides a measurement resolution of how to measure cognitive fluency development by measuring utterance fluency.

In the section on fluency studies in task-based language teaching classrooms, a historical review of TBLT development and studies on the different aspects of fluency development were presented. The review showed that mediation had not been studied in fluency development in TBLT classrooms, hence the need for this study.

The mediation models section reviewed Piaget's (Piaget & Cook, 1952), Vygotsky's (1978) and R. Feuerstein's (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2015) mediation models and pointed out the differences and connections between these models. The review pointed out that both Vygotsky's and R. Feuerstein's mediation models departed from Piaget's child learning cognitive development model, and R. Feuerstein's mediation theory extended Vygotsky's mediation theory. R. Feuerstein's mediation focuses on the role of a human mediator between the learners and the learning environment, and it provides a systematic mediation framework. Therefore, this action research used R. Feuerstein's MLE theory as the mediation guideline.

The review of mediation theory implementation in second- or foreign-language classrooms showed that R. Feuerstein's mediation model was not well known and rarely implemented in second- or foreign-language classrooms. The review also showed controversial

research results of the effects of mediation on fluency development in empirical studies (Levi, 2012; Safdari & Fathi, 2020). All the above results indicate a need for this study.

CHAPTER III

RESEARCH METHODOLOGY

The purpose of this study was to investigate how to use a mediation model, built under the guidance of the Mediated Learning Experience (MLE) theory, to improve language fluency in a Task-Based Language Teaching (TBLT) second- or foreign-language classroom. Because very little prior research has assessed the mediation model in TBLT language classrooms, this study utilized action research to assess if the model is adequate.

In this chapter, the research methodology is outlined and described. First, a restatement of the research questions is presented, followed by a description of the research design, participants, human subject considerations, instrumentation, and intervention. This chapter concludes with a description of the procedures and data analysis methods.

Research Questions

Two research questions are the focus of this study:

1. How is mediation used in the Advanced Placement (AP) Chinese second- or foreign-language TBLT classroom to improve learners' utterance (cognitive) fluency?
2. To what extent does mediation improve learners' utterance fluency, as measured by the number of silent pauses, the number of corrections, and mean syllable duration, in the AP Chinese second- or foreign-language TBLT classroom?

Research Design

I conducted an action research study to explore how to implement mediation to improve learners' cognitive fluency in the AP Chinese second- or foreign-language TBLT classroom. The

study design followed the test-intervention-test procedure. Because utterance fluency is the measurable aspect of speech fluency that reflects the speaker's cognitive fluency (Segalowitz, 2010), this study assessed cognitive fluency development by measuring utterance fluency during pre- and posttest. The teacher conducted mediation during the intervention stage.

Action research often is conducted by practicing professionals to solve a problem or answer a question about professional practice in the field but not in a laboratory setting (Willis & Edwards, 2014). Kurt Lewin (see Willis & Edwards, 2014) in the 1940s developed this research method to improve professional practice. For Lewin, this form of action research connects schools, teachers, parents, and students, so it is a school-based, teacher-involved research method (Newton & Burgess, 2008). In applied linguistics studies, action research has been accepted as an empirical approach and engages practitioners in their individual professional growth through practical inquiry (Burns, 2015).

There are two basic assumptions about action research: one is that the research must focus on action, and the other is that action research practice is a sociocultural process but not an individual process (Willis & Edwards, 2014). Underlined by the first assumption, action research involves developing and implementing an action to learn if it makes a difference in professional practice or studying a particular context or setting to build knowledge that can lead to action in practice (Willis & Edwards, 2014). Also, action research is used when the solution to a research problem is challenging to identify because a universally accepted solution does not exist (Willis & Edwards, 2014). Underlined by the second assumption, action research usually will be done in a sociocultural environment. Through planning, data-gathering, reflection, and the dynamic interaction between action and reflection, action research possesses the strength to generate

improvement in further action (Burns, 2015). In the TBLT and mediation research field, a model for practicing mediation successfully in the classroom to improve language fluency does not exist. Therefore, action research can be an effective research method to learn how the assumed model works. Also, in this study, what I focused on was my mediation actions and how these actions affected students' utterance fluency development. The interaction between the mediator and mediatees is a sociocultural process, which satisfied the second assumption for conducting action research.

There are many models in educational action research. The most commonly cited action research model is Kemmis and McTaggart's (1988) four-moment action research model that includes the four stages of planning, acting, observing, and reflecting. In their model, action research is a continuous and interactive process (Altrichter et al., 2002). One plan-act-observe-reflect cycle is followed by another plan-act-observe-reflect cycle. The cycles will continue till the end of the research. In the planning stage, researchers will gather information and develop a plan to address the action research's problems in the planning stage. Then, in the acting stage, researchers will implement the plan. Next, in the observing stage, researchers will observe and evaluate changes and gather data. Finally, the reflecting stage can lead to the beginning of another action research cycle.

This study's research design followed the test-intervention-test procedure. To balance my role as the teacher and researcher responsible for data collection, in the planning stage, I was aware of my double roles in the research when I developed the lesson plans and learning materials. In the action stage, I used an audio recorder to record my interactions with students during class to supplement my subjective classroom observation of my teaching. In the reflection

stage, after each class, I recorded my observations and reflections immediately in the teaching observation and reflection log, and used the MLE teaching self-rating chart to rate my own teaching.

Research Setting and Participants

This action research study was conducted in one AP Chinese second- or foreign-language course in an urban high school in the Bay Area, during the 2022 Spring semester. The class was a 4th-year Chinese class in the high school. It was an elective course and was open to students in the whole school to enroll. As this is a year-long course, students began the course in Fall 2021 and continued on in Spring 2022.

There were a total of 25 students from this AP Chinese second- or foreign-language class who participated in the study. Twenty participants completed the whole process of the 10 lessons during a 16-day mediation cycle. Five participants were absent for one to 4 days during this research cycle. Twenty-two out of these 25 participants completed both the pretest and posttest. Only twenty-one out of these 25 participants' speaking samples were valid, however, for the pretest and posttest.

The demographic information of these 25 participants is presented in the following tables (Tables 2-5). The demographic information for four participants whom I did not collect pre- and posttest data from is presented in Table 6.

From Table 2, the majority of participants were 10th graders, who were 56% of the participants. Twelfth graders were the second largest group. They were 32% of the participants. Tenth graders who signed up for AP Chinese usually have Chinese learning experiences prior to high school. Twelfth graders who signed up for AP Chinese usually were 4th-year Chinese

Table 2
Participants' Grade Level

Grade	<i>f</i>	%
10th	14	56
11th	3	12
12th	8	32
Total	25	100

language learners who generally started Chinese learning during high-school freshman year.

The majority of the participants were female students (Table 3), and the majority of participants were Asian (Table 3), which is representative of high-school Chinese language classes in California. The Chinese language is usually chosen by Asian students who have a cultural connection to Chinese culture.

Table 3
Gender and Race Demographics for Student Participants in AP Chinese Class

Variable	<i>f</i>	%
Gender		
Female	18	72
Male	7	28
Total	25	100
Race		
White	2	8
Asian	21	84
Other	2	8
Total	25	100

Forty-eight percent of participants' home languages is a Chinese dialect other than Mandarin Chinese (Table 4). A total of 16% of participants' home language is Mandarin Chinese solely (4%) or Mandarin Chinese with other languages (12%). The remaining 36% of participants' home language is English. Therefore, a total of 64% of the participants are Chinese

heritage speakers, and for 84% of the participants, Mandarin Chinese is a second or foreign language.

Tabel 4
Participants' Home Language

Home Language	<i>f</i>	%
English	9	36
Mandarin Chinese	1	4
Other Chinese Language	12	48
Other		
English and Mandarin	1	4
Mandarin and other Chinese Language	1	4
English, Mandarin and other Chinese Language	1	4
Total	25	100

Table 5
Participants' Years of Mandarin Chinese Language Learning

Year of Mandarin Learning	<i>f</i>	%
Formal		
1-2 years	3	12
3 years	6	24
4 years	2	8
5 years	1	4
5+ years	6	24
Formal+Nonformal		
6-7 years	3	12
8 years	1	4
Nonformal		
8 years	1	4
10 years	1	4
11 years	1	4
Total	25	100

Table 6

Four Participants' Whose Pre- and Posttest Samples Were not Collected

Demographic Information	<i>f</i>	%
Grade		
10th	2	50
12th	2	50
Gender		
Female	3	75
Male	1	25
Race		
Asian	3	75
White	1	25
Home Language		
Chinese dialect other than Mandarin	2	50
English	2	50
Year of Mandarin Learning		
2-3 years formal	3	75
8 years formal	1	25

Based on the frequencies for the data in Table 5, the participants' learning background was very diverse. Before they enrolled in the AP Chinese class, 48% of the students had between 1-4 years of formal Mandarin Chinese learning, and 28% of the students had 5 or more years of formal Mandarin Chinese education. The remaining 28% of students had a more complicated learning background before they enrolled in the AP Chinese class. Twelve percent of the students had 8-11 years of nonformal Chinese education (e.g., a weekend Chinese school), and the other 16% had mixed formal and nonformal Mandarin Chinese education. The diverse learning background of the students suggested that it would be unrealistic to use lecturing in order to convey language knowledge because the students' proficiency range varied widely.

As the teacher-researcher, I conducted the research in the class for one project unit in late January in the 2022 Spring semester. It took about 2 weeks, the length of the teaching unit. The class schedule was five lessons a week, and each lesson was approximately 45 to 55 minutes, and each lesson was one research cycle (planning, action, observation, and reflection). Excluding the pretest and posttest, there were 10 lessons for the whole research period. The mediation was provided from the first lesson to the 10th lesson. These research cycles allowed me to have the space and opportunity to reflect on my teaching practice and modify and improve my teaching. In this action research, all activities in the study were embedded into the course content. All students enrolled in the course completed the activities as part of their required course work, but I only analyzed the data from those students who had obtained parental permission and who themselves also agreed to participate in the research study and not those who opted-out of the research. Also, the data obtained from students and course activities were used following the participant consent that students and parents or guardians agreed on.

The Researcher or Mediator

I was the researcher and mediator. I conducted this research in one AP Chinese class at a high school in the Bay Area where I teach. After receiving my MA in Chinese Language and Literature from Beijing Normal University, I worked as an editor for the Learning Chinese magazine at Beijing Language and Culture University Press. I received a California Teaching Credential in 2008 after attending the San Francisco State University teacher credential program. Since then, I have taught Chinese as a second or foreign language for different proficiency-level learners in K-12 schools in California for about 14 years.

Protection of Human Subjects

I followed the American Psychological Association's (2012) Ethical Principles Concerning Research and Publication to protect human subjects in this study. In addition, I solicited Human Subjects approval from both the school district and the University of San Francisco (USF) Institutional Review Board (IRB) for the Protection of Human Subjects. After I received permission from USF IRB and the school district to collect data, I first explained my research and participants' rights in class to my students and gave each of them a paper copy of a letter to parents and the research consent form (see Appendix A) to bring to their parents or guardians. I provided my contact information and my university supervisor and school on-site supervisor's contact in the letter so that parents could contact me or my supervisors if they had any questions. After obtaining parents' permission, I gave a paper copy of the research assent form (see Appendix A) to students for their agreement. I explained the research and participants' rights in the class and answered any questions they had. Students who volunteered to participate in the research signed the assent form.

The consent form was written in both English and Chinese in case some parents or guardians could not read English. Also, all parents or guardians and students were informed that they had the right not to participate or opt-out of the study without any academic consequence.

All the personal information obtained from the samples and the class in this study was kept confidential. The digital data were stored in Google Drive under my USF university account. All paper data that showed any respondent identifiers were shredded immediately and properly. The survey results were stored in a Google Drive. The class interaction digital recordings with their digital version transcripts also were stored in a Google Drive. I used

Google Documents to write the teacher observation and reflection log and stored it in a Google Drive. The MLE teacher self-rating charts also were digital and stored in a Google Drive. The participants' names were coded in the teacher observation and reflection log and the MLE teacher self-rating chart to protect individual learners from being identified. Computer printouts or collected paper that showed any respondent identifiers were shredded properly. All participants' names used in the study are pseudonyms. All these procedures were implemented to keep the data confidential and participants anonymous.

Instrumentation

This was an action research study that utilized mixed methods. It consisted of qualitative data (including audio recording, teacher self-rating, teacher observation, and reflection log) from the 10 cycles of mediation implementation, and each cycle included planning, action, observation, and reflection four stages. Also, quantitative data from a pretest before the mediation implementation and a posttest after the mediation implementation were collected. Using mixed methods (qualitative+quantitative) gave a more objective perspective on the practice because cross-checking perspectives could guard against researcher bias (Burns, 2015).

The following data-collection methods and instruments were used in this study: Mediated Learning Experience (MLE) teacher self-rating chart, mediation audio recordings, teacher observation and reflection log, student learning background survey, utterance fluency assessment, and instructional artifacts such as teacher unit and lesson plans.

Mediated Learning Experience (MLE) teacher self-rating chart

Because not every action carried out in the classroom is mediational, I self-checked my mediation implementation using an MLE teacher self-rating chart (see Appendix B) to ensure

that the mediation conducted in class provided learners with MLE. The MLE teacher self-rating chart was adapted from the Mediated Learning Experience rating scales that were developed by Lidz (1991) and Hasson (2018) for mediational behaviors. Both Lidz's and Hasson's scales were developed based on MLE theory. The purpose of Lidz's scale was for assessing mediation for improving children's learning in general. Hasson's scale was a self-monitoring tool of the use of mediational techniques by speech and language therapists. This study integrated Lidz's and Hasson's scales with modifications. There were 12 types of mediation (see Table 1 and details in the "R. Feuerstein's Mediated Learning Experience theory" section in chapter I) in the MLE self-rating chart. Each mediation type in the MLE self-rating checklist corresponds to one mediation category in Feuerstein's MLE theory. This self-rating chart was used to discover if the mediation used in this study belonged to the MLE categories. I also coded my mediation implementation under different mediation types in the self-rating chart after each lesson, to provide insight into how mediation could be used to aid fluency development in a language classroom. The data of my mediation implementation was from in-class mediation audio recordings and teacher self-observation and reflection log. These two instruments are described in detail below.

In-class mediation audio recordings

I used an audio recorder to record my verbal interactions with learners during class for all the 10 intervention class sessions. I used a portable digital voice recorder to make the audio recordings. Using an audio recorder instead of a video camera was beneficial for three reasons: (a) the digital voice recorder was less intrusive with the class than a video camera because it is small and easy to carry around, (b) a high-quality digital voice recorder could produce a

high-quality recording and it could pick up the teacher's and the students' voices well enough, and (c) having an audio recording of the teacher's (myself) verbal mediation and the interaction between the teacher and students provided sufficient information for data analysis. Each intervention cycle's recording was transcribed afterward and was coded under the mediation types in the MLE teacher self-rating chart. The data provided evidence to describe if and how MLE happened in the classroom and the possible mediation patterns.

Teacher observation and reflection log

I conducted a self-observation of my teaching practice. The observation field notes were documented in the teacher observation and reflection log (see Appendix C). The notes were made immediately after each class session. The content of the field notes included self-observation of the teacher's mediation that was not documented by audio recording—for example, the teacher's behavior or thoughts. Also, the log was used to record the teacher's comments, questions from the observation, self-evaluation, or considerations for further mediation action. The log as a self-reflective tool helped me document my impressions and insights of what mediation I had done in class that was working well and what needed to be improved. In addition, the observation and reflection log from one intervention cycle provided data for nonverbal mediation. It also provided support to revise the action plan for the coming cycles.

Student learning background survey

The *Student Learning Background Survey* (see Appendix D) was a paper survey that was administered in the classroom before the beginning of the mediation cycles to gather data about students' learning background, including their age, grade, gender, family language information,

and years of Chinese learning. The information gathered from the survey helped me modify the lesson plans to meet the learners' needs better. It also helped me to answer the first question in my mediation process: "Who are the mediatees?"

Utterance fluency assessment

The utterance fluency assessment in this study was an oral presentation task (see Appendix E) and was administered as a pretest and posttest. The speaking presentation topic was adapted from the College Board 2019 AP Chinese exam cultural presentation topic (College Board, 2019). The cultural presentation section in the AP Chinese exam is used to assess learners' presentational skills, including fluency. The presentation task in this study followed the AP exam speech presentation format guidelines. Each student was asked to record a 2-minute oral presentation in Chinese to introduce how Chinese people celebrate the Chinese New Year. Students had 4 minutes to prepare before recording their oral presentation. They also were allowed to write down anything they wanted on a piece of paper during the preparation period. During this period, however, they could not use the Internet to search for information, look at their notes, or discuss with each other. After the 4-minute preparation period, they started to record their 2-minute presentation. The pretest was given when the project unit started and before the mediation was implemented. The posttest was given after the 10 mediation cycles were implemented. Students in this study were familiar with this assessment format because they had used this assessment format many times in the previous Fall semester.

The pretest and posttest were conducted in the school classroom. The students were seated apart to complete the speaking task using voice recorder apps on their individual cell phones. After the teacher described the task, the teacher gave students the opportunity to ask

questions to clarify the task requirements. Then students started to perform the speaking task at the same time when the preparation time was over. The teacher walked around the classroom to monitor students' task completion. The students uploaded their digital recordings to the online Google Classroom when they finished recording.

In recent fluency studies, Segalowitz (2010) claimed that cognitive fluency could be measured by utterance fluency. Both De Jong et al. (2013) and Kahng (2020) conducted correlational studies with utterance fluency and cognitive fluency and found that some measures of utterance fluency can better predict cognitive fluency than other measures. Their research results showed that the number of silent pauses, number of corrections, and mean syllable duration (inverse articulate rate) are better predictors of cognitive fluency than other utterance fluency measures like mean silent pause duration or number of repetitions. Among all these variables, mean syllable duration is the strongest predictor. Based on their studies, the number of silent pauses, number of corrections, and mean syllable duration in utterance fluency are valid to predict cognitive fluency changes. Therefore, this study measured learners' utterance fluency by measuring the number of silent pauses, the number of corrections, and the mean syllable duration from their speaking samples.

Instructional artifacts

The collected artifacts included the teacher's unit plan (see Appendix F) and lesson plans (see Appendix G). The artifacts that were collected provided a record of the teacher's mediation activities like designing stimuli, selecting stimuli, sequencing stimuli, modifying stimuli, and so on. They also were used as the basis to modify my class planning for the next action cycle.

Intervention or Treatment

The action research included a total of 10 mediation cycles without including the pretest and the posttest. Each action research cycle was one lesson period (1st lesson 25 minutes, 2nd to 10th lesson 45 to 55 minutes). During each lesson, students completed tasks planned by the teacher or self-selected by themselves, while the teacher (I) conducted mediation intervention to improve students' language-fluency development. The tasks designed for the unit and mediation procedure details are described below.

TBLT Project Unit and Tasks Design

In the project unit, students in groups created games for the in-class Chinese New Year Game Fair and played games with their classmates at the fair to celebrate the Chinese New Year in class. Students formed their own groups, and each group self-selected and designed a game that engaged players (their classmates) in verbal responses or interactions about the Chinese New Year celebration. Through in-class discussion, information searching, peer interviewing, and other in-class activities, students inquired how Chinese families celebrated the most important Chinese traditional holiday and designed a game to incorporate their understanding of the Chinese New Year celebration and engaged their classmates in their interactive games. The final goal of this project unit was that students would be able to describe how Chinese people celebrate the Chinese New Year by incorporating appropriate cultural knowledge and language knowledge through carrying out the project. Under this goal, subtasks (see Appendix F) were applied in 10 lessons, and students carried out these subtasks, which led them to finish their project (see Appendix F for a detailed copy of the project unit plan and Appendix G for lesson plans).

The reason for choosing this project to practice mediation to learn if it could promote learners' fluency development was that many learners in my class were familiar with the Chinese New Year celebration. Chinese New Year is the most popular Chinese holiday, and most of the students in my AP class have a Chinese family cultural background. Therefore, it was not a big problem for most students to present this topic in English, but when asked to present it in Chinese, they might not speak fluently because they do not have the target language knowledge. Therefore, mediation conducted in this project could focus more on mediating language development rather than mediating content learning.

Mediation process

I implemented the mediation under the guidance of Mediated Learning Experience theory and used the adapted Flavian's (2019) mediation process model. Each day's mediation intervention was also one action research plan-act-observe-reflect cycle.

Stage 1: Plan

First, I collected data about learners and the mediator. Learners' data including age, family language information, and years of Chinese language learning were collected to help the mediator better understand learners' needs before lesson planning and mediation implementation in class. I collected learners' data through the *Student Learning Background Survey* (see details in the "Instrumentation" section) before the mediation started. Because I was the mediator as well, I also self-reflected on my capability, teaching experiences of doing mediation, and lessons I had learned in implementing successful mediation to build self-awareness of my teaching before implementing mediation in the coming new lesson. I recorded my self-reflection in the teacher observation and reflection log.

Second, I set goals for mediated interaction for fluency development. The mediation goals for mediating language fluency development included promoting learners' motivation to improve fluency and developing learners' cognitive functions, automaticity, and attention to language, which were under fluency development.

Third, I planned the mediation according to MLE: selecting and designing appropriate tasks and customizing tasks based on teaching content requirements, mediation needs, and learners' needs. I selected and designed customized tasks to modify learners' cognitive function, automaticity, and attention to language (Segalowitz, 2010) that are relevant to fluency development. For example, I created task repetition opportunities in the lesson plan to develop learners' language automaticity.

Stage 2: Act

In this stage, I implemented mediation in class (see Appendix H for the general in-class mediation procedure). The unit and lesson plan design incorporated the in-class mediation procedure. I implemented the three universal mediations during the in-class mediation implementation: mediation of intention, mediation of meaning, and mediation of transcendence. Also, I implemented situated meditations based on the situation happening while teaching. The situated mediations included: mediation of a feeling of competence; mediation of regulation and control of behavior; mediation of sharing behavior; mediation of individuation and psychological differentiation; mediation of goal-seeking, goal-setting, planning, and goal-achieving; mediation of the search for the challenge, novelty, and complexity; mediation of the awareness of being a modifiable entity; mediation of optimistic alternative; and mediation of a sense of belonging.

During teacher-student interactions, I also used mediation techniques like asking students what to do rather than telling them (Greenberg, 2014)) to raise the learners' awareness of language.

Stage 3: Observe

During the mediation intervention, I observed the students' reactions to mediation. I used an audio recorder to record my interactions with students during class time to supplement my subjective classroom observation of the class.

Stage 4: Reflect

When each mediation intervention was over, I self-checked my mediation implementation using a Mediated Learning Experience (MLE) teacher self-rating chart to ensure that the mediation conducted in class provided learners with MLE. The teaching observation and reflection notes were documented in the log. The notes were made immediately after each class session. Based on my self-reflection on my teaching, I modified the mediation plan for the next day's lesson if needed.

Procedures

This study's mediation intervention took place for a total of 10 lessons (excluding pretest and posttest). A detailed timeline of activities is presented in Table 7 below.

Before starting the intervention, I submitted an application for an IRB review of the proposed study at the University of San Francisco (USF) and then obtained the approval from the school district to conduct the study in the classroom for which I was the instructor. After I obtained approval, I collected data in late January 2022, when the teaching unit was conducted according to the curriculum.

Table 7
Timeline for Data Collection

Date	Quantitative Data	Qualitative Data	Researcher Actions
1/12/22	None	None	<ul style="list-style-type: none"> • Collected study participant consent
1/18/22	<ul style="list-style-type: none"> • Student background survey 	<ul style="list-style-type: none"> • Student background survey • Teacher observation and reflection 	<ul style="list-style-type: none"> • Administered student background survey • Administered pretest • Teacher observation and reflection
1/19/22	<ul style="list-style-type: none"> • Pretest 	<ul style="list-style-type: none"> • Teacher observation and reflection 	<ul style="list-style-type: none"> • Teacher observation and reflection
1/19/22-2/3/22	<ul style="list-style-type: none"> • MLE teacher self-rating 	<ul style="list-style-type: none"> • Unit plan and lesson plan, • Teaching observation and reflection • In-class interaction audio recording • MLE teacher self-rating 	<ul style="list-style-type: none"> • Plan-action-observation-reflection • Practiced mediation • Teacher observation and reflection
2/4/22	Posttest	<ul style="list-style-type: none"> • Unit plan and lesson plan • Teacher observation and reflection 	<ul style="list-style-type: none"> • Administered posttest • Teacher observation and reflection

Before I conducted the intervention, I first distributed to each student a paper copy of a letter to parents and the research consent form (see Appendix A) to bring to their parents or guardian to obtain their consent. Once parents or guardians agreed that their children could participate in the study and signed the consent form, I distributed a paper copy of the research assent form (see Appendix A) to their children in the class. Only after both parents or guardians and students consented to participate, I started to collect students' learning background information using the *Student Learning Background Survey* (see Appendix D). Students completed the survey during class time. I explained the purpose of the survey and answered questions about the survey items if students had any questions.

The study design followed the test-intervention-test procedure. A pretest (see Appendix E) was given before the intervention. The pretests and posttests were conducted in the classroom. When students started to perform the speaking task, the teacher walked around the classroom to monitor students' task completion. The students uploaded their digital recordings to the online Google Classroom when they finished recording. The same procedure was used for the posttest.

There were 10 intervention cycles (each lesson was one cycle), and each cycle took approximately one lesson period to complete. Because this was an action research study, each intervention cycle followed Kemmis and McTaggart's (1988) plan-act-observe-reflection four-stage model. The mediation intervention included collecting data about the learners and the mediator, task planning, in-class teacher mediation, and reflection and mediation modification. The task planning data and modification data were collected through the teacher's lesson plans, unit plan, and teacher's observation and reflection log. Teacher-student interaction in class was audio recorded. I also prepared a seating chart with the students' names listed to keep track of students' speaking interaction or class participation. Teacher's thoughts, ideas, observations, and reflections that came up after teaching were recorded in the teachers' observation and reflection log. I also completed the MLE self-rating chart after each lesson.

Data Analysis

To answer research question one, the qualitative data collected were analyzed by using simplified Miles et al.'s (2014) qualitative data analysis model. First, I converted data to digital format, which included transcribing audio recordings, scanning documents or using electronic versions, and so on. This process also included adding back some missing content in field notes or based on the researcher's memory. Second, I read all the data to obtain a sense of the collected

data. Then I made brief notes during data reading and coded data collected from each intervention cycle under different MLE mediation categories in the MLE teacher self-rating charts to determine if the mediation I implemented in the classroom was MLE. The mediation interaction recording transcriptions and the teacher's observation and reflection log were organized as episodes of conversation or statements, and coded into an MLE self-rating chart. The data collected from each intervention cycle was coded in a separate MLE teaching self-rating chart. If mediation was identified in one episode of conversation or statement, it was counted as mediation that happened once. Then, I counted the frequency of mediation happening under each MLE category to determine which mediation had been addressed more frequently in the classroom. Finally, after all the intervention cycles were coded separately, I looked for a recurring pattern and generated pattern codes. I used the pattern codes to organize my findings and to answer the research questions. A second coder was used to establish interrater reliability. I first prepared a set of coding rules and trained the second coder using these rules to analyze 20% of the data ("training data"). Then, the second coder and I independently coded another 10% of the data ("test data"). We had 77% agreement on the test data. We discussed and came to an agreement on the codes where we differed. Based on the updated coding rules, I recoded the remaining data.

Research question two addressed changes in learners' utterance fluency. I collected 21 pretest speaking samples and 21 posttest speaking samples from 21 participants among total 25 study participants. Four participants' data were not included because they did not complete both the pretest and the posttest, or their data were not eligible. The analyzed speaking variables included: the number of silent pauses, the number of self-corrections, and mean syllable duration

Table 8

Summary of Research Questions, Data Collection, and Analysis Method

Research Questions	Instrument or Data-Collection Method	Data Type	Analysis Method
1. How is mediation used in the TBLT AP Chinese second- or foreign-language classroom to improve learners' utterance (cognitive) fluency?	<ul style="list-style-type: none"> • In-class mediation interaction audio recording and its transcription. • Teacher observation and reflection log. • Lesson plans, unit plans • MLE self-rating checklist 	<ul style="list-style-type: none"> • Qualitative data from in-class interaction audio recordings • Qualitative data from written observation and reflection log. • Qualitative data from the written lesson plan, unit plan. • Quantitative data and qualitative data from MLE self-rating chart. 	Qualitative data analysis used Miles et al. (2014) qualitative data analysis model
2. To what extent does mediation improve learners' utterance fluency, as measured by the number of silent pauses, the number of corrections, and mean syllable duration, in the TBLT AP Chinese second- or foreign-language classroom?	Utterance fluency pretest and posttest	Quantitative data from the pre- and posttests	<ul style="list-style-type: none"> • Used the speaking transcripts and the voice analysis software PRAAT to help calculate the number of silent pauses, the number of corrections, and mean syllable duration; • Used paired-samples <i>t</i> tests separately to compare the pre- and posttest values of the variables: the number of silent pauses, the number of corrections, and mean syllable duration.

(MSD). The number of silent pauses is the total number of silent pauses during a certain period.

Silent pauses are the silent parts that occur between runs that indicate hesitation (Park, 2016).

The silent pauses that are 0.25 seconds and above are counted as an indication of fluency

breakdown (De Jong & Bosker, 2013; Tavakoli et al., 2017). The number of self-corrections is the number of times a speaker self-corrects during a certain period of time (Segalowitz, 2010). MSD is the mean of the time duration to articulate one syllable. The calculation formula is $MSD = \text{Phonation time} / \text{Total number of syllables}$ (De Jong et al., 2013). Phonation time is the total speaking time minus silent pausing time (De Jong, 2018).

I used the analysis method that De Jong et al. (2012) used to measure utterance fluency. First, I transcribed all collected speaking samples, and marked information about self-corrections in the transcripts. Then, based on the transcripts, I hand counted the number of self-corrections, and the total number of syllables for each speaking sample. Each Chinese character was counted as one syllable (Lin et al., 2016; Peng et al., 2008) and not including pause fillers like “uh” or “umm” as syllables (e.g., Bygate, 2001). Second, I used the voice analysis software, PRAAT (Version 6.2.12, Boersma & Weenink, 2022), to help calculate the number of silent pauses and MSD. I set the PRAAT sound annotation minimum silent interval duration as 0.25 seconds, and minimum sound interval duration as 0.1 second. Therefore, the software could detect silent intervals (longer than 0.25s) and sound intervals and marked them as “silent” or “sounding” under the sound waves. PRAAT also marked the duration for each silent duration section and sounding duration section. To double check if all the sound or silent pauses were detected by the software, I listened to the recording while reading the marks under the sound waves and the recording transcripts. After manually correcting the errors on marks under the sound waves, I hand counted the number of silent pauses for each speaking sample. Also, I added all the sounding duration section times based on the marks in the textgrid to get the total phonation time for each speaking sample. Then I calculated the number of silent pauses per 100 words, and the

mean syllable duration (MSD = total phonation time/syllables) for each speaking sample. Finally, to find out if learners' utterance fluency was improved, I used paired-samples *t* tests separately to compare the pre- and posttest values of the variables: number of silent pauses/100 words, number of corrections/100 words, and MSD.

Summary

This was an action research study that utilized mixed methods. It included 10 cycles (not including pretest and posttest) of implementation of mediation in an AP Chinese foreign-language TBLT classroom to investigate how mediation according to MLE promoted learners' language fluency development. The research design was pretest-intervention-posttest. The intervention was the teacher's mediation practice under the guidance of MLE theory in class. The quantitative data were collected through oral fluency pre- and posttest to determine to what extent mediation improved learners' utterance or cognitive fluency. The qualitative data were collected during the intervention process through teaching observations and reflection log, audio class recordings, MLE teacher self-rating charts, and pre- and posttest speaking samples and their transcription. It was analyzed using Miles et al.'s (2014) qualitative data analysis model. Through the data collected from mediation practice from cycle to cycle, this action research tried to uncover how mediation under the guidance of MLE was used to improve learners' language fluency and to what extent mediation improved learners' utterance fluency.

CHAPTER IV

RESULTS

The purpose of this study was to investigate how to use a mediation model, built under the guidance of the Mediated Learning Experience (MLE) theory, to improve language fluency in a Task-Based Language Teaching (TBLT) second- or foreign-language classroom. Because very little prior research has assessed the mediation model in TBLT language classrooms, this study utilized action research to assess if the model is adequate. The study addressed the following research questions:

1. How is mediation used in the Advanced Placement (AP) Chinese second- or foreign-language TBLT classroom to improve learners' utterance (cognitive) fluency?
2. To what extent does mediation improve learners' utterance fluency, as measured by the number of silent pauses, the number of corrections, and mean syllable duration in the AP Chinese second- or foreign-language TBLT classroom?

I conducted this action research in an AP Chinese second- or foreign-language classroom in a public high school in the Bay Area. I was the researcher and the instructor who practiced being the mediator. The design of this study followed the test-intervention-test procedure. The pretest and posttest assessed cognitive fluency development by measuring utterance fluency, because utterance fluency is the measurable aspect of speech fluency that reflects the speaker's cognitive fluency (Nergis, 2021). I conducted mediation during the intervention stage to improve students' cognitive or utterance fluency. The mediation was implemented for a total of 10 lessons that occurred over a period of 16 days. This chapter provides the results of this action research

study. The results are organized and presented by each research question. After the presentation of the results, a summary concludes with the overall findings of this study.

Research Question 1

Research Question 1: *How is mediation used in the AP Chinese second- or foreign-language TBLT classroom to improve learners' utterance (cognitive) fluency?*

This research question aims to understand better how the mediation model, built under the guidance of the Mediated Learning Experience (MLE) theory, was implemented to improve language fluency in an AP Chinese Task-Based Language Teaching (TBLT) classroom. Based on my analysis of the various data sources, I first present qualitative findings, including examples of each mediation type employed in the study and some themes that describe how and when different mediation types were used. Then, I provide a quantitative overview of how frequently each mediation type occurred during the intervention.

Qualitative findings

Qualitative data collected during the intervention included the mediation interaction audio-recording transcripts, teacher's observation and reflection log, lesson plans, unit plan, utterance fluency assessment transcripts, and MLE teacher self-rating charts. Based on the analysis of the various data sources, it was found that during the intervention period, 11 out of the 12 types of mediation (see Table 1 and details in the "R. Feuerstein's Mediated Learning Experience theory" section in Chapter I) proposed by Feinstein's MLE theory (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2012) were practiced by the instructor. The one type of mediation that was not found in this research was MLE 10 (Mediation of the awareness of being a modifiable entity). To provide more insight into how mediation was used in this AP Chinese

language TBLT classroom, in the following section, I first list examples of each mediation type employed in the study and then describe some themes that emerged when analyzing the qualitative data about how the different types of mediation were used.

Example of MLE 1: Mediation of intentionality

This mediation is employed to convey to the students that the mediator intends to help them improve (Hasson, 2018), which includes communication with the students about the purpose of the task or interaction and attempts by the mediator to maintain students' involvement in the task or interaction (Lidz, 1991). In this research, three typical examples of the mediation of intentionality were identified. One was that I shared my reasons for the planned tasks and task design with the students to help learners to recognize a particular object of focus so that stimuli become more salient and powerful (R. Feuerstein et al., 2010). For example, on day 5, before the class started to watch some short videos about the Chinese New Year celebration, I shared my intention for having the class do this task:

“这里我也给你们找了一些视频。网上有很多关于春节的信息，但这些视频我觉得比较好，是比较短，然后呢，它说了最重要的东西，然后呢，你也可以看一看这个视频，你有印象。很多同学我们没有过过传统的中国新年，所以你看看，到底这个新年，比如说庙会怎么样啊，汤圆怎么样啊，到底人怎么做，你可以有个印象。” [“I found some videos for you. There is a lot of information about the Chinese New Year, but these videos I think are relatively good. They are short, and they talk about the most important thing. Also, after you watch these videos, you will have an impression (of the Chinese New Year). Many of you have not had the experience of celebrating the Chinese New Year traditionally. Therefore (through watching these videos), you will see how the (Chinese) New Year is celebrated, like what the temple fair is like, what the Tangyuan is like, you can have an impression.”]

During this meditation, I clarified to students why I chose these videos to help them access information about the Chinese New Year.

The second typical example of the mediation of intentionality identified in this research was that I purposely designed or planned in-class interactive tasks that could maintain the students' involvement. I tried to shape stimuli to respond to learners' readiness to be affected (R. Feuerstein et al., 2010). One example in this study was that I created a project that involved students in designing and participating in a Chinese New Year game fair.

The third typical example of the mediation of intentionality identified was that I purposely raised my voice, slowed down, or used gestures to raise students' attention or to hold students' interest. Shaping my way of talking to learners or the way of presenting information is another way to convey the mediator's intentionality (R. Feuerstein et al., 2010).

Example of MLE 2: Mediation of meaning

Mediation of meaning moves the content from a neutral position to a valuable or important position (Lidz, 1991) by giving meaning to an activity, a choice, or a preference (R. Feuerstein et al., 2010). In this research, the typical mediation of meaning was having students notice the importance or meaning of the content. It is because learners might not find meaning in things they do and imposing on the learner a meaning also forces a search for meaning (R. Feuerstein et al., 2010). One mediation of meaning example is on day 1, I asked students a series of questions before we started to explore the unit topic:

“你觉得我们为什么要过节.....有时候过节，是为了纪念一个人，对不对？那中国的春节是为了什么？过春节是为了什么？” [“Why do you think we celebrate a holiday/festival? ... Sometimes, we celebrate a holiday to commemorate a person, right? Then, what is the Chinese New Year for? Why do (Chinese people) celebrate the Chinese New Year? ”]

I used these questions to guide students to think about the significance of the unit topic, the Chinese New Year Celebration.

Example of MLE 3: Mediation of transcendence

Mediation of transcendence is employed to promote the connection between the task and learners' related but not currently present experiences (Lidz, 1991); this experience may refer to what they have had or what they will complete at another time (R. Feuerstein et al., 2010, 2012). In this research, a typical example of the mediation of transcendence identified was that I connected the present class content to what students are familiar with, and I helped students to generalize one situation so that they could use it at another time. For example, on day 2, I had students compare the similarity and differences between celebrating the new year among Chinese and Americans. Through this comparison, students could connect the latest content about the Chinese New Year celebration to the new year celebration tradition they were familiar with and generalize the new year celebration norms.

Example of MLE 4: Mediation of a feeling of competence

This mediation is mediating learners to feel competent in learning by helping them overcome difficulties or become familiar with new content and challenging and encouraging them to reach beyond their current functioning (R. Feuerstein et al., 2010). There were two typical examples of mediation of a feeling of competence that were identified in this research: (a) using verbal praise and encouragement to let students know that they have done an excellent job and to boost their feeling of competence (Lidz, 1991) and (b) assisting students in improving their skills or solving problems in their way so that it will create in the learner the feeling of ability (R. Feuerstein et al., 2010). For example, on day 4:

老师: 哪个同学给我们讲讲年的故事?

Charlotte(学生): 从前有个怪物, 叫年, 年就吃小动物和人, 有一天, 有个地方就不要把鬼逃走, 所以他们就放炮..fireworks, 也有很多红色的东西, 所以它就逃走, 他们就很安全了..

老师: 然后呢?

Charlotte: 人们就 eh..就每个新年就放这个红色的炮。

老师: 鞭炮。

Charlotte: 鞭炮。

老师: 然后呢?

Charlotte:

老师: 每一年都做, 然后就成了什么?

Charlotte: 一个节

[Teacher: Who can tell us the story of the Nian?

Charlotte (student): Once upon a time, there was a monster named Nian. Nian ate small animals and people. One day, a place did not want the ghost to run away, so they lit fireworks and many red things. So, it ran away, and they were safe...

Teacher: Then?

Charlotte: People then eh...lit red pao every new year.

Teacher: Bianpao (fireworks)

Charlotte: Bianpao (fireworks)

Teacher: Then?

Charlotte: ...

Teacher: If (people) do it every year, what will it become?

Charlotte: A festival/holiday.]

During this interaction, the mediation was through question asking and answering. When the student Charlotte first told the story, she did not complete the story. Therefore, I used the question: “然后呢 [Then]?” to guide Charlotte to continue to tell the story. When I asked the second “然后呢 [Then]?” and Charlotte was still unable to continue the storytelling, I elaborated my question to provide more hints to Charlotte to enlighten her to complete telling the story. Questions I asked in this process aided Charlotte in completing her storytelling task successfully. A successful experience can create within learners a feeling of competence (R. Feuerstein et al., 2010).

Example of MLE 5: Mediation of regulation and control of behavior

This mediation is employed to engage learners in regulating their behavior by deciding whether they are ready to do something (R. Feuerstein et al., 2010). A typical example of the mediation of regulation and control of behavior identified in this study was that I guided students

to think about if they had the necessary tools or information before starting to work on their tasks. For example, on day 2, I said to students:

“下边请你跟你的伴说一下，为了准备这个project，你们需要准备什么？你需要知道什么？在你开始做之前？[Please tell your class partner to prepare for this project, what do you need to prepare? What do you need to know before you start the project?]”

This guided discussion aimed to help learners to think about what they needed before they started their action. Therefore, learners give themselves time to think and to check whether they have enough information before they react (R. Feuerstein et al., 2010). This mediation helped them regulate their actions.

Example of MLE 6: Mediation of sharing behavior

Mediating sharing behavior is to mediate learners' readiness and ability to relate with their peers, like adjusting to one another, learning from each other, or supporting each other (R. Feuerstein et al., 2010). A typical example of the mediation of sharing in this study was that I created the need and opportunities for learners to develop their skills to share and support each other. For example, the group project to design a game fair allowed students to share what they knew with their peers and support each other while they prepared the project together. During the game fair, students had further opportunities to share their games with the whole class while they played their peers' games.

Example of MLE 7: Mediation of individualization and psychological differentiation

This mediation is employed to help create within a learner a sense of being a separate person with an ability to think and express oneself in unique ways. Mediators will encourage learners to express themselves but not impose others' aspects of experience on the learner (R. Feuerstein et al., 2010). A typical example of the mediation of individualization and

psychological differentiation in this study was that learners were given opportunities to work on the tasks and express themselves in their way. For example, on day 2 and day 3, I arranged the Chinese New Year class decoration task that supported students in creating objects they intended to use to decorate the classroom however they wanted. The unit project also was designed in a way that students could decide what games they wanted to design for the game fair, and the class would support them in developing their ideas and completing their projects based on their preferences.

Example of MLE 8: Mediation of goal-seeking, goal-setting, planning, and goal-achieving

The purpose of this mediation is to develop learners' ability to set goals or to invest in plans to achieve goals (R. Feuerstein et al., 2010). A typical example of MLE 8 identified in this research was when I provided students the opportunity to discuss with their partners and to plan out their work and deepened their plan through questioning during class discussion. For example, on day 2:

Teacher: 那今天我们一起来看看, 要了解中国人的习俗, 你怎么了解? 从哪里可以了解到? [Today we'll find together. If you want to collect information to understand Chinese people's (Chinese New Year celebration) customs, how can you? From where?]

Coral: 可以问人 [(You can) ask people].

Teacher: 问谁 [Ask who] ?

Coral: 我可以问我的婆婆。 [I can ask my grandma.]

老师: 非常好。如果你的婆婆过春节, 还可以问你的婆婆。还有没有? [Wonderful. If your grandmother celebrates the Chinese New Year, you can ask your grandma. Anything else?]

Hana: 上网。 [Go online.]

老师: 很好。我们可以问人, 可以上网。 [Great. We can ask people, or we can go online.]

During the above mediation interaction, I helped students plan out how to search for information for their projects' sake.

Example of MLE 9: Mediation of the search for challenge, novelty, and complexity

This type of mediation is employed to mediate learners' ability to confront challenges, adapt to the novel, and face the world's complexity (R. Feuerstein et al., 2010). A typical example of this type of mediation in this research is that I encouraged learners' to meet challenges and prepare for challenge, novelty, and complexity. For example, I encouraged students to participate during class discussions or game playing when they did not want to volunteer to answer questions or volunteer because they were worried they would not do well. Or I would support students to be ready for more complex possibilities that they might encounter. For example, on day 7, students were working on their game-fair project with their peers. I talked to Luna, who had just finished preparing her pictictionary game. Her game required two participants where one participant would draw while the other participant would guess what the drawing is.

Teacher: 如果你的摊子只来了一个人呢? [How about there is only one person who comes to your (game) booth?]

Luna: 那就等另外一个人。[Then wait for one more person.]

Teacher: 如果另外一个人不来呢? 要不就是“我画你猜”。[How about if no other person comes? Maybe (you can change the game into) “I draw and you guess” ?]

Luna: 我画你猜? ! 好家伙..... [I draw and you guess? Man...]

Teacher: 这样的话, 如果只有一个人来的话..... [If it happens that there is only one person (who comes to your game booth)...]

Luna: 不可能。[It's not possible.]

Teacher: 那有可能呵.....你说答对有奖, 那来的两个人是大家说好了呢? [There is this possibility...(Also,) you said the game winners can get a reward (from your booth), so how about if the two people who come to your game have already discussed their plan in advance?]

Luna: 那是有要求的呵.....[We have our requirements...]

Through asking questions, I challenged Luna and tried to prepare Luna to be ready for possible complicated situations that she might not anticipate before.

Example of MLE 10: Mediation of the awareness of being a modifiable entity (not identified in the study)

This mediation is applied to communicate to learners that they have profited in a positive direction from experience and that they have improved and changed in some way compared with the starting point (Lidz, 1991). An example of this mediation type was not identified in the research. Although I gave students feedback about their work, I did not provide communication about what they had changed because I did not identify significant change for any individual learners during that period.

Example of MLE 11: Mediation of optimistic alternative

This mediation is to mediate learners to search for a promising alternative or to mediate the expectation for positive outcomes (R. Feuerstein et al., 2010). A typical example of the mediation of an optimistic alternative identified in this research was that I encouraged learners to view their work from a positive perspective. For example, on day 2, when the student June complained that she did not write her calligraphy well enough because “我的‘福’写得太胖了 [I wrote the character ‘Fu’ too fatty].” I told her that her writing style made the character represent “有福气 [good fortune]”. In Chinese culture, fat and full means good fortune, so I hope my comment made the student feel better about her calligraphy writing.

Example of MLE 12: Mediation of a sense of belonging

Mediation of a sense of belonging is to help and support learners to develop a feeling of belonging or connecting to a community (R. Feuerstein et al., 2010). A typical example of the mediation of a sense of belonging was that I organized students to learn in the community and had learners participate in community-building activities. For example, on day 8, the game-fair

day, students were organized to go to each other's game booth to play games designed and conducted by their peers. Through their participation and interaction with each other, their sense of community was strengthened.

Use of mediation in the TBLT classroom: Emerging themes

As mentioned previously, of the 12 types of mediation proposed by Feurestien's MLE theory, I found evidence of use of all types, except for MLE 10: Mediation of the awareness of being a modifiable entity. These mediation types were employed based on learners' needs during each lesson. When analyzing the data to understand how the various types of mediation were used in the classroom, there were four themes that emerged: (a) the questioning technique can be used across multiple mediation categories, (b) modifying lesson plans to meet mediation needs, (c) the teacher's personality affects mediation strategy choice, and (d) repetition affects learners' new word acquisition.

Theme 1: The questioning technique can be used across multiple mediation categories.

The questioning technique was a common technique to use in mediation (Hill & Sabet, 2009; S. Feuerstein, 2015). The technique of asking questions in this study was used across different types of mediation in this study. For example, in MLE 1 mediation, the mediator deliberately used questions to maintain students' involvement in the interaction. One example is on Day 3, the teacher said:

“今天是我们给你们看一看你做的新年装饰品是什么。也给我们说一说你做的新年装饰品.....我们做这个活动呢，一个是要给大家看一看你做的东西，分享我们的想法或者故事，对不对？还有一个原因呢是这样，你跟别人说一说，其实呢，让你们记得更牢。是不是？有的时候在脑袋里想一想，哦，我知道，但说一遍的话，让你们记得更牢。所以希望大家珍惜这个时间。”

["Today, you are going to show us the new year's decorations you made and introduce the New Year decorations you made...one reason we are doing this activity is to show everyone the decorations you made and to share our ideas and stories, right? The other reason is that if you tell other people your ideas or stories, you will remember them

better. Isn't it? Sometimes, you think you know, but if you tell others, it will help you remember better. Therefore, I hope you all will appreciate this time (to show and tell).”]

In this mediation attempt, the teacher used the question “Right?” or “Isn't it?” to obtain the students' attention.

The mediator also used questions to engage students to think about the purpose of the task and the steps to achieve the goal to mediate meaning (MLE 2) and mediate goal-seeking and planning (MLE 8). For example, on Day 2, the teacher said:

Teacher: 为了开始做这个project, 需要先知道什么东西? 了解什么东西? 还是不需要知道, 今天就可以开始做了? 你觉得需要了解什么吗? [To start this project, what information do we need to know first? What do we need to understand? Or we do not need to know anything else, and we can start our project today? What do you think you need to know?]

Jolie: 需要知道 [You need to know]... (switched into English) you have to know the information about the Chinese new year yourself.

Teacher: 非常好。我们要知道春节中国人到底有什么样的习俗。 [Great. We must know the Chinese people's customs to celebrate the Chinese New Year.] (Write down “春节习俗 [Chinese New Year customs]” on the board, then turn around to face the students) 对不对 [Right]? 不然我们怎么做 [Otherwise, how can we start] ?

Teacher: 还有什么要了解的 [Anything else we need to know]?

Carl: 怎样做游戏。 [How to make a game.]

Teacher: 很好, 还有你要知道怎么做你的游戏。 [Great, you also need to know how to make your game.]

The teacher writes down on the board “怎么做游戏 [how to make a game]” and turns around to ask students: 还有什么, 在我们做之前? 没有了? 那今天我们一起来看看, 要了解中国人的习俗, 你怎么了解? 从哪里可以了解到? [What else (do we need to know) before making the game? Nothing? Then let's find out if you want to understand Chinese people's customs, how can you understand them? From where?]

Coral: 可以问人。 [You can ask people.]

Teacher: 问谁? [Ask who?]

Coral: 我可以问我的婆婆。 [I can ask my grandma.]

Teacher: 非常好。如果你的婆婆过春节, 还可以问你的婆婆。还有没有? [Great. If your grandma celebrates Chinese New Year, you can ask your grandma. Any other ways?]

Coral: 上网。 [Go online.]

Teacher: 很好。我们可以问人, 可以上网.....那我们来了解一下, 春节前有什么习俗。 [Great. We can ask people, we can search online.....then, let's understand Chinese New Year customs before the Chinese New Year.]

During this interaction between teacher and students, the teacher used multiple questions like “需要先知道什么东西？了解什么东西？还是不需要知道，今天就可以开始做了？你觉得需要了解什么吗？ [what information do we need to know first? What do we need to understand? Or we do not need to know anything else, and we can start our project today? Do you think you need to know?] ”

When student Jolie answered: “ 需要知道 [You need to know]... (switched into English) you have to know the information about the Chinese New Year yourself,” the teacher praised her answer first, then used another question “对不对?不然我们怎么做?” [Right? Otherwise, how can we start our project?] to ensure that Jolie’s answer “(to start to do the project) you have to know the information about the Chinese New Year yourself” is the meaning of the following task “to find out Chinese New Year customs before the Chinese New Year.” In this mediation attempt, the teacher used the questioning strategy to mediate meaning (MLE 2) and mediate goal-seeking and planning (MLE 8).

Using questions as a mediation technique was detected in almost every mediation cycle. It was used in all of the mediation types that were employed in this study except for MLE 11 (Mediation of optimistic alternative). See Table 9 for examples of questions used across the various mediation types employed in this study. The questioning technique is a mediation technique that can be used across mediation categories.

Table 9

Examples of Questions Used in Mediation

Mediation Type	Examples of questioning techniques used	Mediation Implementation
MLE 1: Mediation of Intentionality	(During Day 1) 我们做这个活动呢，一个是要给大家看一看你做的东西，分享我们的想法或者故事，对不对？还有一个原因呢是这样，你跟别人说一说，其实呢，让你们记得更牢。是不是？ [One reason we are doing this activity is to show everyone the decoration you made and to share our ideas and stories, right? The other reason is that if you tell other people your ideas and stories, you will remember them better. Isn't it?]	Share my reasons for the planned tasks and task design with the students to help learners to recognize a particular object of focus.
MLE 2: Mediation of Meaning	(During Day 1) “你觉得我们为什么要过节……有时候过节，是为了纪念一个人，对不对？那中国的春节是为了什么？过春节是为了什么？” [Why do you think we celebrate a holiday/festival? ... Sometimes, we celebrate a holiday to commemorate a person, right? Then, what is the Chinese New Year for? Why do (Chinese people) celebrate the Chinese New Year?]	Guide students to think about the significance of the unit topic, “Chinese New Year Celebration.”
MLE 3: Mediation of transcendence	(During Day 1)我们为什么过节？我们为什么要庆祝一个节日？每个文化里都有节日，是不是？ [Why do we celebrate the holidays/festivals? Why do we celebrate a holiday/festival? Every culture has its own holidays/festivals. Is it right?]	Have students connect the new concept to a familiar one

Table 9 (continued)

Mediation type	Examples of questioning techniques used	Mediation Implementation
MLE 4: Mediation of feeling of competence	<p>(During Day 4) Charlotte: 从前有个怪物, 叫年, 年就吃小动物和人, 有一天, 有个地方就不要把鬼逃走, 所以他们就放炮...fireworks, 也有很多红色的东西, 所以它就逃走, 他们就很安全了... [Once upon a time, there was a monster named Nian. Nian ate small animals and people. One day, there was a place that did not want the ghost to run away, so they lit fireworks, and many red things. So, it (the monster) ran away, they(people) would be safe...]</p> <p>Teacher: 然后呢? [Then?]</p> <p>Charlotte: 人们就 eh..就每个新年就放这个红色的炮。 [People then eh...lit red pao every new year.]</p> <p>Teacher: 鞭炮 Bianpao [fireworks]</p> <p>Charlotte: 鞭炮 Bianpao [fireworks]</p> <p>Teacher: 然后呢 [Then]?</p> <p>Charlotte: ...</p> <p>Teacher: 每一年都做, 然后就成了什么? [If (people) do it every year, what will it become?]</p> <p>Charlotte: 一个节。 [A festival/holiday.]</p>	Provide support to help the student complete a task successfully to boost the student's sense of competence
MLE 5: Mediation of regulation and control of behavior	<p>(During Day 2) 下边请你跟你的伴说一下, 为了准备这个project, 你们需要准备什么? 你需要知道什么? 在你开始做之前?</p> <p>[Please tell your class partner to prepare for this project, what you need to prepare? What you need to know before you start the project?]</p>	Help learners to think about what they need before they start their action
MLE 6: Mediation of sharing of experience/ thought	<p>(During Day 3) Teacher: 我们做这个活动呢, 一个是要给大家看一看你做的东西, 分享我们的想法或者故事, 对不对? 还有一个原因呢是这样, 你跟别人说一说, 其实呢, 让你们记得更牢。是不是?</p> <p>[We do this activity, one is showing everyone what you have done and sharing our thoughts or stories, right? The other reason is that if you tell (your story) to other people, it will help you remember it better. Isn't it?]</p>	Create need and possibility for learners to share and support each other

Table 9 (continued)

Mediation type	Examples of questioning techniques used	Mediation Implementation
MLE 7: Mediation of psychological differentiation	(During Day 2) Teacher: 我们要装饰我们的教室, 准备庆祝春节。你想做什么? [We're going to decorate our classroom and prepare to celebrate the Chinese New Year. What do you want to do?]	Create opportunities for learners to express themselves in their own way
MLE 8: Mediation of goal-seeking, goal-setting, planning, and goal-achieving	(During Day 2) 老师: 那今天我们一起来看看, 要了解中国人的习俗, 你怎么了解? 从哪里可以了解到? [Teacher: Today we'll find together. If you want to collect information to understand Chinese people's (Chinese New Year celebration) customs, how can you? From where?]	Deepen students' plan through questioning
MLE 9: Mediation of the search for challenge, novelty, and complexity	(During Day 9) Teacher: 大家还有什么问题没有? 没有了? 继续问, 继续问, 这很难得的机会, 因为呢, 你不可以了解文化知识, 也是一个我们很好的学习怎么样跟人用中文交流, 对不对? [Do you have any other questions? No? Keep asking, keep asking... it's a rare opportunity because not only can you learn cultural knowledge, but you can learn how to communicate with people in Chinese, right?]	Encourage students' participation and search for challenge
MLE 12: Mediation of belonging	(During Day 9) Teacher: 我们班有多少同学过春节了? [How many of you have celebrated the Chinese New Year?] (see students raised hands) 好, 今天是这样, 你呢还是先跟你的伴儿分享一下你的长周末怎么样。 [Great. Today, you will first share with your partner what your long weekend was like.]	Encourage students' to connect to each other in order to build a sense of community

Theme 2: Modifying lesson plans to meet mediation needs. During the 10-day mediation period, I modified the original lesson plans multiple times after I identified issues that arose in the class. I either modified the lesson plan promptly during class time or modified the next day's lesson plan based on the day or the previous day's teaching reflection.

In this study, promptly modifying the lesson plan happened when I found that the lesson plan did not meet students' needs. For example, during Day 1, I spent more time than I expected in the Kahoot game because from students' responses to the Kahoot questions, I decided I should give students feedback immediately rather than waiting till the end of the class as I had planned. Also, I spent a little more time discussing each question's responses than planned. Because it took longer than I planned, I needed to cut the end-of-class students' reflection task during the Day 1 lesson.

For the latter, modifying the next day's lesson plan was based on the day's or the previous day's teaching reflection. For example, after listening to students' pretest recordings, I learned two important facts. One was that most students just knew the general idea of Chinese New Year celebration customs and could not describe the idea they knew fluently in Chinese. For example, many of them talked about the folk story "The Story of Nian," which is about the origin of the Chinese New Year celebration traditions. Their pretest, however, showed that they did not know the story's details or have the vocabulary to describe it, which is what I expected before I designed the lesson plan. Another issue was not what I expected when I prepared the lesson plan. That was the custom the students knew about the Chinese New Year celebration based on their life experiences as Chinese Americans who grew up in America. They talked about 红包 [red envelopes], and family gatherings to have a meal together, the customs Americans are familiar with about Chinese New Year, but not the authentic Chinese New Year celebration traditions. Many of the students even described the date of the Chinese New Year incorrectly because, as children who grew up in the US, most only had a sense that Chinese New Year was sort of around February. Therefore, in the pretest, many of the students described the Chinese New Year

as being in February but not the accurate date of January 1st in the Lunar calendar. Based on the findings from the pretest results, I thought that what students needed to know more about was the authentic ways that Chinese people in China celebrate the New Year. Therefore, I decided to increase authentic input and raise students' language form awareness. To increase authentic input, I modified the lesson plans in two ways: one was by carefully selecting video clips to help students visualize the traditional way of the Chinese New Year celebration and the other was by having students who had an experience of living in China or near-native speakers to share their Chinese New Year celebration experiences with the class. Therefore, I modified Day 2's lesson plan. I added two short clips of Chinese New Year activities: A news report video of Chinese people traveling back home for the New Year gathering; the other was people going to a temple fair during the Chinese New Year. On day 10, I added two short video clips of news reports about changes in the Chinese New Year's Eve dining customs. I hoped that these video clips could provide authentic input resources for students' understanding of Chinese New Year customs.

I also modified Day 4's lesson plan from interviewing each other to inquiring about information on Chinese New Year celebration customs to have a whole class game. I realized that if students interviewed each other about the Chinese New Year celebration activity, most would still only share their limited knowledge based on their life experiences in the US. Based on this reflection, I modified the lesson plan to have students make a whole class inquiry to gather additional information. The class inquiry activity was through a game, "Snatching Chinese New Year Red Envelopes." In this game, I divided the class into two groups, each sending a person to fight for a red envelope. The team who snatched the red envelope could

decide which question they wanted and choose which team should answer the question. Anyone on the team could answer their team's questions. There were two students in the class who immigrated from China in elementary school and knew the Chinese New Year celebration traditions very well. Therefore, if one person on the team could answer the question, everyone in the class could hear the answer, and I believed that it would be a more efficient and prosperous form of authentic input than my previous lesson plan.

To raise students' language-form awareness, I also modified the lesson plan to provide prompt feedback to increase students' language-form awareness. For example, at the end of Day 4, when students were working on their handouts, I discovered that multiple students were confused about using the appropriate term in Chinese to describe the monster in the Chinese folk story. I decided to provide feedback at the beginning of Day 5's lesson and talked about the difference between different words for "monster": 妖怪, 怪兽, 魔怪, 怪物, 鬼. I could see students paying attention when I was addressing these words.

Theme 3: Teacher's personality affects mediation strategy choice. During the mediation process, through teaching reflection, I was aware that my introverted personality affected my mediation strategy choice, especially for MLE 6: mediation of sharing behavior. To mediate sharing of experience, a mediator can communicate to the student an experience or thought the mediator had (Lidz, 1991). I found that I unconsciously did not choose this mediation strategy. For example, on my Day 1 teaching reflection, I realized that there was an opportunity to share my personal experiences with students, but I did not. Although the sharing was not in my original lesson plan, in the reflection, I asked myself, "Would it make a difference if I shared my personal experience with students to mediate sharing?" I reminded myself to be aware of my

behavior. In the subsequent days, during Day 4, I deliberately shared my personal experience of the Chinese New Year celebration. When I shared my experience, I noticed some students were more attentive. I saw Hana nodding. During the 10-day mediation intervention period, however, I noticed I missed many opportunities to provide personal experience sharing. One big reason is that I am introverted and private, and I am uncomfortable sharing my personal experiences with students. The mediator's personality has an effect on the meditation strategies that were chosen to conduct in the classroom.

Theme 4: Repetition affects learners' new word acquisition. I tried to create repetition opportunities during the acquisition input and output stages. The data showed that repetition helped students to acquire some new terms. For example, Charlotte, in her pretest recording, said, “有一个故事, 因为一个地方就有一个鬼, 和鬼每个新年就来, 吃人 [There was a story. Because there was a ghost in a place, and the ghost came to eat people every New Year].” She used the term “鬼 [ghost]” instead of the correct term “怪兽 [monster]” to name the monster in the Chinese New Year legend. On day 3, the class discussed the Chinese New Year legend. Before we started, I said to the class: “我们教室很漂亮, 已经开始像过年。大家有没有发现, 都是红色的粉色的, 大家都说了, 跟年的故事有关系。哪一个同学, 你知道年的故事。怪兽年的故事? [Our classroom is beautiful. It looks like we have started to celebrate the New Year. Have you noticed that all (the decoration) are red or pink? You already said it is relevant to the story of Nian. Does anyone know the story of Nian? The monster Nian's story?]” Nobody volunteered. I called on a few of the students, but they all said no. It meant most of the students could not retell the story. Then I used mediation strategies to decrease the retelling difficulties by asking students a simple question: “那个怪兽叫什么名字? [What is the monster called?]”

Then, one student volunteered and said the monster's name “年 (Nian).” Through question asking and answering, I went over the story with the students, and then I showed the class a PowerPoint with the pictures with 怪兽 [monster] and its written Chinese characters words, and students were retelling the story with their partners. Through this process, students heard and said the word 怪兽 [monster] multiple times.

The next day, I had students look at the pictures again and retell the story to their partners. Charlotte retold the story as follows:

“从前有个怪物，叫年，年就吃小动物和人。有一天，有个地方就不要把鬼逃走，所以他们就放炮 [Long time ago, there was a monster called Nian. Nian eats small animals and people. One day, one place did not want to have the ghost run away, so they light firecrackers].....”

After day 3 and day 4's input and output multiple repetition tasks, Charlotte still did not use the word 怪兽 (guai shou) [monster] to describe the monster. She used the similar word 怪物 (guai wu, which also means monster in Chinese), and later she used the word 鬼 (ghost), the same wrong word she used in the pretest. I provided mediation to her directly after she retold the story.

Teacher: 那年是一个鬼吗? 鬼是什么东西? [Is Nian a 鬼 (gui)? What is a 鬼 (gui)?]

Charlotte: A ghost.

Teacher: 那年是不是鬼? [Then, is Nian a ghost?]

Charlotte: 不是[No].

Teacher: 那它是什么? [What is it then?]

Charlotte: 龙? [Dragon?]

Teacher: 年是一个什么样的... [Nian is a what kind of...]

Luna: 怪兽 [Monster].

Teacher: 怪-兽! 年是个怪兽。 [Mon-ster! Nian is a monster.]

During this interaction, I addressed the difference between the words “鬼 [ghost]” and “怪兽 [monster].” Although Charlotte did not recall the word “怪兽 [monster]” by herself, she at least had other input opportunities to hear the word “怪兽 [monster].” Also, I tried to deepen her

impression of the word 怪兽 [monster] by prolonging the pronunciation and saying each character louder.

In the class later that day, I saw some other students were still confused about using the appropriate term “怪兽 [monster]” in Chinese to describe the monster. Therefore, on day 5, when I provided feedback about their work in the class, I deliberately pointed out the difference between 怪兽 (guai shou) [monster], 怪物 (guai wu) [monster], and 鬼 [ghost]. I could see that students paid attention when I was addressing these words.

During the posttest, Charlotte described the story as the following:

“年是一个怪兽，有一天一个村子里面的人们就要把这个鬼这个怪兽怕怕走。” [Nian is a monster. One day, people in one village wanted to scare scare away this ghost this monster.]

During her posttest, Charlotte finally used the word 怪兽 [monster] instead of 鬼 [ghost] to describe the monster. Although she still did not fluently retrieve the word 怪兽 [monster] all the time. In the second half of the sentence, she first used 鬼 [ghost], but she self-corrected and used the word “怪兽 [monster]” correctly. From Charlotte’s acquisition process, repetition opportunities provided during the intervention affected her word acquisition.

Quantitative findings

Although the qualitative findings for research question one showed the depth of how mediation was implemented in this study, the purpose of the quantitative portion for research question one was to provide a big picture of how mediation was conducted in the study.

Although the qualitative findings showed that almost all mediation types were employed in the intervention, the data showed that the frequencies of different types of mediation (see Table 1 in Chapter I) were different (see Table 10).

Table 10

Frequency of Different Mediation Types

MLE Types	Mediation Occurrence Frequency/Day										Total
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	
MLE1: Intentionality	31	14	10	17	14	3	2	2	18	13	124
MLE2: Meaning	3	2	4	3	2	1	1	1	2	2	21
MLE3: Transcendence	9	8	3	1	2	1	1	1	4	2	32
MLE4: Competence	13	23	18	16	4	13	1	2	20	30	140
MLE5: Regulation of behavior	1	1	1	0	0	2	0	0	1	1	7
MLE6: Sharing	1	3	3	7	1	1	1	1	4	4	26
MLE7: Psycho-differentiation	1	1	2	1	2	1	2	1	1	1	13
MLE8: Goal-seeking	1	6	1	0	0	1	0	0	1	0	10
MLE9: Search for challenge	0	0	0	1	0	0	1	0	1	0	3
MLE10: Modifiable entity	0	0	0	0	0	0	0	0	0	0	0
MLE11: Optimistic	0	2	0	4	0	0	0	0	0	0	6
MLE12: Sense of belonging	1	1	1	2	1	1	1	3	2	1	14

The types of mediation that did not occur every day in class were all the situational mediations, including MLE 5: Mediation of regulation and control of behavior; MLE 8: Mediation of goal-seeking, goal-setting, planning, and goal-achieving; and MLE 11: Mediation of optimistic alternative. One mediation that never occurred was situational mediation: MLE 10 (Mediation of the awareness of being a modifiable entity).

The types of mediations that occurred every day at least once in class included MLE 1 (Mediation of intentionality); MLE 2 (Mediation of meaning); MLE 3 (Mediation of transcendence); MLE 4 (Mediation of feeling of competence); MLE 6 (Mediation of sharing of experience); MLE 7 (Mediation of psychological differentiation); and MLE 12 (Mediation of a sense of belonging). Among the mediations that happened every day at least once in class,

MLE1, 2, and 3 are the three essential and fundamental mediations, whereas MLE 4, 6, 7, and 12 are situational mediations. Also, mediation frequency varied in different phases of the intervention. The mediation that happened most frequently is MLE 4 (Mediation of feeling of competence) and MLE 1 (Mediation of intentionality). MLE 4 occurred 140 times, and MLE 1 occurred 124 times within the 10-day mediation period. They happened much more frequently than the other types of mediation (MLE 3, 32 times; MLE 6, 26 times; MLE 2, 21 times; MLE 12, 14 times; MLE 7, 13 times) (see Figure 3).

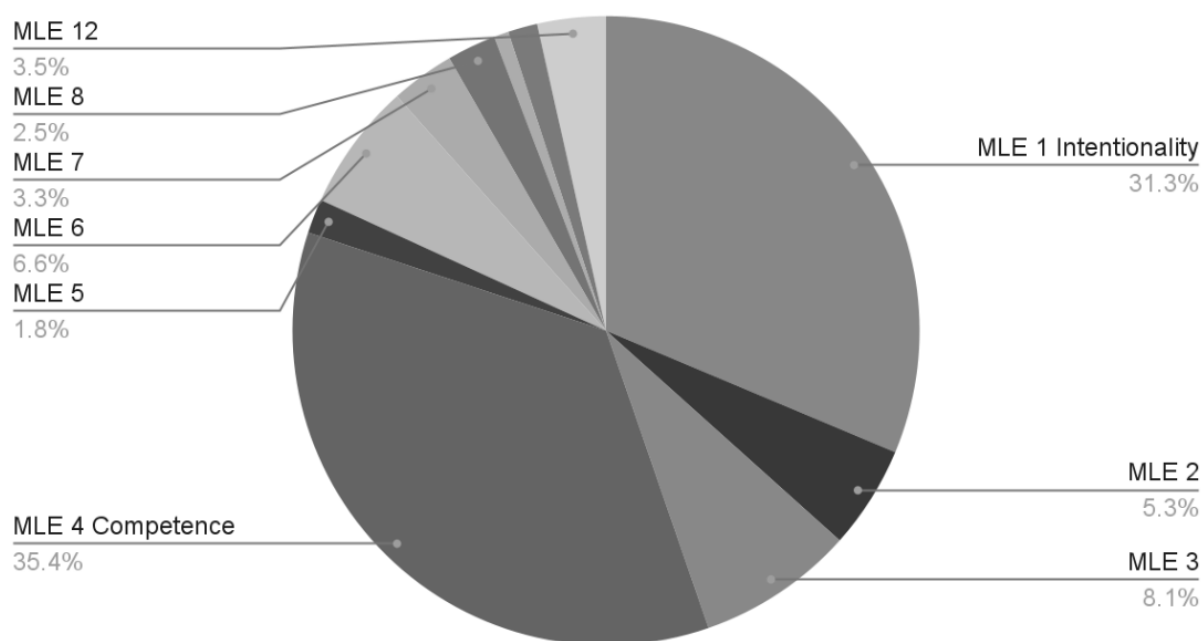


Figure 3. Different Mediation Types Frequency Comparison

Research Question 2

Research Question 2: *To what extent does mediation improve learners' utterance fluency, as measured by the number of silent pauses, the number of corrections, and mean syllable duration in the TBLT AP Chinese second- or foreign-language classroom?*

The purpose of research question two is to learn if mediation was effective for developing cognitive fluency, as measured by utterance fluency. Utterance fluency was measured by the number of silent pauses and silent pauses/100 words in the pre- and posttest, and the results are presented in Table 11.

For all but four students, the number of silent pauses increased on the posttest. The number of syllables increased on the posttest for all but two students with a range on the pretest of 86 to 555 and on the posttest of 161 to 518. The number of silent pauses also increased for all but two students with a range on the pretest of 18 to 59 and on the posttest the range was 38 to 66. A different pattern emerges when the number of silent pauses per 100 words is considered. Seven students increased their ratio of pauses per 100 words, whereas the other 14 students decreased their ratio. The ratio of pauses per 100 words ranged from 8.6 to 53.5 on the pretest and 9.5 to 37.1 on the posttest.

A paired-samples t test was performed to compare the number of silent pauses/100 words from pre- to posttest. There was a statistically significant difference in the number of silent pauses/100 words between pretest results ($M = 22.97$, $SD = 11.44$) and posttest results ($M = 19.31$, $SD = 6.88$); $t(20) = -2.53$, $d = -.55$, a medium effect size.

Table 11

The Number of Silent Pauses and The Number of Silent Pauses/100 Words in the Pretest and Posttest Broken Down by Students

Student	# of silent pauses		# of syllables		# of silent pauses/100 words	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
1	51	47	166	250	30.7	18.8
2	38	44	114	161	33.3	27.3
3	41	52	160	264	25.6	19.7
4	46	59	148	220	31.1	26.8
5	40	62	86	167	46.5	37.1
6	39	43	256	277	15.2	15.5
7	47	57	227	240	20.7	23.8
8	54	53	387	428	14.0	12.4
9	48	49	555	518	8.6	9.5
10	47	55	380	377	12.4	14.6
11	37	51	194	295	19.1	17.3
12	39	43	184	310	21.2	13.9
13	49	63	177	250	27.7	25.2
14	55	46	266	311	20.7	14.8
15	18	42	173	256	10.4	16.4
16	46	66	86	235	53.5	28.1
17	22	40	110	216	20.0	18.5
18	42	38	259	317	16.2	12.0
19	59	63	244	322	24.2	19.6
20	45	49	440	441	10.2	11.1
21	51	55	242	238	21.1	23.1

Note: one word in Chinese = one syllable in Chinese

The number of self-corrections and self-corrections/100 words in pretest and posttest are in Table 12. From the data in Table 12, there were 10 students whose number of corrections increased from pretest to posttest, seven students whose number of corrections decreased, and four whose number of corrections were the same on both tests. Ten of the students decreased their ratio of corrections per 100 words, with only one staying at the same ratio, and ten increasing their ratio.

Table 12

The Number of Corrections in Pretest and Posttest Broken Down by Students

Student	# of corrections		# of syllables		# of corrections/100 words	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
1	2	0	166	250	1.2	0.0
2	2	0	114	161	1.8	0.0
3	1	4	160	264	0.6	1.5
4	3	3	148	220	2.0	1.4
5	2	2	86	167	2.3	1.2
6	4	5	256	277	1.6	1.8
7	4	3	227	240	1.8	1.3
8	2	2	387	428	0.5	0.5
9	5	6	555	518	0.9	1.2
10	6	4	380	377	1.6	1.1
11	4	3	194	295	2.1	1.0
12	0	1	184	310	0.0	0.3
13	2	1	177	250	1.1	0.4
14	1	4	266	311	0.4	1.3
15	1	2	173	256	0.6	0.8
16	1	0	86	235	1.2	0.0
17	1	1	110	216	0.9	0.5
18	1	6	259	317	0.4	1.9
19	2	6	244	322	0.8	1.9
20	4	5	440	441	0.9	1.1
21	2	4	242	238	0.8	1.7

Note: One word in Chinese = One syllable in Chinese

A paired-samples t test was performed to compare the number of self-corrections/100 words from pre- to posttest. There was not a statistically significant difference in the number of self-corrections/100 words between pretest results ($M = 1.12$, $SD = 0.63$) and posttest results ($M = 1.00$, $SD = 0.63$; $t(20) = 0.63$).

The mean syllable duration (MSD) in the pre- and posttest are provided in Table 13. Five students' MSD increased, 15 students' MSD decreased, while only one stayed the same. The range of MSD on pretest was 178 to 508 and on posttest was 190 to 490. A paired-samples t test

was performed to compare MSD in pre- and posttest results. There was a statistically significant difference in MSD between pretest results ($M = 334.10$, $SD = 88.17$) and posttest results ($M = 308.52$, $SD = 71.55$); $t(20) = -2.70$, with a medium effect size of $d = -0.59$. The effect size was negative as there was an average decrease of 25.58 MSD from pretest to posttest.

Table 13

Mean Syllable Duration (MSD) in Pretest and Posttest Broken Down by Students

Student	Phonation time (millisecond)		# of syllables		Mean syllable duration (MSD) (millisecond/per syllable)	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
1	68009	85386	166	250	410	342
2	57946	78865	114	161	508	490
3	55502	87675	160	264	347	332
4	48659	73760	148	220	329	335
5	39221	66943	86	167	456	401
6	88839	92790	256	277	347	335
7	90262	87704	227	240	398	365
8	83807	92248	387	428	217	216
9	98785	98271	555	518	178	190
10	92789	91591	380	377	244	243
11	96381	95213	194	295	497	323
12	59606	75477	184	310	324	243
13	57376	89078	177	250	324	356
14	83864	95029	266	311	315	306
15	48976	72235	173	256	283	282
16	30093	71484	86	235	350	304
17	41681	75420	110	216	379	349
18	86319	104491	259	317	333	330
19	64686	76104	244	322	265	236
20	90459	86070	440	441	206	195
21	74033	72923	242	238	306	306

Note: One word in Chinese = One Chinese Syllable

Summary

In summary, for Research Question 1, the findings showed that all the mediation types except for MLE 10 were employed in the intervention, but the employment frequency of each mediation type was different. Also, four themes emerged during the qualitative data analysis. These four themes are: (a) the questioning technique can be used across multiple mediation categories, (b) modifying lesson plans to meet mediation needs, (c) teacher's personality affects mediation strategy choice, and (d) repetition affects learners' new word acquisition. For Research Question 2, the results showed that participants produced fewer silent pauses/100 words in the posttest than in the pretest. On average, participants' MSD decreased during the posttest compared to the pretest, and the results are statistically significant. Although participants, on average, produced fewer self-corrections/100 words in the posttest than in the pretest, however, that difference is not statistically significant.

CHAPTER V

SUMMARY, LIMITATIONS, DISCUSSION, AND IMPLICATIONS

The purpose of this study was to investigate how to use the mediation model, built under the guidance of the Mediated Learning Experience (MLE) theory, to improve language fluency in a Task-Based Language Teaching (TBLT) second- or foreign-language classroom. Because very little prior research has assessed the mediation model in TBLT language classrooms, this study utilized action research to assess if the model is adequate.

This final chapter provides the study overview and interpretations of the research findings. The content in this chapter includes a summary of the study, a summary of the findings, limitations of the study, a discussion of the findings, conclusions, implications for educational practice, and recommendations for future research.

Summary of the Study

Fluency development is critical to learning in a language classroom. The teacher's role as a mediator in a learner's fluency development, however, rarely has been explored in Task-Based Language Teaching (TBLT) classroom teaching. This study utilized action research to investigate how a teacher, as the human mediator who can make sure that stimuli in the learning environment will be available and benefit the learners, implemented mediation under the guidance of Mediated Learning Experience (MLE) theory (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2012) in aiding learners' language speaking-fluency development in one Advanced Placement (AP) Chinese TBLT class in a public high school in the Bay Area. MLE theory, developed by psychologist Reuven Feuerstein, provided a mediation framework for this action research.

This study used action research based on mixed methods. The study's design followed the test-intervention-test procedure. I, the teacher and the researcher, conducted mediation during the intervention stage to improve students' cognitive and utterance fluency. The mediation was employed immediately after the pretest and stopped before the posttest. It took 10 lessons (not including the pretest and posttest). Each lesson's mediation intervention is one action research plan-act-observe-reflect cycle. The teacher collected data, including mediation interaction audio-recording transcripts, teacher's observation and reflection log, lesson plans, unit plans, in-class handouts, MLE teacher self-rating checklists, and participants' speaking pre- and posttest samples to answer the following two research questions:

1. How is mediation used in the AP Chinese second- or foreign-language TBLT classroom to improve learners' utterance (cognitive) fluency?
2. To what extent does mediation improve learners' utterance fluency, as measured by the number of silent pauses, the number of corrections, and mean syllable duration, in the AP Chinese second- or foreign-language TBLT classroom?

The first research question aims to understand better how to implement the mediation model to improve learners' utterance and cognitive fluency in a TBLT foreign-language classroom. The second research question assesses whether mediation effectively improved learners' utterance and cognitive fluency.

The first research question was answered based on my analysis of the mediation interaction audio-recording transcripts, teacher's observation and reflection log, lesson plans, unit plans, utterance fluency assessment transcripts, MLE teacher self-rating charts, and pre- and posttest recording transcripts. Qualitative findings included how each category of MLE was

employed in the study and themes that emerged in the study that described how and when different mediation was used. Quantitative findings presented included an overview of how frequently each mediation type occurred during the intervention.

For research question two, I collected 21 pretest speaking samples and 21 posttest speaking samples from 25 participants, to assess their cognitive and utterance fluency. The variables in the speaking samples that were analyzed included the number of silent pauses, the number of corrections, and the mean syllable duration. I used paired-samples *t* tests separately to compare the pre- and posttest values of these three variables to find out if learners' utterance and cognitive fluency had improved.

Summary of the Findings

The findings for the first research question showed that 11 out of the 12 mediation categories in MLE (see Table 1 in Chapter I) were employed in the intervention and that each mediation category's employment frequency was different. The types of mediation that did not happen every day in class were all the situational mediations, including MLE 5 (Mediation of regulation and control of behavior), MLE 8 (Mediation of goal-seeking, goal-setting, planning, and goal-achieving), and MLE 11 (Mediation of optimistic alternative). One mediation type that was never used was a situational mediation: MLE 10 (Mediation of the awareness of being a modifiable entity).

The types of mediation that happened every day at least once in class included MLE 1 (Mediation of intentionality), MLE 2 (Mediation of meaning), MLE 3 (Mediation of transcendence), MLE 4 (Mediation of feeling of competence), MLE 6 (Mediation of sharing of experience), MLE 7 (Mediation of psychological differentiation), and MLE 12 (Mediation of a

sense of belonging). Among the mediations that happened every day at least once in class, MLE1, 2, and 3 are the three essential and fundamental mediations, and MLE 4, 6, 7, and 12 are situational mediations. The mediation that happened most frequently was MLE 4 (Mediation of feeling of competence) and MLE 1 (Mediation of intentionality). Each occurred almost 4 to 10 times more than any other type of mediation.

Also, four themes emerged during the qualitative data analysis. These four themes are

1. The questioning technique can be used across multiple mediation categories. Using questions as a mediation technique was detected in almost every mediation cycle and in most of the MLE categories employed in this study.

2. Modifying lesson plans to meet mediation needs. I modified the original lesson plans multiple times after I identified issues that came up in the class. There were two major types of lesson modification. One is to modify the lesson plan promptly during class time. The other is modifying the next day's lesson plan based on the previous day's teaching reflection.

3. The teacher's personality affects mediation strategy choices. As the mediator, my introverted personality affected my mediation strategy choices, especially for MLE 6: mediation of sharing behavior. I often chose not to share my personal experience in the classroom at moments that could have been helpful, which interfered with my role as the mediator in terms of modeling sharing behavior.

4. Repetition affects learners' new word acquisition. I tried to create repetition opportunities during the acquisition input and output stages. The data showed that repetition helped students in the process of acquiring new terms.

For the second research question, the pre- and posttest data paired-samples t test results showed that both the number of silent pauses/100 words and mean syllable duration decreased in the posttest, and they were statistically significant, with medium effect sizes. The number of corrections/100 words in the posttest decreased as well. The difference between the pre- and posttest, however, was not statistically significant.

Limitations of the Study

As action research, one limitation of this study is that it only provided one case to investigate how a teacher practiced mediation to improve learners' language fluency. The study only dealt with one language (Mandarin Chinese language) and was practiced in one AP Chinese classroom with only 25 participants and 21 collected pre- and posttest samples. Therefore, the sample size in this study was small and limited.

Second, this study only conducted the mediation in a class for 10 lessons. For fluency development, 10 lessons might not be sufficient to observe learners' improvement because fluent speaking competence is not easy to achieve (Tavakoli & Wright, 2020). Also, this study's design followed the test-intervention-test procedure, and the fluency achievement data were collected from the posttest immediately after the intervention. Therefore, it could not explain whether the fluency achievement after mediation lasted and how long it would last.

Third, many factors besides mediation affect fluency development, like technology support, learner characteristics, learning differentiation, and so on. This study, however, could not exclude all these irrelevant factors because it was conducted in a classroom setting, which was not an ideal experimental environment.

Fourth, the data in this study were collected from one class without a comparison group. This study tried to limit this influence by using a mixed-methods research design that can guard against researcher bias (Burns, 2015). Besides collecting fluency assessment quantitative data, it also collected qualitative data to investigate the fluency development from the mediator's (teacher) and mediatees' (students) interaction data and the teacher's observation and reflection data to provide additional insight into the research questions.

In addition, I (the researcher) in this action research was also the teacher (the mediator). It meant the field notes and teacher's self-rating were subjective. To limit the subjectivity, I used a teaching reflection log to help me reflect on my teaching practices and to help me modify my mediation.

Discussion of the Findings

The findings of this study provide evidence of the use of specific mediation types and patterns that mediate learners' fluency development in an AP Chinese TBLT classroom. Learners' utterance and cognitive fluency developed after a short period of meditation intervention suggesting that the mediation model used in this study mediated learners' speaking fluency development successfully.

The findings in this study are discussed under each research question. The first is responding to the findings for the first research question: How is mediation used in TBLT classrooms to improve learners' utterance (cognitive) fluency? The second is responding to the findings of the second research question: To what extent does mediation improve learners' utterance fluency?

Discussion of the first research question

The study results laid out a picture of how to conduct mediation in an AP Chinese language TBLT classroom to improve learners' fluency development. The findings showed how different mediation types were used during mediation, how to use questioning as a technique for mediation, and a number of factors that could affect mediation.

1. How to use different mediation types during mediation. Based on R. Feuerstein's mediation theory (R. Feuerstein, 1990; R. Feuerstein et al., 1978, 2010, 2012), learners' learning experiences cannot be called mediated learning experiences if they are not mediated by the three essential and fundamental mediations: mediation of intentionality, mediation of meaning, and mediation of transcendence. The findings of this study showed that these three mediation types occurred in every lesson during the intervention period. The mediation types that did not happen every day or did not happen at all belong to the category of situational mediation (see Table 1 in Chapter I). As a result, the mediation implemented in this study followed R. Feuerstein's mediation theory guidance and provided learners mediated learning experience.

The study findings also showed that mediation of intentionality and the feeling of competence happened most frequently and much more frequently than other types of mediation. Based on Segalowitz's (2010) cognitive fluency theory, two main cognitive processes underlying fluency are automaticity and attention to language. To develop learners' fluency, learners' language automaticity needs to be developed, and learners' awareness of language needs to be raised. The function of mediation of intentionality and mediation of feeling of competence meet these two fluency-development cognitive-process requirements.

R. Ellis (2009) emphasized that in a successful TBLT classroom, both teachers and students need to know the purpose of performing a task. Mediation of intentionality is employed to convey to the students that the mediator intends to help them improve (Hasson, 2018) through communicating with the students about the purpose of the task or attempts by the mediator to maintain students' involvement in the task or interaction (Lidz, 1991). Through the mediation of intentionality, mediators make stimuli salient, and saliency is important in attracting learners' attention to the object under consideration (R. Feuerstein et al., 2012). In second-language acquisition, the information a learner perceives is different from what the learner notices. Schmidt (1990) described noticing as a focal awareness and postulated that those who notice most learn most. What the mediation of intention emphasizes is making stimuli salient and making stimuli noticeable to learners. Therefore, this mediation might have increased learners' awareness of language.

Mediation of learners' feeling of competence helps learners to become familiar with the new and the unknown and helps them reach beyond their current functioning (R. Feuerstein et al., 2010). In this study, in order to boost learners' feeling of competence in language performance, the mediator was observed to raise learners' awareness of language through teacher-student interaction and by creating many repetition tasks to assist learners' language automaticity development. Automaticity development relies on repetition during the language input and output stages (N. Ellis, 2002). Multiple researchers have observed that task repetition can help language automaticity development (Bygate, 2001; N. Ellis, 2002; Lynch & Maclean, 2001; Segalowitz, 2010). Levi (2012) successfully used mediation practice to improve language fluency. She also created task-repetition opportunities for learners to develop language-fluency

performance. The findings in this study resonated with those researchers and showed repetition affected learners' new word acquisition, which may eventually affect their word retrieval speed and stability that are components of cognitive fluency (Segalowitz, 2010). In addition, if learners can perform a task better, it can boost their feeling of competence in their language skills, which in turn, also can improve their learning motivation (Dörnyei et al., 2006). Motivation is a factor associated with fluency development (Segalowitz, 2010).

Because compared with other mediation categories that mainly work on motivation, mediation of intentionality and mediation of learners' feeling of competence work on addressing language awareness and automaticity development in addition to improving learners' learning motivation, which may explain why they were implemented more frequently than other mediation categories in mediating fluency development.

2. How to use questioning as a mediation technique. In this study, questioning techniques appeared in almost all the mediation types, which suggests that questioning can be an effective mediation technique. Greenberg (2014) mentioned that one of the qualities of an effective teacher or mediator is asking but not telling. S. Feuerstein (2015) postulated that reciprocal questioning is the best way to turn stimuli into a source of learning because questioning can involve learners in answer-seeking and will trigger mental process mobilization. Therefore, the findings of this study supported the mediation principle brought up by Greenberg and S. Feuerstein, and it confirmed using questioning as a mediation technique in other studies (Ebadi & Asakereh, 2017; Hill & Sabet, 2009, Safdari & Fathi, 2020). In addition, this study showed that while conducting mediation under the MLE framework, questioning can be used across different mediation categories.

3. Factors that affect mediation implementation. In the study, I had to modify lesson plans multiple times to meet mediation needs. Also, I found that my personality affected my mediation strategy choices. Tasks will not come to life without reframing and reinterpreting through lesson planning and teaching practice reflection and reformulation (Rolin-Ianziti, 2010). R. Ellis (2009) also concluded in his research that if teachers can tailor tasks based on students' language proficiency level, being involved in task material development can determine if mediation is successful or not, which suggests that if teachers do not have the power to modify their lesson plans, they may not meet students' needs. The findings of this study supported Rolin-Ianziti's (2010) and R. Ellis' (2009) opinions.

In this study, I also found that my introverted personality affected my mediation strategy choices in how to mediate sharing behavior. Teachers' personality research shows that teachers' personalities positively correlate with teachers' teaching preferences (Mahmoudi & Zamanian, 2018). Therefore, mediators' personalities could be a significant influence on their mediation strategy choice.

In summary, the findings in this study suggest two possible factors that relate to the mediator that could affect mediation implementation: One is that if mediators can modify their lesson plans and curriculum, the mediation will be more effective; the other is that the mediator's personality can interfere with the mediation process and quality.

Discussion of the second research question

Three utterance fluency variables were measured to ascertain if mediation is an effective method for improving learners' cognitive and utterance fluency. The finding of fewer silent pauses/100 words and smaller mean syllable duration (MSD) in the posttest showed that learners,

on average, produced fewer silent pauses in the posttest than in the pretest, and speakers used less time to produce a syllable in the posttest than in the pretest. Utterance fluency is the measurable aspect of fluency development (Segalowitz, 2010). The change in these two utterance fluency variables means that learners' utterance fluency improved after the mediation intervention.

The change in the number of self-corrections was not statistically significant in this study. This result, however, does not necessarily invalidate the study. First, fluency is difficult to achieve at the beginning (Tavakoli & Wright, 2020). Second, utterance fluency can be measured in different ways, including speed fluency, breakdown fluency, and repair fluency (Alimorad & Yazdani, 2020; De Jong & Tillman, 2018; Li et al., 2015; Skehan & Foster, 2005; Tavakoli & Skehan, 2005) and these different types of fluency develop at different speeds. The number of silent pauses measures breakdown fluency, MSD measures speed fluency, and the number of corrections measures repair fluency. Huensch and Tracy-Ventura (2017) conducted research on Spanish as second-language learners' utterance fluency development over 2 years of learning, and they found that learners' speed-fluency development appears quickest, followed by improvement in breakdown fluency. Learners in their study, however, showed no improvement in repair fluency. The different paces of the improvement of different aspects of fluency suggested that repair fluency is a variable that may take a longer time to change. The mediation intervention in this study occurred over 10 lessons within 16 days, which may be too short to expect statistically significant improvement in repair fluency.

Cognitive fluency can be measured by utterance fluency (Segalowitz, 2010). The number of silent pauses and MSD are the utterance fluency variables that correlate to cognitive fluency

development, and MSD is the strongest predictor (De Jong et al., 2013; Kahng, 2020). The findings of this study were that utterance fluency changed between the pre- and posttest after the mediation intervention. There were fewer silent pauses/100 words and smaller MSD. These results suggest that the mediation model built under the guidance of R. Feuerstein's Mediated Learning Experience (MLE) theory improved learners' cognitive fluency development.

Conclusions

This study investigated how to use the mediation model, built under the guidance of the Mediated Learning Experience (MLE) theory, to improve language fluency in a Task-Based Language Teaching (TBLT) second- or foreign-language classroom. Following the research questions and the findings, the conclusions drawn from this study are that this mediation model improved learners' utterance and cognitive fluency. The conclusions of this study address the following two areas: (a) How is mediation used in the AP Chinese TBLT classroom to improve utterance (cognitive) fluency? and (b) To what extent does mediation improve utterance fluency?

How is mediation used to improve utterance and cognitive fluency?

This study first found that the three essential and fundamental types of mediation, mediation of intentionality, mediation of meaning, and mediation of transcendence, were implemented in every lesson. All the mediation types that did not happen every day or did not happen at all belong to situational mediation. The frequent use of the three essential types of mediation, however, provides evidence that the mediation implemented in this study followed the MLE theory's guidance and provided learners mediated learning experience.

Second, this study suggests what types of mediation might influence fluency development. Mediation of intentionality and mediation of feeling of competence were practiced

most frequently and much more frequently than other mediation types during the mediation period, which is because these two mediation categories might contribute to prompting language noticing and developing learners' language automaticity besides promoting learners' motivation. Third, this study indicated that questioning could be used as a mediation technique for different mediation categories.

Finally, the study highlighted two possible factors that affect mediation implementation. One is if the mediator can modify lesson plans to meet mediation needs; the other is that the mediator's personality can affect their mediation strategy choices.

To what extent does mediation improve utterance fluency?

To determine if mediation of cognitive fluency is effective, this study measured utterance fluency variables that correlate to cognitive fluency development. Three utterance fluency variables were measured in this study: (a) the number of silent pauses, (b) the number of self-corrections, and (c) mean syllable duration (MSD). The data collected from learners' pre- and posttests showed that both the learners' number of silent pauses/100 words and MSD decreased on the posttests, and the result was statistically significant, which suggests that the mediation improved learners' utterance and cognitive fluency development. Although the decrease in the number of self-corrections on the posttest was not statistically significant, it can not invalidate the research findings because self-correction is a variable that may require a much longer time to change. The 10 lessons of mediation in this study may be too short for improvement in learners' self-correction.

From the findings of this study, it can be concluded that the mediation model built based on R. Feuerstein's mediation theory can improve learners' speaking fluency in the AP Chinese TBLT classroom.

Implications for Educational Practice

This study provided a mediation practice case study to improve learners' speaking fluency development in one AP Chinese TBLT classroom. The findings of this study suggest some useful mediation practice tips for foreign- or second-language educators.

First, this study points out that R. Feuerstein's Mediated Learning Experience theory can provide adequate mediation guidance to support teachers in practicing mediation in TBLT classrooms to improve learners' speaking fluency.

Second, if teachers want to implement mediation successfully, this study provides an example of how to implement mediation. The findings in this study imply that implementing mediation of intention and mediation of feelings of competence might affect fluency development. Furthermore, the study results suggest that teachers can use questioning techniques to implement different mediation categories in their classrooms. In addition, this study implies that two possible factors might affect mediation qualities. One factor is whether teachers can modify lesson plans; the other is the influence of teachers' personalities on their mediation strategy choices. The former implies that school districts should ensure teachers have enough power to modify the curriculum or lesson plans to meet their students' learning needs. The latter factor implies that as mediators, classroom teachers must be aware of the influence of their personalities on their mediation strategy choices.

Finally, the utterance fluency variables' measurement results in this study showed that speed fluency and breakdown fluency improve faster than repair fluency, which provides educators with a fluency improvement map with which to observe the effectiveness of their mediation practice.

Recommendations for Future Research

To implement mediation to improve learners' speaking fluency in TBLT classrooms, recommendations for future research are as follows:

First, this study only provided one case to investigate how a teacher practiced mediation to improve learners' language fluency in one AP Chinese classroom, which implies that future studies can examine if the same mediation model works in the same way in other AP Chinese language classrooms, in other levels of Chinese classrooms, or in a language classroom that is different from a Chinese language classroom.

Second, this study was action research. It stands from the teacher or mediator's perspective to observe the mediation process. Future studies can further explore the effectiveness of mediation from the learners' perspectives, for example, examining learner responses to mediation. Also, future studies could use different research designs like quantitative research to compare the effectiveness of mediation by comparing an experimental group and a control group to investigate the effectiveness of the mediation.

Third, learners are different. They have different learning backgrounds and language proficiency levels. Future research can examine if the mediation model in this study works the same for different groups of learners like beginners versus advanced learners, low-achievement learners versus high-achievement learners, and so on.

Fourth, this study showed that questioning could be used as a meditation technique in the implementation of different mediation types. There are many different question types, therefore, future research can address what types of questions are more effective in mediating fluency development.

Future research also could explore the effects of the length or duration of the intervention. As previously mentioned, a potential limitation of this study was the duration of the mediation being limited to only 10 lessons. Future research could examine a more extended period of mediation to learn if the improvement in utterance fluency development would be greater.

Finally, this study was designed to collect posttest data immediately after the intervention. Therefore, the findings in this study do not provide any insight into whether learners' fluency improvement is long-term in nature, and if so, how long it will last. This is another area that future research could examine.

Closing Remarks

This study took me almost 3 years from the day I started to form the thought of investigating fluency development in a constructive learning classroom. The motivation for this study, however, was to answer questions that had been swirling in my mind for over a decade of Chinese language teaching.

It began on my first day of teaching as a student teacher. That day, I used the same curriculum, same lesson plan, same teaching materials, and same teaching method that my master teacher demonstrated in her Chinese class. The students' performance in my class, however, was not as good as my master teacher's. I wondered to myself, "what makes good teaching and how do I do it?" As a teacher in training, these ideas filled my mind. I eagerly

explored new teaching methods and new technologies and tried to implement many new things in my teaching. During this process, I could not help but ask myself more questions, “Which teaching method or technology should I use? Is there a set of central principles that I can follow?”

When I started my dissertation journey, after reading many research papers, the confusion did not go away but became worse. I remember one day, I was reading some researchers’ arguments about comparing teaching methods. Researchers on each side conducted their studies to prove their method was the right way to enhance learners’ language performance. I remember feeling very confused. How could both sides be right? At that moment, I began to wonder if there were more common foundational factors that were at play in helping learners perform better rather than teaching method battles.

What are those factors? Growing up in China, I have experienced very traditional teachers who were excellent in helping me learn, and I have also experienced progressive teachers who were also excellent. I have come to believe that being a good teacher is not about a new teaching method being better than an old one or a new technology, but rather something more fundamental. Today, in the language teaching field, I believe teaching methods and technology have been overemphasized at the expense of teaching itself. That is when I discovered the ideas in R. Feuerstein's Mediated Learning Experience that helped me to conceptualize the teacher’s fundamental role as a mediator in the classroom, which was especially true in a constructivist learning classroom.

Constructivist teaching has become increasingly popular in second- and foreign-language classrooms. Like many other teachers, I have tried to implement inquiry-based

learning, or project-based learning in my classroom. The interesting situation that I observed was that students were more motivated in inquiry-based, project-based learning, but students also reflected that they liked the teacher's lectures because they felt they could learn more through lectures but not through project activities. After a couple of years, however, when I asked the same group of students what they remembered in the class, what I learned was that they usually could not recall the content of the lectures, but only remembered some projects they had done in the class. In addition, I observed that through pure inquiry, students' language-fluency development was poor. How to improve students' fluency in a constructivist learning classroom?

These observations and reflections from my experiences working as a language teacher formed the basis of my desire to explore how to conceptualize teaching to improve learners' fluency development in a constructivist teaching classroom. Especially in the AP Chinese language class I am teaching, how to improve fluency is critical. On the one hand, AP Chinese language teachers are like other language teachers, we have to motivate students and engage students in learning. On the other hand, we can not sacrifice the cultural knowledge and language skills students have to acquire in order to prepare students for the exam. Free inquiry cannot help students prepare for their AP exam. Lecturing cannot meet today's students' needs and cannot engage and involve them in learning. I had to find a way that improves students' fluency in a cognitive learning environment.

During this dissertation writing process, I am glad that I found R. Feuerstein's mediation theory. It offered answers to questions that have confused me for so long. I am very happy that this study's findings showed that mediation under the MLE framework was able to support students to develop fluency in a cognitive learning environment. Although this is the first step of

exploration of mediation in AP Chinese TBLT classroom, it is a turning point in my teaching life. What I learned is not about how to do mediation to support my students to complete one specific project, it is about how I, as a mediator, can function as a go-between for students and the learning environment around them. In particular, how I can use mediation strategies under the MLE framework to connect these students to the stimuli in their learning environment.

These ideas work for any project students do and in any classroom. They help me understand my role as a teacher in helping students find meaning, direct their attention, achieve their potential, and function as independent thinkers to achieve their goals.

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APPENDIXES

Appendix A

Parent Consent and Student Assent Form

(Current Date)

Dear parents/guardians,

My name is Jing Liang. I am a teacher at [REDACTED] High School and am currently a doctoral graduate student in the School of Education at the University of San Francisco. I am sending this letter to explain why I would like for your child to participate in my doctoral research project in [REDACTED] AP Chinese class. I am studying how to assist students in improving their Mandarin Chinese language speaking fluency and I would like to see if this study will lessen learners' learning burden in fluency development and speed up their learning process.

With your permission, I will ask your child to participate in the fluency development study, which will last about two-week (a total of 11 lessons). Students will complete a short survey about their Chinese language learning background, taking about 5 minutes and doing regular class activities. I will audio record the class during this research period. Your child's participation in this study is completely voluntary and will not affect his or her grades in any way. Your child may quit this study at any time by simply saying "Stop." or "I do not wish to participate."

The study will be conducted this semester in the AP Chinese class. There are no known risks involved in this study and your child will not receive any compensation for his or her participation. To protect your child's confidentiality, your child's name will not appear on any record sheets. The information obtained will not be shared with anyone, unless required by law. The records will be maintained by me and my faculty sponsor, Dr. Apedoe. If you have any questions, please contact me at [REDACTED] or via email at [REDACTED].

This letter will serve as a consent form for your child's participation and will be kept in the School of Education at the University of San Francisco. If you have any questions about this study, please contact Dr. Apedoe, the faculty sponsor of this project, at [REDACTED]. Or you can contact [REDACTED] principal Mr. Dominguez at [REDACTED]. If you have any questions about your child's rights as a participant, you may contact the University of San Francisco IRB at IRBPHS@usfca.edu.

Please have your child return this form to me by (date).

Sincerely yours,

Jing Liang

Statement of Consent

I read the above consent form for the project entitled “Improving language fluency development in Chinese Foreign/Second language Classroom” conducted by Jing Liang of the University of San Francisco. The nature, demands, risks, and benefits of the project have been explained to me. I am aware that I have the opportunity to ask questions about this research. I understand that I may withdraw my consent and discontinue my child’s participation at any time without penalty.

Child’s Name (print clearly)

Signature of Legal Guardian

Date

亲爱的家长和监护人：

您好！我叫梁晶，是 [REDACTED] 高中的一名老师，也是旧金山大学教育学院的博士研究生。我给您发这封信是因为我希望您能同意让您的孩子参与我在 [REDACTED] 的AP中文班进行的博士论文研究项目。我在研究怎样帮助学生说中文说得更流利。我希望通过这个项目，学生能减轻他们语言流利度发展过程中的学习压力，同时又加速语言学习进程。

如果您同意，您的孩子会参与为期大约两个星期的(共11 堂课)的语言流利度发展的研究。您的孩子会完成一个中文学习背景调查问卷 (大约需要5分钟)，做日常的课堂活动，我也会把这个期间的上课的过程录音下来。您的孩子的参与是完全自愿的，不会因任何情况影响到他们的成绩。您的孩子也可以随时提出退出这个研究，只要简单说“停”，或者“我不想参加了”就可以。

这个项目会在这个学期的AP课进行。该研究不含有任何已知的风险和危害。您的孩子也不会因为参与这个项目而得到补偿。为保护您的孩子的个人数据，您孩子的名字不会出现在任何纪录纸上。收集到的信息也不会跟任何人分享，除非法律要求。所有的记录也会被我和我的博士生导师Dr. Apedoe 妥善保管。如果您有任何问题，请给我打电话 [REDACTED] 或者发电邮: [REDACTED]。

这封来函同时也是您同意您的孩子参与研究的同意书，会被保存在旧金山大学教育学院。如果您对这项研究有任何疑问，请跟我的导师 Dr. Apedoe 联系 ([REDACTED])。或者跟 [REDACTED] 高中的校长 Mr. Dominguez 联系 ([REDACTED])。如果您对您的孩子作为参与这项研究的参与者的权力有任何问题的话，您可以跟旧金山大学的IRB联系 (IRBPHS@usfca.edu)。

请让您的孩子在 (日期) 前把这份同意书带回学校交给我。

衷心感谢！

梁晶

同意书

我已阅读以上关于研究项目“提高中文作为外语或第二外语课堂的学习者的语言流利度”的同意书的内容。该项目的研究者是旧金山大学教育学院的梁晶。该项目的性质、风险危害和益处已经被解释给我。我知道我可以对该研究提问题。我也知道我可以不同意，还可以在什么时候让我的孩子停止参与这项研究而不会有任何的惩处。

孩子名字（请工整书写）

监护人签名

日期

(Current Date)

Dear student,

My name is Jing Liang and I am currently a doctoral graduate student in the School of Education at the University of San Francisco. I am asking you to participate in a project that examines how to lessen learners' learning burden in fluency development and how to speed up their fluency developing process.

I am asking you to participate in the fluency development study, which will last about two-week (a total of 11 lessons). You will complete a short survey about your Chinese language learning background that would take about 5 minutes and do regular class activities. I will audio record the class during this research period. Your parents or legal guardians have already given permission for you to participate in this study, but you do not have to participate if you choose. You may quit this study at any time by simply telling me that you do not want to continue. You can skip any questions or tasks that you do not want to complete. Your participation in this study will not affect your grades in any way. There are no known risks involved in this study and you will receive nothing for your participation. To protect your confidentiality, your responses will not be shared with anyone unless required by law. The responses you make will be kept by my professor Dr. Apedoe and me. Your parents will not know if you chose to participate in this project or will know the answers you provide.

If you have any questions about this study, please contact me at [REDACTED].

Sincerely yours,

Jing Liang

Agreement

I agree to participate in this research project and I have received a copy of this form.

Student's Name (Please Print)

Date

Student's Signature

I have explained to the above named individual the nature and purpose, benefits and possible risks associated with participation in this research. I have answered all questions that have been raised and I have provided the participant with a copy of this form.

Researcher

Date

Appendix B

Mediated Learning Experience (MLE) Teacher Self Rating

Mediated Learning Experience (MLE) Teacher Self Rating

Adopted from Lidz (1991) and Hasson (2018) and guided by Feuerstein et al. (2010, 2012)

Date:

Mediation of MLE	Observed Mediation in class	Frequency
<p>1. Intentionality: convey to the students that you intend to help them improve. This includes communication to the students of the purpose for the task or interaction, as well as attempts by the mediator to maintain the students' involvement in the task or in the interaction. The mediator shows ongoing interest in the active involvement of the students.</p> <p><i>e.g. statement or encouragement of a principle to induce self-regulation in the students; this principle would apply to the child's ability to maintain attention and inhibit impulsivity.</i></p>		

<p>2. Meaning: Moving the content from neutral to a position of value and importance; this may be done by effective emphasis, gesture, movement of the materials, or by stating that the object or aspect of focus is important and should be noticed.</p> <p><i>e.g. elaboration that expands the information about the activity or object or that provides information about the cultural meaning or relevance</i></p>		
<p>3. Transcendence: promotion of cognitive bridges between the task or activity and related but not currently present experiences of the students; this may refer to the past or may anticipate the future.</p> <p><i>e.g. elaborated reference includes hypothetical, inferential, or cause/effect thinking. Or ask students: "Have you seen one like this before? When? Why is it like that? Does it apply to this situation? " or "When is another time you could do that?"</i></p>		

<p>4. Feeling of competence: mediating learners to feel that they are competent in learning. Help learners to overcome difficulties, get familiar with new content, and challenge and encourage the learners to reach beyond their current functioning.</p> <p><i>E.g. through verbal or non-verbal praise or encouragement to communicate to the student that he/she did a good job.</i></p> <p><i>Or. manipulating the task to facilitate mastery of the student.</i></p> <p><i>Or Asking child what to do rather than telling him.</i></p> <p><i>Or facilitate the application of rules and strategic thinking. Ask questions like “which word can we use to start a question?”</i></p>		
<p>5. Regulation and control of behavior: engaging learners in a process of regulation of their behavior of deciding whether they are ready to do something.</p> <p><i>e.g. teach the learner to think about if they have the necessary tools, information before they start their action.</i></p>		

<p>6. Sharing of experience/thought: communication to the student of an experience or thought the mediator had that the student had not previously shared or experienced with the mediator. Create students' needs and skills to share with others.</p> <p>E.g. comments including "When I was a high school student..." or "This makes me think of..." should relate to the activity being shared.</p>		
<p>7. Psychological differentiation: To help create within a learner a sense of being a separate person with an ability to think and express oneself in unique ways. The focus of the mediator is on the provision of a good learning experience rather than on the creation of a good product; if something has to be sacrificed, it is the end product, not the child's experience.</p>		
<p>8. Mediation of goal-seeking, goal-setting, planning, and goal-achieving: A mediator can use mediational strategies like enlarging learners' sphere of awareness of what is possible or attainable to develop learners' ability to set goals or to invest in plans to achieve goals.</p>		

<p>9. Mediation of the search for challenge, novelty, and complexity: mediate for the acceptance and mastery of challenge; encourage the readiness to engage, act upon, and search for novelty and complexity of tasks.</p>		
<p>10. Change: communication to the child that she/he has profited in a positive direction from the experience, that she/he has improved and changed in some way compared to the starting point. This includes providing the child with actual pre-/post-product comparisons, as well as pre-/post-behavioral descriptions. <i>e.g. elaborate feedback regarding what the student did and what the changes were.</i></p>		
<p>11. Optimistic alternative: mediating learners to search for an optimistic alternative or mediating the expectation for positive outcomes. <i>E.g. providing encouragement like “it will be fun.”</i></p>		
<p>12. Sense of belonging. Help and support learners to develop a feeling of belonging or connecting to a community. Communication of a sense of caring about and enjoyment of the student.</p>		

Appendix C

Teacher Observation and Reflection Log (Day 1- Day 11)

Day 1: Jan_19 Pretest Observation and Reflection

The pretest itself went smoothly in general besides having to move it from yesterday to today, from the lab to the classroom before I started lesson 1 because of an unexpected fire alarm yesterday.

Franco came to the class late. When he came in, we had already started the pretest recording. He barely started his recording, other students finished, so he did not continue his recording. Harley did not follow the instructions. She did not start to record when other students started. Both of their recordings could not be collected as samples. Cleo was absent today.

After I collected everyone's recording, and listened to them, I found that although students knew general things about Chinese New Year customs, they could not describe them correctly in language and they did not know the details of some customs. Also, most of the students were not fluent. After listening to all their recordings, I got the sense that the ideas they know about the Chinese new year are based on their own life experiences as Chinese Americans. For example, most of them will talk about red envelopes, red decorations for the new year, and family gatherings to have a meal together. They do not even know the exact date of the Chinese New Year.

I think that what students need is to be exposed to authentic ways of how Chinese people in China celebrate the new year.

Day 1: Jan_19 Lesson 1 Observation and Reflection

We played the Kahoot game in class today. The game took longer than I expected. Most of the time, after the Kahoot showed students' answers, I gave feedback to students' answers directly rather than asking students to reflect on their answers as I had planned. I felt it would be more efficient to provide feedback immediately but not waiting until the end of the game. There was not enough time to have students reflect on their performance at the end of class. I need to create more space for students to reflect on their work.

Students were happy when they started to play the Kahoot game. When students are familiar with one question, some students would deliberately shout out some wrong answers for fun. When the question was difficult for them to answer, they would shout out wow...

After doing the MLE self-rating, I realized that there was an opportunity to mediate sharing, like sharing my own experiences, but I did not. Will it make a difference if I share my own experiences?

Day 2: Jan_20 Lesson 2 Observation and Reflection

Before the class started, during the class transition period, I played a news video clip about Chinese people taking trains and planes to travel back home to reunite with their families before the Chinese new year. This was not in my original lesson plan. I hoped this could create an atmosphere of the Chinese New Year. Also, when students walked into the classroom they could watch it and gather some information about the Chinese New Year celebration. I noticed that some students paid attention to the video. I hoped this video could help students be more familiar with the Chinese new year celebration customs in China.

Today, we started the project. In the lesson plan, I planned to have students map out the project on a piece of paper. In class, however, I had students have a verbal brainstorm of what they needed to prepare for the project instead. I spontaneously changed the plan for two reasons. One, mapping out the project on a piece of paper would take more class time. Two, I was worried that students went into detail about what kind of games they wanted to design, but would get lost in the detail rather than the big picture. Verbal mapping would save time and could prevent students from getting lost in detail.

The result is better. Students were able to think of the big picture rather than getting lost in details.

Student Jolie did not know how to say the word, “Chinese New Year custom”. Student Ander did not know how to say the word, “Chinese New Year scroll” in Chinese. I provided corrective feedback and tried to raise their attention to language. I need to pay attention in future lessons to see the results of my mediation today to Jolie and Ander.

Day 3: Jan_21 Lesson 3 Observation and Reflection

In the past two lessons, all the tasks we did in the class took longer than I expected. I had to cut class discussion time shorter.

In the previous lessons, I noticed when I was listening to the class recording that I didn't address enough the intentionality (purpose) of why I chose certain tasks for the class. Today, when I told students about the show-and-tell activity, I addressed that sharing their ideas with the class would help them better recall the information. When I told the class this, I saw some students nod and some students raise their heads. I need to pay more attention to their body language in the coming classes.

I had students describe the objects they decided to make and where they wanted to post or place them in the classroom.

Some decorations students made were not what I expected. Many students wrote the character “福”(Fu) for decoration. At least 8 groups wrote Fu (total of 14 groups) While I was thinking about where students would post these multiple Fu's in the classroom, June and Luna arranged and posted 5 “Fu” signs on the top of the map of China, and they explained it is 五福 (Five Fu). It was very creative.

While I had students show-and-tell the new year decorations that they made in class, because multiple of them made “Fu” signs, I noticed that while one student group presented their decorations, other pairs learned from their previous peers' presentations.

I also noticed that students knew the cultural knowledge that you need to hang upside down the Fu but they could not use Chinese to describe it. I asked Ander, “怎么贴? [How to post it?]” Ander responded, “不是正的 [not straight]”. He held the ‘Fu’ upside down in his

hand, but he could not use the word “倒 [upside down]” . I addressed how to say upside down in Chinese, and wrote the character on the board. It was helpful. When Reena was doing their group’s presentation, while she was trying to express the concept upside down, I observed she hesitated a second, then she looked at the board, and quickly expressed the phrase upside down in Chinese correctly. Students learned from the mediation I gave to their peers.

During the class discussion time, students learned from each other. When Rohan was showing the “Fu” he wrote, Luna noticed that Rohan’s Fu was missing one dot. She pointed it out. Students laughed. I saw later that Rohan added a dot on his Fu.

When a student group finished their show-and-tell, I would praise them first, then I would emphasize some keywords students used in their presentation, and I would praise them and provide suggestions or opinions for their presentation.

Today, I also managed to have students reflect on what they learned before 8 minutes when the class was over. We didn’t have enough time to talk about their reflections because only a couple of students finished. Most of the students were still working when the class was almost over. In the coming lessons, I need to leave 10 minutes for the reflection activity if it requires writing down characters. Writing characters is challenging for a lot of students.

Day 4: Jan 24 Lesson 4 Observation and Reflection

In the lesson plan, I planned to do peer interviewing because I was thinking that many students in the class had the experience of celebrating the Chinese new year. I was thinking if they ask each other about how to celebrate Chinese New Year, they will get the information they need and it would be better than searching for this information online because usually, students will search for English information and translate it into Chinese later. If they interview each other, they can interact with each other in Chinese. After I listened to their pretest recordings, I found out that although most of them knew the Chinese New Year, what they knew was how Chinese Americans celebrate the Chinese New Year. What they knew was very limited. Besides a couple of students, who are Chinese native speakers, and immigrated to America when they were in elementary school, most of the students only knew things like that families will get together to eat dinner together, and kids will get a red envelope. If I had them interview each other, it would not expand their understanding of Chinese New Year. Therefore, last night, I modified the lesson plan. I designed a “fighting for the red envelope” game. In this game, I divided the class into two groups, each group would send a person to fight for the red envelope. The team who got the red envelope could decide which question they want and decide which team should answer the question. The team that answered the question correctly could get 100 points, the team that did not answer the question correctly would be deducted 100 points. Anyone on the team could answer the question. Therefore, if one person in the team could answer the question, everyone in the class could hear the answer and it would be the information input. It would be better than the interviewing task in which they ask around and it’s possible that they still can not get the appropriate information.

When we started doing the activity “fighting for the red envelope” game in class, students cheered up. Students who were incredibly excited were the students who knew about the Chinese New Year very well, like Luna, who is a native speaker.

They named their teams. One was 发财 (get fortune); The other was 幸福 (Happiness), which fits the Chinese New Year customs very well. Students are creative, and they have fun with their creativity.

Although students were playing the game to get points, I could see they still cared about each other’s feelings. Luna was playing against Rohan. After Luna got the envelope a couple of times, she deliberately let Rohan get the red envelope so that Rohan’s team would have an opportunity to answer questions.

Because students needed to answer the questions in front of the class, it’s possible that this would intimidate some students to answer the questions because they were concerned if they did not answer the question correctly, it would be embarrassing.

When the class was over, I asked Charlotte about whether she learned something through the process of game playing. She said she still liked lecturing more because she couldn’t understand very well from other students’ answers in class because of their accents or because they speak too fast.

What Charlotte said was exactly what I try to work on by using mediation to deal with the problem of pure inquiry. Other students spoke too fast or spoke with an accent, so Charlotte could not get the information because the students did not know how to do mediation. Charlotte could understand my speaking, because I usually slow down my speaking or add stress on certain keywords deliberately in class to make sure students could understand me.

Today, during the class, I also deliberately shared my personal experience of the Chinese New Year celebration. While I shared my experience, I noticed some students raised their heads to pay more attention to my talking. I also saw Hana nodding. Sharing my personal experience seems like a good way to engage students.

Day 5: Jan_25 Lesson 5 Observation and Reflection

Since the majority of the students did not have the experience of celebrating Chinese New Year in a traditional way, I decided to expose students to a short video clip series about Chinese New Year customs. Each video clip is only 2-3 minutes, a total of 5 clips. I decided to play the video clip in front of the class instead of having students watch them themselves at their own pace. We don't have headsets with Chromebooks in the classroom, they're going to interrupt each other when they play videos at their own pace. I still posted the video in Google Classroom so that students still have the chance to watch them at their own pace.

Yesterday, while students were working on their handouts, I saw some students were still confused about using the appropriate term in Chinese to describe the monster in the Chinese folk story. Therefore, today I talked about the difference between confusing words: 妖怪, 怪兽, 魔怪, 怪物, 鬼. I could see students paid attention when I talked about these words.

The problem for self-inquiry is that some students will spend more time than others, some will be more serious than others. Some students will spend as little effort as possible. However, some students will spend a lot of effort on a small thing. How can I balance that? Before students started to work on their project descriptions, I spoke about the significance of having everyone write their own descriptions. I addressed that in this way, everyone would get a chance to express themselves in Chinese.

In the previous lesson, I had the idea to have students map out the game design. I modified the lesson plan to have students verbally plan out their game design with their partners. Also, I had students write the game description today in class. It will force students to reflect on

and plan their games, and it will be an opportunity for them to think through their games, and express their ideas in Chinese.

Day 6: Jan_26 Lesson 6 Observation and Reflection

When I was walking around while students were preparing the game, I found some students still could not say 年 (Nian)'s name correctly. Vienna wrote on her slides as 年夭(妖) rather than 年兽. Franco wrote it as 年怪.

Although I described these word differences in class deliberately in the previous lessons, it seems like they haven't remembered the correct word. Vienna and Tye were working on the same shared google slides. When I pointed out Vienna's mistake, she could not remember the correct word. Suddenly, I saw the 年夭 in the slide on her screen turned into 年怪兽. Tye had changed the word for Vienna! Let's see if Vienna will learn the word from her peer's correction.

While I was walking around, I could see that some groups were cooperating very well, but some students were off task.

Cleo was playing a cellphone game while her partner was working on the game design project. She went back to being on task after I reminded her.

Harley was off task also. She was doing her other class's assignment until I reminded her.

Day 7: Jan_27 Lesson 7 Observation and Reflection

Today was the last day that students can prepare for the game fair. I had students prepare a poster for their game fair booth.

When I was walking around the classroom, two groups finished their work much earlier than the other groups. A couple of students were off task.

The game Luna and her partner designed was Pictionary. They wanted a player to draw the picture based on the item they provided and have the other player guess. It is a simple game and does not need a lot of preparation. Luna seemed not to think through the game either. She wanted one player to draw and another player to guess. I challenged her by asking a couple of questions about some possible situations that would happen during the game fair day.

Reena's group finished their work as well. Their game was having players read a picture and say the object in the picture in Chinese. It's a simple game also. I asked them what if one person can not say the name, what the consequence would be. They said they will just tell the person. I asked if the person can say all the names correctly, what the consequence will be. They said no consequence. It looks like they do not know what a game is. Or I did not mediate well what a game means.

Bruce was not doing work also. When I asked Bruce if their group finished their design, he turned to his partner, and asked him, "Have you finished?" His partner is Franco. Franco said, "Almost." Then Franco asked, "Can we just have traditional (Chinese character) form on the slides? I guess everyone can understand." I asked Bruce, since Bruce only reads the simplified form, "Can you understand the traditional form on the slides? If you can not understand, it means other people might not understand either." Franco said, "Alright." Bruce then started to work.

Ander was serious in learning. He was designing a jeopardy game and he was reading information from Baidu (a Chinese search engine) to design appropriate questions for the game. He was searching online seriously during the whole class period today and yesterday.

Forest's group seemed to understand how to play a game. They designed play rules and game awards.

Last night, I read the game description that students turned in and provided written feedback to students. Three groups all designed jeopardy games. They all used the literal translation from English "Jeopardy" to "危险边缘" for their game's Chinese name. I corrected them, and suggested they use the Chinese name "抢答赛". I noticed that they used the correct name for their game today in class.

Day 8: Jan_28 Lesson 8 Observation and Reflection

Today is the game fair.

Yesterday I was concerned about Luna's group's pictorial game. If there is only one student who goes to their booth, how can it work out? It looked like it should not be a concern. Students went to their booth in pairs with their partners. It worked out well.

Students were happy to play the games that their peers' designed.

I played Franco's group's game. Their game was guessing a new year expression based on pictures they showed on the screen. It was not very easy to guess. After you guess, they will show you the right term in Chinese on the screen. I watched Vienna playing their game. When she read the picture about “年夜饭 (Chinese New Year Eve meal)”, she said, “年年有鱼?”. It was wrong. Franco showed her the correct answer.

I played Forest's group's game. Their game was you need to answer a question in Chinese first. If your answer was correct, then you would get a chance to throw a Ping Pong ball into a cup. The winner would be the one who could throw the most amount of Ping Pong balls into the cup in one minute. It was a well-designed game. Questions I answered were: “说出三个春节前的习俗”, “春节为什么要吃汤圆和饺子”. The final winner of the game was Coral.

Hana's group's game was guessing Chinese riddles. They didn't allow Luna to play the game because they said that game would be too simple for Luna. Luna is a native speaker. Luna, however, was engaged in playing their game. She enjoyed playing all the games. All the games appealed to students, even if they were simple games. The students who played most of the games during today's game fair were Luna, and Jolie.

I divided the class into two shifts. During the first run, even number groups host games, and other students play games. During the second run, switch, the odd number groups would host. All the time, students were engaged. I felt that we rushed out to complete the game fair. If there were 30 minutes more, it would be better.

I didn't collect the students' game-playing record sheets at the end of the class. Maybe I should collect them so that I can figure out what kind of games each student played. However, the purpose of the data I try to collect from teaching is how I do mediation, so it's not very important to know how many games or what games each student played. It is more important to know if the teacher has created opportunities for students to be exposed and engaged in doing class activities.

For the next lesson, I planned to have the class interview a couple of students who celebrate Chinese New Year yearly at home and whose Chinese are native speaker level or near-native speaker level. I hope through this interview, students can understand the changes of Chinese New Year celebration tradition in modern Chinese families.

Day 9: Feb_2 Lesson 9 Observation and Reflection

Today, I had the class interview three students whose families are from China, and whose Chinese language level is at native speaker level or near-native speaker level. Two of them immigrated to America when they were in elementary school. When the class was over, I asked Jolie if she learned something new during the class today. She said half-half. She said she learned something she did not know, like people give each other hongbao through the social media app WeChat. Although Jolie celebrates the Chinese new year at home as well, her family did not adopt new changes in Chinese New Year celebration customs which have gotten popular in recent years. It was the right decision for me to have the class to do this class interviewing task. For most Chinese Americans, although they celebrate Chinese New Year at home, their families usually do not adopt new traditions, but keep practicing old traditions that they know.

The three students that I asked to share their experiences of the new year celebration were all very happy to do this. Luna was not very engaged in preparing for the game fair, but she was very engaged in the interview task.

After the class interview, I asked students to talk to their partners to tell three custom changes in the new year celebration first, then I asked Bruce to tell the class one change he got from the interview. Bruce said he didn't know. Did he pay attention to the class? In a big class, I can not make sure everyone pays attention to the class. What should a teacher do to accommodate this?

I asked Lyla to share three changes with the class. I noticed she only wrote one in her chart, but she was able to say three changes orally in front of the class. Did I not give students enough time to prepare?

When students were reading the article on the handout, I was walking around, I noticed Clara was sharing her chart with Coral. Students do learn from each other.

Day 10: Feb_3 Lesson 10 Observation and Reflection

Yesterday, when I was in class, I noticed students still were not able to describe certain activities by using correct verbs accurately. For example, “用微信发红包 [send red envelopes via Wechat]”, they would say “用微信给红包 [give red envelopes via Wechat]”. Although it’s correct grammatically, the better verb usage would be 发 [send] but not 给 [give].

So I designed a handout last night to address the verbs when you describe a Chinese new year activity. When I was walking around the classroom today during the lesson when students were working on their handout exercise, it was clear that many of them were not clear about what verbs to use while describing certain Chinese New Year activities. The handout exercise was the right one for them to address some verb usage.

Same thing for the sentence patterns I brought up in class today. While they were reading the article, I asked them if they had questions. Nobody asked questions, and it felt like they already knew everything. However, when I brought up the sentence patterns which the article used, students had no clue what the sentence patterns meant. Feuerstein was right. Although stimuli were there, it did not mean, however, students would notice them if they were not mediated.

Same thing for the Chinese New Year celebration tradition. I thought talking about the changes of the new year celebration tradition should not be challenging for many students because they are Chinese Americans and they celebrate Chinese New Year at home. Actually, they do not know the tradition too well. Using a Chinese expression, they are “似懂非懂 [seems to understand, but actually they do not understand]”. What I need to do is guiding them to explore these places that they sort of know but not really. I hope I have done this.

Day 11: Feb_4 Posttest Observation and Reflection

The posttest went smoothly. Franco and Lola were absent today.

Appendix D

Student Learning Background Survey

AP Chinese Students Learning Background Survey

The purpose of this survey is to help the instructor to know your learning background. All the information will be kept confidential. Please take a moment to finish the survey! Thanks!

1. Your grade: A. 9 B. 10 C. 11 D. 12
2. Gender: A. F B. M C. Other
3. Race:
 - A. White
 - B. Black or African American
 - C. American Indian or Alaska Native
 - D. Asian
 - E. Native Hawaiian or other Pacific Islander
 - F. Other
4. Your home language:
 - A. English
 - B. Mandarin Chinese
 - C. Other Chinese language (e.g., Cantonese)
 - D. Other. Please explain:
5. Your Chinese language academic learning background:
 - A. Studied Mandarin Chinese for 3 years in a formal school setting.
 - B. Studied Mandarin Chinese for 4 years in a formal school setting.
 - C. Studied Mandarin Chinese for 5 years in a formal school setting.
 - D. None of the above. Please explain:

Appendix E

Utterance Fluency Assessment

Directions: You will be asked to speak in Chinese on a specific topic. Imagine you are making an oral presentation to your Chinese class. First, you will read the topic for your presentation. You will have 4 minutes to prepare for your presentation. You will then have 2 minutes to record your presentation. Your presentation should be as complete as possible.

Topic: Please introduce the Chinese traditional holiday, the Chinese New Year, and explain its significance.

Preparation Time: 4 Minutes

Response Time: 2 Minutes

Administration instruction and procedure:

I. Before assessment

Teacher instruction:

1. You will be asked to speak in Chinese on a specific topic. Imagine you are making an oral presentation to your Chinese class. First, you will read the topic for your presentation.

Topic: *Please introduce the Chinese traditional holiday, the Chinese New Year, and explain its significance.*

2. You will have 4 minutes to prepare for your presentation. You are allowed to write down anything you want to on a piece of paper during the preparation period, but you cannot use the Internet to search for information, look at your notes, or discuss with each other during this preparation period.

3. After the 4-minute preparation period, you will then have 2 minutes to record your presentation. Your presentation should be as complete as possible.

Students ask questions to clarify the task and teacher answers questions

II. Assessment preparation (4 minutes)

Teacher walks around to monitor students' task completion and answer questions if needed

III. Assessment (2 minutes)

Teacher walks around to monitor students' task completion and answer questions if needed

III. After assessment

When 2 minutes recording time is over, teacher asks students to pause recording and upload their recording files to Google Classroom.

Appendix F
Project Unit Plan

Project Unit: Chinese New Year Game Fair

Project Description: Students in groups will create games for the in-class Chinese New Year Game Fair and play games with their classmates at the Fair to celebrate the Chinese New Year in class. Students will form their own groups, and each group will self-select and design a game that will engage players (their classmates) in verbal responses or interaction about the Chinese New Year celebration. Through in-class discussion, information searching, peer interviewing, and other in-class activities, students will inquire how Chinese families celebrate the most important Chinese traditional holiday and design a game to incorporate their understanding of the Chinese New Year celebration and engage their classmates in their interactive games.

Time: Mon-Fri, 45-55 minutes/each lesson, 10 lessons. Spring Semester.

Goal: Students will be able to describe how Chinese people celebrate the Chinese New Year by incorporating appropriate cultural knowledge and language knowledge through carrying out the project.

Objectives:

1. Students will develop their cultural awareness about how the Chinese celebrate the Chinese New Year.
2. Students are able to describe the time and significance of the Chinese New Year in Chinese by using appropriate vocabulary and grammar verbally.
3. Students are able to describe 2-3 common activities people do during the Chinese New Year celebration in Chinese by using appropriate vocabulary and grammar verbally.
4. Students will know the main characters and basic plot of the folktale, The Story of Nian, which is relevant to the origin of the Chinese New Year.
5. Students increase their awareness of the Chinese New Year celebration differences among different Chinese communities.
6. Students increase their awareness of the change of the Chinese New Year celebration tradition in modern China.
7. Students' oral presentation fluency will be developed for this topic.

Unit Schedule (“T” represents “Task”)

Day	Objectives	Tasks	Task Repetition Design	Teaching and Learning Materials
Pre-mediation Pretest	Gather students’ learning background information.	<ul style="list-style-type: none"> ● Pretest ● Learning background survey 	None	<ul style="list-style-type: none"> ● Personal cellphone with recording apps ● Classroom supplies
1 Project mapping	<ul style="list-style-type: none"> ● Students understand why they do the project ● Students understand in general how a Chinese family celebrates the new year 	T1: Understanding the project “Chinese New Year Game Fair” T2: Play the Kahoot game “Chinese New Year” to warm up for the project. (Canceled task) Student reflection.		<ul style="list-style-type: none"> ● Computer ● Internet ● Powerpoint ● Classroom supplies
2 Classroom New Year decoration/ project information gathering	<ul style="list-style-type: none"> ● Students are able to explore how they can carry on to complete the project. ● Students are able to identify and describe main pre Chinese New Year celebration activities in Chinese verbally 	T3: Class discussion: New year celebration in Chinese vs. in America T4: Class discussion to connect Chinese New Year celebration tradition, going to a temple fair, with the class project Game Fair T5: Class discussion how to carry on the project (Added) Task6: Class discussion after watching Liziqi’s new year preparation video clip T7: Students form	T3 repeats partially T2 T6 repeats partially of T3, 4	<ul style="list-style-type: none"> ● Chromebooks for groups ● Internet ● Powerpoint ● Classroom supplies ● Handouts

		groups to prepare Chinese New Year celebration decorations for the classroom T8: Students reflect on what they have learned and write it down in their chart		
3 Show and tell new year decoration/ project information gathering	<ul style="list-style-type: none"> • Students are able to describe their pre Chinese New Year celebration activities in Chinese verbally • Strengthen students' awareness of pre Chinese New Year celebration activities • Develop students' awareness of the origin of the Chinese New Year celebration 	<p>T9: Students show and tell their work for new year classroom decoration (Introduce their work in Chinese verbally)</p> <p>T10: Students decorate classroom using the decorations they made</p> <p>T11: Class discussion why Chinese people prepare to celebrate Chinese New Year in certain ways.</p> <p>T12: Inquiring the folk story "Nian"</p> <p>T13: Students reflect what they have learned and write it down in their chart</p>	<p>T9 repeats partially of T6, T7</p> <p>T11 repeats partially of T6, T9</p>	<ul style="list-style-type: none"> • Chromebooks for groups • Internet • Powerpoint • Handouts: <i>The Story of Nian</i> • Classroom supplies
4 Chinese New Year celebration in China vs. in America /project information gathering	<ul style="list-style-type: none"> • Strengthen students' awareness of how Chinese people celebrate the new year. • Students are able to describe the different Chinese new year celebration activities in different Chinese communities • Students are able 	<p>(Cancelled Task): Warm up: students inquiry how Chinese celebrate the new year in China through watching video clips (selected by teacher) and searching online. (<i>Modification</i>)</p> <p>Task 14: Class discussion about the video clip "preparing Chinese New Year snacks"</p> <p>T15: Retell the Chinese</p>	<p>T14 repeats partially of T11, 12</p> <p>T 15 repeats partially of T14</p>	<ul style="list-style-type: none"> • Video clip "Story of Nian" • Chromebooks for groups • Internet • Powerpoint • Classroom supplies

	to retell the Chinese New Year folk story: <i>the Story of Nian</i>	New Year folk story: <i>the Story of Nian</i> (Cancelled task): Peer interview to find out how Chinese celebrate Chinese New Year in America (Modification) Change into T 16 playing the game: “Snatching Chinese New Year Red Envelopes.” T17: Students reflect what they have learned and write it down in their chart	T16 repeats T11, 14	
5 Read one article about Chinese New Year celebration/ project information gathering	<ul style="list-style-type: none"> • Students expand their vocabulary and grammar how to describe Chinese new year celebration activities • Students deepen their understanding of Chinese New Year celebration traditions. 	(Added) T18: Video watching: Chinese New Year customs video clips (Added) T19: Organize information inquired into Chinese New year celebration chart T20: Students write their game design planning description T21: Students reflect on what they have learned and write it down in their chart	T18 repeats T16 T19 repeats T16, 18	<ul style="list-style-type: none"> • Chromebooks • Internet • Powerpoint • Classroom supplies
6 Creating the game for the Chinese New Year celebration fair	<ul style="list-style-type: none"> • Students are able to select information they gathered from previous lessons to create their game • Students are able to apply relevant Chinese language knowledge in 	T22: Group work on the project: Design a game for the Chinese New Year celebration fair T23: Students reflect on what they learned and write down in their chart.	T23 repeats T22	<ul style="list-style-type: none"> • Chromebooks • Internet • Powerpoint • Classroom supplies

	<p>their game</p> <ul style="list-style-type: none"> ● Students are able to transfer their ideas in their game design 			
7 Continue to creating the game for the Chinese New Year celebration fair	<ul style="list-style-type: none"> ● Students are able to select information they gathered from previous lessons to create their game ● Students are able to apply relevant Chinese language knowledge in their game ● Students are able to transfer their ideas in their games. 	<p>T24: Group continues to work on the project: Design a game for the Chinese New Year celebration fair</p> <p>T25: Students in groups make an advertisement poster for their game booths</p> <p>T26: Students reflect on what they have learned and write it down in their chart</p>		<ul style="list-style-type: none"> ● Chromebooks ● Internet ● Powerpoint ● Classroom supplies
8 Game Fair	<ul style="list-style-type: none"> ● Students are able to present their game to their peers ● Students are able to strengthen their cultural knowledge about the Chinese New Year through playing games. 	<p>Divide student groups into two big groups: Group I, II</p> <p>T27: Game playing:</p> <p>Group I host games in booths they set up; Group II students go to different booths and play games individually.</p> <p>Group II host games in booths they set up; Group I students go to different booths and play games individually.</p> <p>T28: Students reflect on what they have learned and write it down in their chart</p>	<p>T27 repeats itself (when the game designer present the game multi-times for different players)</p>	<ul style="list-style-type: none"> ● Chromebooks ● Internet ● Students prepared games ● Classroom supplies

<p>9 Cultural presentation “Chinese New Year Celebration ”</p>	<ul style="list-style-type: none"> ● Students are able to strengthen their culture knowledge through verbal express their personal experience ● Students are able to strengthen their language knowledge through verbal express their personal experience ● Students are able to use critical thinking skills to analyze the change of the Chinese New Year celebration traditions. 	<p>T29: Students share their family Chinese New Year celebration experience with the class (Modified) T30: Class discussion Chinese New Year celebration then and now. (Modification) Class interview and discussion: Interview three peers and discuss Chinese New Year celebration then and now T31: Students inquire Chinese New Year celebration transition changes through reading a pre-selected article, <i>Chinese New Year Celebration: Tradition in Change</i> T32: Students reflect what they have learned and write it down in their chart</p>	<p>T30 repeats partial of T11, 14, 16, 18, 19 T31 repeats partial of T30</p>	<ul style="list-style-type: none"> ● <i>Chinese New Year Celebration: Tradition in Change</i> handouts ● Class supplies
<p>10</p>	<ul style="list-style-type: none"> ● Students are able strengthen their grammar ● Students are able to strengthen their cultural knowledge about Chinese New Year through peer presentation ● Students are able to strengthen their language knowledge through peer presentation 	<p>(Added) T33: Class discussion about the custom change of new year eve dinner gathering after watching news report “Eating Out for Chinese New Year Eve Dinner” (Added)T34: Students in peers work on the handout to strengthen the language form–use appropriate verbs for different new year activities</p>	<p>T33 repeats partial of T30, 31</p>	<ul style="list-style-type: none"> ● Computer ● Chinese New Year celebration activities exercise handouts ● Classroom supplies

		<p>T35: Students acquire new sentence patterns that encountered in the reading “<i>The Change of Chinese New Year Celebration</i>”</p> <p>T36: Students give a oral presentation to describe Chinese New Year celebration to their peers.</p> <p>T37: Students reflect what they have learned and write it down in their chart</p>	T36 repeats pretest	
Post-Mediation	<ul style="list-style-type: none"> ● Gather information to see if students have acquired content expected for the unit ● Gather information to see if students’ speaking fluency has been developed 	Posttest	Posttest repeats Pretest and T36	<ul style="list-style-type: none"> ● Personal cellphone with recording devices for each student ● Classroom supplies

Appendix G***Lesson Plan (Day 1-11)***

Lesson plan: Pretest

Class: AP Chinese, 30 Students

Topic: Pre Test

Length: 20 minutes

Objectives:

Gather information to see students' learning background

Teaching and learning materials:

Internet

Powerpoint

Classroom supplies

Recording devices

Procedure:

Stage	Task	Teacher Mediation Process Implementation	Mediation Goals
Pre Task	Giving Pre test direction	<ul style="list-style-type: none"> ● Teacher instruction: <ol style="list-style-type: none"> 1. You will be asked to speak in Chinese on a specific topic. Imagine you are making an oral presentation to your Chinese class. First, you will read the topic for your presentation. Topic: Please introduce the traditional Chinese holiday, the Chinese New Year, and explain its significance. 2. You will have 4 minutes to prepare for your presentation. You are allowed to write down anything you want to on a piece of paper during the preparation period, but you cannot use the Internet to search for information, look at your notes, or discuss with each other during this preparation period. 3. After the 4-minute preparation period, you will then have 2 minutes to record your presentation. Your presentation should be as complete as possible. ● Q/A: Students ask questions to clarify the task, and teacher answer questions 	None
In Class Task	Pretest Preparation (4 minutes)	Teacher walks around to monitor students' task completion and answer questions if needed	None

	Pretest (2 minutes)	Teacher walks around to monitor students' task completion and answer questions if needed	None
Post Task	Student learning background survey	<p>Teacher instruction: The purpose of this survey is to help me to know your learning background. All the information will be kept confidential.</p> <ul style="list-style-type: none"> ● Q/A: Students ask questions to clarify the task and teacher answer questions ● Teacher walks around to monitor students' task completion and answer questions if needed 	None

Lesson plan: day 1

Class: AP Chinese, 30 Students

Topic: *Self assessment of understanding of Chinese New Year celebration traditions*

Length: 25-30 minutes

Objectives:

1. Students understand the Unit goal.
2. Students understand the meaning of why they do the unit project.
3. Students are able to self-evaluate what they have known about Chinese new year celebration customs by playing the Kahoot game.

Standards:

College Board: AP Chinese Language and Culture Course Skills

- 2.A Make connections among cultural and interdisciplinary information provided in texts.
- 3.B Interpret the meaning of a text.
- 4.A Determine the meaning of familiar and unfamiliar words.
- 4.B Use words appropriate for a given context.
- 5.A Understand and apply appropriate communication strategies in interpersonal speaking.
- 5.B Understand and apply appropriate and varied syntactical expressions in interpersonal speaking.
- 7.A Plan and research an issue or topic for presentational speaking

Teaching and learning materials:

Internet
Powerpoint
Kahoot game
Classroom supplies

Procedure:

Stage	Tasks	Teacher Mediation Process	Mediation Goals
Pre Task	T1: Understanding the project: Chinese New Year Game Fair	1. Teacher explains the intentions and meaning of the task through questions and answers: <i>(in Chinese) In this unit we're going to find out how Chinese families celebrate Chinese New Year. We're going to have a Chinese New Year game fair in our class. Our project will be designing a game with your group for the Chinese New Year Game Fair. I'm telling you this project now, so you can start to prepare for the project from now on. What should I prepare for the project? What information should I collect for the project?</i>	MLE 1: Mediation of intentionality and reciprocity MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 8: Mediation of goal-seeking,

		<p>2. Teacher connects students to their previous experience to mediate transcendence through questions and answers. <i>q/a: (in Chinese) Why do you celebrate a festival/holiday?</i></p> <p>3. Teacher enriches students with appropriate verbal tools to express their ideas in Chinese <i>Example:</i></p> <ul style="list-style-type: none"> ● <i>Asking students to evaluate right/wrong rather than telling them</i> ● <i>Challenge the students to justify their answers</i> ● <i>Teacher/asking students to write down keywords in Chinese on the board</i> 	goal-setting, planning, and goal-achieving
In Class Task	T2: Playing Kahoot game: Chinese New Year Celebration	<p>1. Before game: Teacher explains the intentions and meaning of the task through questions and answers: <i>(in Chinese) We're going to play a Kahoot game to see how much you know about the Chinese New Year.</i> <i>q/a: Are you familiar with the Chinese New Year customs?</i> <i>Understanding how Chinese people celebrate Chinese holidays will be a great path for you to understand Chinese culture. I prepared this game to help you self-assess how much you HAVE known about Chinese holiday celebrations. Before we start to play the game, do you have any questions?</i></p> <p>2. During game: Teacher enriches students with appropriate verbal tools to express their ideas in Chinese <i>Example: Asking students to evaluate right/wrong rather than telling them</i></p>	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 3: Mediation of meaning MLE 4: Mediation of feeling of competence
Post Task	Teacher feedback	<p>1. Teacher provides verbal feedback for students' performance in the game. (modified into providing feedback after each Kahoot question)</p> <p>2. Students self reflection of their performance in the Kahoot game (canceled in class)</p>	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of

			competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives
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Lesson plan: day 2

Class: AP Chinese, 30 Students

Topic: Classroom Chinese New Year decoration/ Gather information about Chinese New Year activities before the new year

Length: 45-55 minutes

Objectives:

1. Students are able to develop their awareness of the significance of the Chinese New Year
2. Students are able to identify and describe the main pre-Chinese-New-Year-celebration activities in Chinese verbally
3. Students are able to implement their ideas of how to decorate the classroom by creating real object

Standards:

College Board: AP Chinese Language and Culture Course Skills

- 2.A Make connections among cultural and interdisciplinary information provided in texts.
- 3.B Interpret the meaning of a text.
- 4.A Determine the meaning of familiar and unfamiliar words.
- 4.B Use words appropriate for a given context.
- 5.A Understand and apply appropriate communication strategies in interpersonal speaking.
- 5.B Understand and apply appropriate and varied syntactical expressions in interpersonal speaking.
- 7.A Plan and research an issue or topic for presentational speaking

Teaching and learning materials:

Chromebooks for each student
Internet
PowerPoint
Classroom supplies

Procedure:

Stage	Tasks	Teacher Mediation Process	Mediation Goals
Pre Task	T3: Warm up: Class discussion- New year celebration in Chinese vs. in America	<p>(Added)1. Teacher starts to play the video clip when students start to enter the classroom until all of them settle in class for creating the atmosphere of the coming of the Chinese New Year on 2/1/22. It also shows students what happens in China before the Chinese New Year—traveling home for Chinese New Year gathering.</p> <p>(Added) 2. Q/A to warm up the topic of New year celebration in Chinese vs. in America. <i>q/a: (in Chinese) What are those people doing in the video clip? What do people do to celebrate New Year in China?</i></p> <p>3. Teacher connects students to their previous experience to mediate transcendence through discussing American customs to celebrate new year vs. Chinese New year celebration customs. <i>q/a: (in Chinese) Have you had the experience of Chinese new year celebration? How do Americans celebrate the new year?</i></p> <p>4. Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese <i>Example:</i></p> <ul style="list-style-type: none"> ● <i>Asking students to evaluate right/wrong rather than telling them</i> ● <i>Challenge the students to justify their answers</i> ● <i>Teacher/asking students to write down keywords in Chinese on board</i> 	<p>MLE 1: Mediation of intentionality and reciprocity</p> <p>MLE 2: Mediation of meaning</p> <p>MLE 3: Mediation of transcendence</p> <p>MLE 4: Mediation of feeling of competence</p> <p>MLE 6: Mediation of sharing behavior</p> <p>MLE7: Mediation of individualization and psychological differentiation</p>

<p>In Class Task</p>	<p>T4: Class discussion to connect Chinese New Year celebration tradition, going to a temple fair, with the class project Game Fair</p>	<p>(Added) 1. Play the video clip <i>Going to a Temple Fair</i>. Teacher connects students to their previous experience to mediate transcendence through questions and answers. <i>q/a: (in Chinese) Have you been to a Chinese New Year temple fair? What do people do there?</i></p> <p>(Added) 2. Teacher conducts class discussion to connect the temple fair with the game fair project that students are going to carry on.</p> <p>3. Teacher explains the intentions and meaning of the task through questions and answers: <i>(in Chinese) In this unit we're going to find out how Chinese families celebrate Chinese New Year. For a lot of Chinese families, during the new year, one activity is going to a new year temple fair. Therefore, in this unit, we're going to have a Chinese New Year game fair in our class. Therefore, our project will be designing a game with your group for the Chinese New Year Game Fair.</i> <i>q/a: Why do Chinese people go to a temple fair during the new year?</i> <i>What do they do in a temple fair?</i></p> <p>4. Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese <i>Example:</i></p> <ul style="list-style-type: none"> ● <i>Asking students to evaluate right/wrong rather than telling them</i> ● <i>Challenge the students to justify their answers</i> ● <i>Teacher/asking students to write down keywords in Chinese on board</i> 	<p>MLE 1: Mediation of intentionality and reciprocity MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE 7: Mediation of individualization and psychological differentiation</p>
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	<p>T5: Class discussion how to carry on the project</p>	<p>1. Teacher explains the intentions and meaning of the task through questions and answers: <i>q/a: To complete this project, what information do you need to collect before you start designing the game? After you collect all the information you need, what should you do?</i></p> <p>2. Teacher enables students to identify the nature of the task and define a problem to be solved <i>q/a: (in Chinese) What are the important elements of a game? In this project, what needs to be included in your game? What kind of information do you need to gather before you start to design the game? How can you gather information? What kind of resources can you use?</i></p> <p>3. Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese <i>Example:</i></p> <ul style="list-style-type: none"> ● <i>Asking students to evaluate right/wrong rather than telling them</i> ● <i>Challenge the students to justify their answers</i> ● <i>Teacher/asking students to write down keywords in Chinese on board</i> <p>5. Provide feedback: teacher provides verbal feedback during the process of teacher/student interaction</p>	<p>MLE 1: Mediation of intentionality and reciprocity MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 8: Mediation of goal seeking, goal setting, and goal achieving MLE 9: Mediation of the search for challenge, novelty, and complexity</p>
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	<p>(Added) Task6: Class discussion after watching Liziqi's new year preparation video clip</p>	<p>1. Teacher explains the intentions and meaning of the task through questions and answers. <i>q/a: (in Chinese) Before people celebrate a family gathering holiday, what do people usually do? Why do they do this?</i> <i>(in Chinese) I chose the video clip to help you visualize how Chinese people prepare for the new year celebration.</i></p> <p>2. Teacher connects students to their previous experience to mediate transcendence through the designed game. <ul style="list-style-type: none"> ● <i>(in Chinese) Have you had the experience of preparing for the Chinese new year celebration? Could you describe your experience?</i> </p> <p>3. Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese <i>Example:</i> <ul style="list-style-type: none"> ● <i>Asking students to evaluate right/wrong rather than telling them</i> ● <i>Challenge the students to justify their answers</i> ● <i>Teacher/asking students to write down keywords in Chinese on board</i> </p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior</p>
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	<p>T7: Students form groups to prepare Chinese New Year celebration decorations for the classroom</p>	<p>Before task: 1. Teacher explains the intentions and meaning of the task through questions and answers. <i>(in Chinese) Through this activity, you can have hands-on experience with Chinese New Year celebration preparation activities. It will deepen your understanding of Chinese culture.</i></p> <p>2. Teacher connects students to their previous experience to mediate transcendence through questions and answers. <i>q/a: (in Chinese) What can you do to decorate our classroom for the Chinese New Year celebration Game Fair? Why?</i></p> <p>3. Show students all the available materials to decorate the classroom and ask them to brainstorm what decoration their group will do. Teacher enables students to identify the nature of the task and define a problem to be solved. <i>q/a: (in Chinese) Do you know how to do this?</i> <i>What material do you need for this?</i></p> <p>During task: Teacher walks around the classroom when students in groups create their task map. Answer questions if needed. Use the mediation strategies like asking students what to do rather than tell them, asking students to evaluate right/wrong rather than telling them, and challenging the students to justify their answers.</p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE7: Mediation of individualization and psychological differentiation MLE 8: Mediation of goal seeking, goal setting, and goal achieving MLE 9: Mediation of the search for challenge, novelty, and complexity MLE 11: Mediation of optimistic alternatives</p>
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Post Task	T8: Students reflect what they get from today's lesson in a chart	<p>Before task: Students reflect on their task implementation verbally with their peers. Teacher provides verbal feedback during the process of teacher/student interaction.</p> <p>During task: Teacher walks around the classroom when students are doing the task. Answer questions if needed. Use the mediation strategies like asking students what to do rather than tell them, asking students to evaluate right/wrong rather than telling them, and challenging students to justify their answers.</p>	<p>MLE 1: Mediation of intentionality</p> <p>MLE 2: Mediation of meaning</p> <p>MLE 4: Mediation of feeling of competence</p> <p>MLE 5: Mediation of regulation and control behavior</p> <p>MLE 10: Mediation of the awareness of being a modifiable entity</p> <p>MLE 11: Mediation of optimistic alternatives</p>
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Lesson plan: day 3

Class: AP Chinese, 30 Students

Topic: Students show and tell their decoration for the Chinese New Year Celebration Game Fair and gather information about the origin of the Chinese New Year celebration custom

Length: 45-55 minutes

Objectives:

1. Students are able to describe their pre-Chinese-New-Year-celebration activities in Chinese verbally
2. Students continue to gather information about the pre-Chinese-New-Year-celebration customs
3. Students develop their awareness of the origin of the Chinese-New-Year-celebration customs

Standards:

College Board: AP Chinese Language and Culture Course Skills

- 2.A Make connections among cultural and interdisciplinary information provided in texts.
- 3.A Interpret the distinguishing features of a text
- 3.B Interpret the meaning of a text
- 4.A Determine the meaning of familiar and unfamiliar words.
- 4.B Use words appropriate for a given context.
- 5.A Understand and apply appropriate communication strategies in interpersonal speaking.
- 5.B Understand and apply appropriate and varied syntactical expressions in interpersonal speaking.
- 7.A Plan and research an issue or topic for presentational speaking
- 7.B Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.
- 7.C Use appropriate language and vocabulary for the intended audience in presentational speaking
- 7.D Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking

Teaching and learning materials:

Handouts “Story of Nian”

Video clip “Story of Nian”

Chromebooks for each student

Internet

Powerpoint

Classroom supplies

Procedure:

Stage	Tasks	Mediation Process	Mediation Goals
Pre Task	Warm-up activity: students watching a short video clip about a Chinese family in Beijing celebrating Chinese new year after students walk into the classroom till the class settle down to start the class	Connecting students to Chinese New Year practice in another space.	MLE 3: Mediation of transcendence
In Class Task	T9: Students show and tell their work for new year classroom decoration (Introduce their work in Chinese verbally) T10: Students decorate the classrooms using the decoration they made.	<p>Before task:</p> <p>1. Teacher explains the intentions and meaning of the task: <i>(in Chinese) Sharing can deepen your understanding and enrich each other's knowledge. Therefore, today, you're going to show and tell your classmates the decoration you made for the Chinese New Year celebration Fair.</i></p> <p>2. While students prepare for their presentation, teacher walks around the classroom. Answer questions if needed. Use the mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to justify their answers.</p> <p>During task:</p> <p>The teacher asks the class to ask questions, provide feedback, and provide verbal feedback to each group's show and tell.</p>	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE7: Mediation of individualization and psychological differentiation

		<p>Post task: T9: Students decorate the classrooms using the decoration they made.</p>	
	<p>T11: Class discussion why Chinese people prepare to celebrate Chinese New Year in certain ways.</p>	<p>Before task: Teacher connects students' experience to a general situation to mediate transcendence: <i>q/a: (in Chinese) What activities do Chinese people prepare to celebrate the Chinese New Year? Why do Chinese people prepare to celebrate Chinese New Year in this way?</i></p> <p>During task: Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese during teacher/student interaction and enhance students' awareness for language knowledge.</p> <ul style="list-style-type: none"> ● <i>Asking students to evaluate right/wrong rather than telling them</i> ● <i>Challenge the students to justify their answers</i> ● <i>Teacher/asking students to write down keywords in Chinese on board</i> 	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE7: Mediation of individualization and psychological differentiation</p>

	<p>T12: Inquiring the folk story “Nian”:</p> <ul style="list-style-type: none"> ● Students watch teacher's pre-selected video clips about the story of Nian. ● Students in peers read the folk story of Nian ● Telling the story to their peer 	<p>Before task:</p> <p>1. Teacher explains the intentions and meaning of the task: <i>(in Chinese) If you want to understand Chinese culture, you need to know this story because the story you’re going to explore is one of the most popular Chinese folktales. This story will explain many Chinese cultural practices during Chinese New Year.</i></p> <p>2. Teacher connects students to their previous experience to mediate transcendence through questions and answers. <i>q/a: (in Chinese) Has anyone read or heard the story of Nian?</i></p> <p>During task: Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and enhance students’ awareness for language knowledge: <i>Teacher walks around the classroom. Answer questions if needed. Use the mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to justify their answers.</i></p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE7: Mediation of individualization and psychological differentiation</p>
Post Task	<p>T13: Students reflect what they have learned and write it down in their chart</p>	<p>Before task: Students reflect on what they have learned and organize their gained information into a chart.</p> <p>During task: Teacher walks around the classroom when students in the task. Answer questions if needed. Use the mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to justify their answers.</p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives</p>

Lesson plan: day 4

Class: AP Chinese, 30 Students

Topic: Gather information about Chinese New Year celebration activities during the new year

Length: 45-55 minutes

Objectives:

1. Students develop their awareness of how Chinese people celebrate the new year
2. Students collect information about Chinese New Year celebration from participate the game “Snatching the Red Envelope”
3. Students collect information about Chinese New Year celebration from the reading provided

Standards:

College Board: AP Chinese Language and Culture Course Skills

- 1.A Describe the literal meaning of the text
- 2.A Make connections among cultural and interdisciplinary information provided in texts.
- 3.A Interpret the distinguishing features of a text.
- 4.A Determine the meaning of familiar and unfamiliar words.
- 4.B Use words appropriate for a given context.
- 5.A Understand and apply appropriate communication strategies in interpersonal speaking.
- 5.B Understand and apply appropriate and varied syntactical expressions in interpersonal speaking.
- 7.A Plan and research an issue or topic for presentational speaking

Teaching and learning materials:

Internet
 Video clips “Preparing Chinese New Year Snacks”
 Powerpoint
 Classroom supplies
 One red envelope for the game

Procedure:

Stage	Tasks	Mediation Process	Mediation Goals
Pre Task	Community building: sharing your weekend with your partner	Students share with their partner their weekend experience as a class Monday routine	MLE 6: Mediation of sharing behavior MLE 12: Mediation of sense of belonging
	<p>(Cancelled task): <i>Warm up</i>: students inquiry how Chinese celebrate the new year in China through watching video clips (selected by teacher) and searching online</p> <p>(Modification) <i>Change into:</i> Task 14: Class discussion about the video clip “preparing Chinese New Year snacks”</p>	<p>1. Teacher connects students to their previous experience to the Chinese New Year food Playing Li Zi Qi preparing Chinese New Year snacks video. <i>q/a: (in Chinese) Why did she make those food? Have you had them?</i></p> <p>2. Teacher explains the intentions and meaning of the task. <i>(in Chinese) A lot of you only had experience of celebrating Chinese New Year in America. I chose the video clip to visualize what other things you haven't experienced but they are important in Chinese New Year celebration. There are more activities than we knew are the custom of Chinese New Year celebration.</i></p> <p>3. Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese <i>Example:</i></p> <ul style="list-style-type: none"> ● <i>Asking students to evaluate right/wrong rather than telling them</i> ● <i>Challenge the students to justify their answers</i> ● <i>Teacher/asking students to write down keywords in Chinese on board</i> 	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE7: Mediation of individualization and psychological differentiation</p>

In Class Task	T15: Retell the Chinese New Year folk story: <i>The Story of Nian</i>	<p>1. Teacher creates task repetition opportunities to strengthen students' language skills.</p> <p>2. Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese</p> <p><i>Example:</i></p> <ul style="list-style-type: none"> ● <i>Asking students to evaluate right/wrong rather than telling them</i> ● <i>Challenge the students to justify their answers</i> ● <i>Teacher/asking students to write down keywords in Chinese on board</i> 	
	<p>(Cancelled Task): Peer interview to find out how Chinese celebrate Chinese New Year in America</p> <p>(Modification) Change into T16: Play the game “Snatching the Red Envelope” (modified jeopardy game—divided students into two groups and the team that snatches the red envelope first will get the chance to choose a question to</p>	<p>Before task:</p> <p>1. Teacher explains the intentions and meaning of the task.</p> <p>q/a: <i>(in Chinese) Have you had the experience of snatching red envelopes? One Chinese New Year activity is snatching red envelopes in WeChat. However, we can not do this in class. Therefore, we're going to play a game that is called Snatching Red Envelope (the teacher modified jeopardy game). We are going to learn through playing.</i></p> <p>During task: Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and enhance students' awareness for language knowledge:</p> <p><i>Teacher walks around the classroom. Answer questions if needed. Use the mediation strategies like asking students what to do rather than tell them, asking students to evaluate right/wrong rather than telling them, and challenging the students to justify their answers.</i></p>	<p>MLE 1: Mediation of intentionality</p> <p>MLE 2: Mediation of meaning</p> <p>MLE 3: Mediation of transcendence</p> <p>MLE 4: Mediation of feeling of competence</p> <p>MLE 6: Mediation of sharing behavior</p> <p>MLE7: Mediation of individualization and psychological differentiation</p>

	answer).		
Post Task	T17: Students reflect what they learned into a chart	Teacher walks around the classroom when students are on task. Answer questions if needed. Use mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to justify their answers.	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives

Lesson plan: day 5

Class: AP Chinese, 30 Students

Topic: Creating the game for the Chinese New Year Celebration Fair

Length: 45-55 minutes

Objectives:

1. Students gather information for their game design through pre-selected video clips.
2. Students develop their awareness for required language knowledge
3. Students are able to apply relevant Chinese language knowledge in their game
4. Students are able to transfer their ideas in their game design.

Standards:

College Board: AP Chinese Language and Culture Course Skills

- 2.A Make connections among cultural and interdisciplinary information provided in texts.
- 4.A Determine the meaning of familiar and unfamiliar words.
- 4.B Use words appropriate for a given context.
- 8.A Plan and research an issue or topic for presentational writing.
- 8.B Use appropriate writing strategies to communicate an idea in presentational writing.

Teaching and learning materials:

Chromebooks for each student
Internet
Powerpoint
Classroom supplies

Procedure:

Stage	Tasks	Mediation Process	Mediation Goals
Pre Task	(Added) Develop students' language form through teacher's feedback	Teacher enhances students' awareness for language knowledge by providing feedback to students' previous day's work.	MLE 4: Mediation of feeling of competence

<p>In Class Task</p>	<p>(Added) T18: Video watching: Chinese New Year customs video clips</p> <p>(Added) T19: Organize information inquired into Chinese New Year celebration chart</p>	<p>Before task:</p> <p>1. Teacher explains the intentions and meaning of the task: <i>(In Chinese) Today you're going to design the game. In order to design the game, you need to know how Chinese people celebrate the Chinese New Year. You already knew the general idea about how Chinese people celebrate the Chinese New Year. Today, you are going to know more details. How can you gather more information about Chinese New Year celebration? I found some videos for you. There is a lot of information about the Chinese New Year, but these videos I think are relatively good. They are short, and they talk about the most important thing. Also, after you watch these videos, you will have an impression of the Chinese New Year. Many of you have not had the experience of celebrating the Chinese New Year traditionally. Therefore through watching these videos, you will see how the Chinese New Year is celebrated, like what the temple fair is like, what the Tangyuan is like, you can have an impression.</i></p> <p>During task:</p> <p>1. Teacher connects students to new task which has distance with students' previous experience to mediate transcendence through questions and answers.</p> <p>2. Teacher enhances students' awareness for cultural awareness by selecting a short video clip series about Chinese New Year customs</p> <p>3. Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and enhance students' awareness for language knowledge: <i>Use the mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to</i></p>	<p>MLE 1: Mediation of intentionality</p> <p>MLE 2: Mediation of meaning</p> <p>MLE 3: Mediation of transcendence</p> <p>MLE 4: Mediation of feeling of competence</p> <p>MLE 6: Mediation of sharing behavior</p> <p>MLE 7: Mediation of individualization and psychological differentiation</p> <p>MLE 9: Mediation of the search for challenge, novelty, and complexity</p>
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		<i>justify their answers.</i>	
	T20: Students write their game design planning description	<p>Before task: 1. Teacher explains the intentions and meaning of the task: <i>(In Chinese) Writing down your thoughts can help you organize thoughts. It is also a good way to help you express your ideas in written Chinese.</i></p> <p>During task: Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and enhance students' awareness for language knowledge: <i>Use the mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to justify their answers</i></p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE7: Mediation of individualization and psychological differentiation MLE 8: Mediation of goal seeking, goal setting, and goal achieving MLE 11: Mediation of optimistic alternatives</p>
Post Task	T21: Students reflect on what they learned and write down in their chart.	Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and with providing verbal feedback.	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives</p>

Lesson plan: day 6

Class: AP Chinese, 30 Students

Topic: Continue to create the game for the Chinese New Year Celebration Game Fair

Length: 45-55 minutes

Objectives:

1. Students are able to select the information they gathered from previous lessons to create their game for their purpose
2. Students are able to apply relevant Chinese language knowledge in their game
3. Students are able to transfer their ideas in their game design.

Standards:

College Board: AP Chinese Language and Culture Course Skills

- 2.A Make connections among cultural and interdisciplinary information provided in texts.
- 4.A Determine the meaning of familiar and unfamiliar words.
- 4.B Use words appropriate for a given context.
- 8.A Plan and research an issue or topic for presentational writing.
- 8.B Use appropriate writing strategies to communicate an idea in presentational writing.

Teaching and learning materials:

Chromebooks for each student

Internet

Classroom supplies

Procedure:

Stage	Tasks	Mediation Process	Mediation Goals
In Class Task	T22: Group continue to work on the project: Design a game for the Chinese New Year Celebration Fair	Teacher walks around the classroom. Answer questions if needed. Use mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to justify their answers. Enriches individual students with appropriate verbal tools to express their ideas in Chinese and with providing verbal feedback.	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE7: Mediation of individualization and psychological differentiation MLE 8: Mediation of goal seeking, goal setting, and goal achieving MLE 9: Mediation of the search for challenge, novelty, and complexity MLE 11: Mediation of optimistic alternatives

Post Task	T23: Students reflect on what they learned and write down in their chart.	Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and with providing verbal feedback	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives
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Lesson plan: day 7

Class: AP Chinese, 30 Students

Topic: Continue to create the game for the Chinese New Year Celebration Game Fair and prepare for the Game Fair

Length: 45-55 minutes

Objectives:

1. Students are able to select the information they gathered from previous lessons to create their game for their purpose
2. Students are able to apply relevant Chinese language knowledge in their game
3. Students are able to transfer their ideas in their game design.

Standards:

College Board: AP Chinese Language and Culture Course Skills

- 2.A Make connections among cultural and interdisciplinary information provided in texts.
- 4.A Determine the meaning of familiar and unfamiliar words.
- 4.B Use words appropriate for a given context.

Teaching and learning materials:

Chromebooks for each student
Internet
Classroom supplies

Procedure:

Stage	Tasks	Mediation Process	Mediation Goals
In Class Task	T24: Group continue to work on the project: Design a game for the Chinese New Year Celebration Fair	Teacher walks around the classroom. Answer questions if needed. Use mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to justify their answers. Enriches individual students with appropriate verbal tools to express their ideas in Chinese and with providing verbal feedback.	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE7: Mediation of individualization and psychological differentiation MLE 8: Mediation of goal seeking, goal setting, and goal achieving MLE 9: Mediation of the search for challenge, novelty, and complexity MLE 11: Mediation of optimistic alternatives

	T25: Students in groups make an advertisement poster for their game booths	<p>Before task: 1. Teacher explains the intentions and meaning of the task: <i>(In Chinese) Have you been to a festival fair? Do people need a poster to tell people what organization they are, what kind of services or products they provide? If you have a game booth and you hope more people come to play your game, what kind of simple advertisement can you do?</i></p> <p>During task: Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and enhance students' awareness for language knowledge: <i>Teacher walks around the classroom. Answer questions if needed. Use mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to justify their answers.</i></p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 6: Mediation of sharing behavior MLE 9: Mediation of the search for challenge, novelty, and complexity MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives</p>
Post Task	T26: Students reflect what they have learned and write it down in their chart	Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and with providing verbal feedback	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives</p>

Lesson plan: day 8

Class: AP Chinese, 30 Students

Topic: The day of the Chinese New Year Celebration Game Fair

Length: 45-55 minutes

Objectives:

1. Students are able to present their game to their peers
2. Students are able to participate in playing their peers' games
3. Students are able to strengthen their cultural knowledge about the Chinese New Year through playing games.
4. Students are able to strengthen their language knowledge about the Chinese New Year through playing games.

Standards:

College Board: AP Chinese Language and Culture Course Skills

1. Comprehend written, audio, audiovisual, and visual text (text and pictures).
- 2.A Make connections among cultural and interdisciplinary information provided in texts.
- 3.B Interpret the meaning of a text.
- 4.A Determine the meaning of familiar and unfamiliar words.
- 4.B Use words appropriate for a given context.
- 5.A Understand and apply appropriate communication strategies in interpersonal speaking.
- 5.B Understand and apply appropriate and varied syntactical expressions in interpersonal speaking.

Teaching and learning materials:

Chromebooks for each student

Internet

Powerpoint

Students' designed games

Game playing record sheet

Classroom supplies

Procedure:

Stage	Tasks	Mediation Process	Mediation Goals
Pre Task	Game fair preparation: <ul style="list-style-type: none"> ● Students prepare their game booth. ● Divide student groups into two big groups: Group I, II 	Teacher explains the intentions and meaning of the task through questions.: <i>(In Chinese) Going to a new year fair is one important activity people do during Chinese New Year. Today, you're going to experience it. Hope through this activity, you can have fun. Joy is the Chinese new year celebration brought to people. Hope you can feel it today. Through this game, I hope you can strengthen your cultural knowledge about the Chinese New Year and the language knowledge you developed in the previous lesson.</i>	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 6: Mediation of sharing behavior
In Class Task	T27: Students play games in the fair: Divide student groups into two big groups: Group I, II <ul style="list-style-type: none"> ● Group I host games in booths they set up; Group II students go to different booths and play games individually. ● Group II host games in booths they set up; Group I students go to different booths and play games individually. 	Teacher walks around enriches individual students with appropriate verbal tools to express their ideas in Chinese and with providing verbal feedback	MLE 6: Mediation of sharing behavior

Post task	T28: Students reflect what they have learned and write it down in their chart	Teacher creates opportunities to help students reflect on their learning	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives
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Lesson plan: day 9

Class: AP Chinese, 30 Students

Topic: Chinese New Year celebration in tradition vs. Today

Length: 45-55 minutes

Objectives:

1. Students develop their awareness of how Chinese people celebrate the new year today vs. past through peer interaction
2. Students are able to identify the different Chinese New Year celebration activities in different Chinese communities through peer interaction
3. Students develop their awareness of language forms through reading the pre-selected article

Standards:

College Board: AP Chinese Language and Culture Course Skills

- 2.A Make connections among cultural and interdisciplinary information provided in texts.
- 3.A Interpret the distinguishing features of a text.
- 4.A Determine the meaning of familiar and unfamiliar words.
- 4.B Use words appropriate for a given context.
- 5.A Understand and apply appropriate communication strategies in interpersonal speaking.
- 5.B Understand and apply appropriate and varied syntactical expressions in interpersonal speaking.

Teaching and learning materials:

Chromebooks for each student

Internet

Powerpoint

Handout: article *_Chinese New Year Celebration: Tradition in Change*

Classroom supplies

Procedure:

Stage	Tasks	Mediation Process	Mediation Goals
Pre Task	Warm-up activity: Students listen to a Chinese New Year song: Gongxi Gongxi	Content-oriented interaction through questions: q/a: <i>Have you heard this song before? When? What's this song about? Do you like this song?</i>	MLE 2: Mediation of transcendence

	T29: Community building: sharing your weekend with your partner	Students share with their partner their weekend experience as a class Monday routine. Because the past weekend was the Chinese New Year, students whose families celebrate Chinese New Year would share this events with the class.	MLE 6: Mediation of sharing behavior MLE 12: Mediation of sense of belonging
In Class Task	(Modified) T30: Class discussion Chinese New Year celebration then and now (Modification) Peer interview a couple of native Chinese speakers to find out how Chinese celebrate Chinese New Year today: <ul style="list-style-type: none"> ● Students create interviewing questions. ● Students peer interview a couple of Chinese native speakers. ● Whole class discussion about the information gathered through the interview. 	1. Teacher explains the intentions and meaning of the task. <i>(In Chinese) A lot of you had the experience of celebrating Chinese New Year. However, do people today celebrate Chinese New Year the same or differently than people in the past? Do people today still celebrate the new year in the traditional way?</i> 2. The teacher creates the interviewing activity to mediate transcendence by connecting students to their previous experience and connects to native speakers' experience which may be new to them. to mediate transcendence. During task: Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and enhance students' awareness for language knowledge: <i>Teacher asks questions or provides feedback during the interview and class discussion. Use the mediation strategies like asking students what to do rather than tell them, asking students to evaluate right/wrong rather than telling them, and challenging the students to justify their answers.</i>	MLE 1: Mediation of intentionality and reciprocity MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE 7: Mediation of individualization and psychological differentiation MLE 8: Mediation of goal seeking, goal setting, and goal achieving

	<p>T31: Students inquire Chinese New Year celebration transition changes through reading a pre-selected article, <i>Chinese New Year Celebration: Tradition in Change</i></p>	<p>Before task: 1. Teacher explains the intentions and meaning of the task through questions: <i>(In Chinese) Be aware of the language form while you read this article. You can inquire about the language form like appropriate words or sentence patterns.</i></p> <p>2. Teacher creates the opportunity for students to have the opportunity to encounter language forms repeatedly.</p> <p>During task: Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese and enhance students' awareness for language knowledge: <i>Teacher walks around the classroom. Answer questions if needed. Use mediation strategies like asking students what to do rather than telling them, asking students to evaluate right/wrong rather than telling them, and challenging them to justify their answers.</i></p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE 9: Mediation of the search for challenge, novelty, and complexity</p>
Post task	<p>T32: Students reflect what they have learned and write it down in their chart</p>	<p>Teacher creates opportunities to help students reflect on their learning</p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives</p>

Lesson plan: day 10

Class: AP Chinese, 30 Students

Topic: Strengthen language form and do the cultural presentation “Chinese New Year”

Length: 45-55 minutes

Objectives:

1. Students are able to strengthen their verb usage in describing Chinese New Year activities
2. Students are able to organize all the information they gathered from previous lessons to present to their peers that how Chinese people celebrate Chinese New Year verbally

Standards:

College Board: AP Chinese Language and Culture Course Skills

4.B Use words appropriate for a given context

7.A Plan and research an issue or topic for presentational speaking.

7.B Use appropriate vocal and visual strategies to communicate an idea in presentational speaking.

7.C Use appropriate language and vocabulary for the intended audience in presentational speaking.

7.D Express a perspective with details and examples to illustrate an opinion or idea in presentational speaking.

Teaching and learning materials:

Chromebooks for each student

Internet

Powerpoint

Classroom supplies

Procedure:

Stage	Tasks	Mediation Process	Mediation Goals
Pre Task	(Added) T33: Warm up: Watch news report- Eating out for Chinese New Year eve dinner Class discussion about the custom change of new year eve dinner gathering after watching news report “Eating Out	Teacher enriches individual students with appropriate verbal tools to express their ideas in Chinese through q/a and with providing verbal feedback	MLE 4: Mediation of feeling of competence

	for Chinese New Year Eve Dinner”		
In Class Task	(added)T34: Students in peers work on the handout to strengthen the language form—use appropriate verbs for different new year activities	<p>Before task: Teacher explains the intentions and meaning of the task: <i>(In Chinese) You have inquired much information about Chinese people celebrating Chinese New Year activities. Can you describe these activities by using the accurate verbs? If you can use these verbs correctly, you could describe the new year activities more precisely.</i></p> <p>During task: Teacher walks around enriches individual students with appropriate verbal tools to express their ideas in Chinese and with providing verbal feedback</p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 3: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior</p>
	T35: Strengthen acquire new sentence patterns that encountered in the reading “ <i>The Change of Chinese New Year Celebration</i> ”	<p>1. Teacher explains the intentions and meaning of the task: <i>(In Chinese) There are some great sentence patterns you can learn from this reading. I want to point them out to you.</i></p> <p>2. Teacher provides scaffolding to help students inquire the sentence patterns through q/a</p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence</p>
	T36: Students give an oral presentation to describe Chinese New Year celebration to their peers: <ul style="list-style-type: none"> • Work with peer to brainstorm how to do the presentation • Share with the class • Work with peer to give a presentation 	<p>1. Teacher explains the intentions and meaning of the task, and connects students to new experience they will encounter to mediate transcendence and meaning: <i>(In Chinese) If you need to tell someone who has no experience of the Chinese New Year celebration one day, I bet it’s going to happen. In this new condition, how are you going to introduce the Chinese New Year celebration to them?</i></p> <p>2. Teacher creates opportunity for students share their thoughts with their peer and with the class</p>	<p>MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE 7: Mediation of individualization and psychological differentiation MLE 9: Mediation of the search for challenge, novelty,</p>

		During task: Teacher walks around enriches individual students with appropriate verbal tools to express their ideas in Chinese and with providing verbal feedback	and complexity
Post Task	T37: Students reflect what they have learned and write it down in their chart	Teacher creates opportunities to help students reflect on their learning	MLE 1: Mediation of intentionality MLE 2: Mediation of meaning MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives

Lesson plan: Posttest

Class: AP Chinese, 30 Students

Topic: Post Test

Length: 20 minutes

Objectives:

1. Gather information to see if students have gained the required content for the unit
2. Gather information to see if students' speaking fluency has been developed

Teaching and learning materials:

Recording devices for each student

Internet

Classroom supplies

Procedure:

Stage	Task	Teacher Mediation Process	Mediation Goals
Pre Task	Giving Posttest direction	<p>Teacher instruction:</p> <ol style="list-style-type: none"> 1. You will be asked to speak in Chinese on a specific topic. Imagine you are making an oral presentation to your Chinese class. First, you will read the topic for your presentation. Topic: <i>Please introduce the traditional Chinese holiday, the Chinese New Year, and explain its significance.</i> 2. You will have 4 minutes to prepare for your presentation. You are allowed to write down anything you want to on a piece of paper during the preparation period, but you cannot use the Internet to search for information, look at your notes, or discuss with each other during this preparation period. 3. After the 4-minute preparation period, you will then have 2 minutes to record your presentation. Your presentation should be as complete as possible. <p>Q/A: Students ask questions to clarify the task, and teacher answer questions</p>	None
In Class	Posttest Preparation	Teacher walks around to monitor students' task completion and answer questions if needed	None

Task	Post test	Teacher walks around to monitor students' task completion and answer questions if needed	None
Post Task	None	Teacher feedback about students' task implementation	MLE 4: Mediation of feeling of competence MLE 10: Mediation of the awareness of being a modifiable entity

Appendix H

General In-class Mediation Procedure Based on Feuerstein's Mediated Learning Experience Theory

Table

General In-class Mediation Procedure Based on Feuerstein's (Feuerstein et al., 2010) Mediated Learning Experience Theory

Mediation Procedure	Mediation Examples	Belong to MLE category
1. Teacher explains the intentions and meaning of the task through questions and answers	<ul style="list-style-type: none"> ● Convey to the students that I intend to help them improve. <i>For example, attempting to maintain students' involvement in the task or interaction.</i> ● Sharing the purpose of the activity, moving the content from neutral to a position of value and importance. <i>For example, pointing out concepts known to the students.</i> ● Adding animation or effect (or humor) to provoke or maintain interest. 	MLE 1: Mediation of intentionality and reciprocity MLE 3: Mediation of meaning MLE 12: Mediation of a sense of belonging
2. Teacher enables students to identify the nature of the task and define a problem to be solved	<ul style="list-style-type: none"> ● Reference to tasks in the past or future. ● Elaborated hypothetical, inferential, or cause and effect thinking ● Supply the information that may be needed to learn relationships or find solutions. Explain to students about forming questions, names, verbs, etc. ● Ask questions--i.e., Ask the students what to do rather than tell them. 	MLE 2: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 8: Mediation of goal seeking, goal setting, and goal achieving MLE 9: Mediation of the search for challenge, novelty, and complexity
3. Teacher enriches individual students with appropriate verbal tools to express their ideas	<ul style="list-style-type: none"> ● Ask questions--i.e., Ask the students what to do rather than tell them. ● Asking students to evaluate right/wrong rather than telling them ● Challenge the students to justify their answers 	MLE 4: Mediation of feeling of competence

4. Content oriented interaction through questions	<ul style="list-style-type: none"> ● Ask questions--i.e., Asking the students what to do rather than telling them ● Challenge the students to justify their answers 	<p>MLE 4: Mediation of feeling of competence MLE 6: Mediation of sharing behavior MLE7: Mediation of individualization and psychological differentiation</p>
<hr/>		
5. Enhance students' awareness for language knowledge	<ul style="list-style-type: none"> ● Ask students to bridge different applications ● Bring about induction of rules by calling attention to similarities among events or examples. ● Facilitate application of rules and strategic thinking. <i>For example, which word can we use to start a question/a statement?</i> <i>Does it make sense to say...?</i> ● Reduce trial-and-error behavior and random answers. 	<p>MLE 4: Mediation of feeling of competence</p>
<hr/>		
6. Create repetition opportunities	Implementing repetition tasks	<p>MLE 2: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 9: Mediation of the search for challenge, novelty, and complexity</p>

7. Encouraging rule application and strategy development	<p>Asking students to bridge to different applications. <i>For example, "When is another time you could do that?"</i></p> <p>Bring about induction of rules by calling attention to similarities among events or examples. <i>For example: "Have you seen one like this before? When? Why is it like that? Does it apply to this situation?"</i></p> <p>Facilitate application of rules and strategic thinking <i>For example, which word can we use to start a question/a statement?</i> <i>Does it make sense to say...?</i></p> <p>Reduce trial-and-error behavior and random answers.</p> <p>Maintain a metacognitive emphasis. <i>For example, focus attention on the students' own thinking processes and encourage them to do the same</i></p> <p>Ask process questions --usually containing 'how' <i>"How did you know?" "How else could you do that?" "How can you find out?"</i> <i>"How did you do that?" "What did you do that time?" "Where did you learn that?"</i></p>	<p>MLE 2: Mediation of transcendence MLE 4: Mediation of feeling of competence</p>
8. Provide feedback	Giving feedback	<p>MLE 2: Mediation of transcendence MLE 4: Mediation of feeling of competence MLE 5: Mediation of regulation and control behavior MLE 10: Mediation of the awareness of being a modifiable entity MLE 11: Mediation of optimistic alternatives</p>
