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An exploratory study on the role of L1 Chinese and L2 English in the cross-linguistic influence in L3 French[1]

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This research investigates cross-linguistic influence in the comprehension of L3 French past tense. A close examination was made on the L1 (Chinese) and L2 (English) transfer patterns among 20 English majors in their early acquisition of L3 French passé compose (PC). Data were collected through introspective think-aloud protocol in a comprehension task and a retrospective interview immediately afterwards. In addition, a grammar test on English past and perfect tenses was conducted as a comparison with participants' knowledge in the French PC. A significant positive correlation was found between positive transfer in tense and aspect from English and the scores of test on English past and perfect tenses, but no relationship was detected between transfer in tense and aspect and general L2 proficiency. Even though a general positive picture of influence from L2 English to L3 French comprehension was observed, a smaller percentage of negative transfer in tense and aspect also received extensive discussion, which provided concrete evidence and implications for the necessity of including L2-L3 contrastive knowledge or translanguaging in L3 instruction as also advocated in recent literature.

Keywords: Translanguaging; Third Language Acquisition; Cross-Linguistic Influence (CLI); Tense in L3; Aspect in L3; French Acquisition

1. Introduction

This research takes a new look at an old topic: transfer and cross-linguistic influence. With the prevalence of learning a third or more language(s), it has been a compulsory requirement for English majors in China to study a second foreign language in most universities for years. A common phenomenon one can observe is the use of previous linguistic knowledge in the initial stage of

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third language learning, especially for adult learners. It would thus be interesting to know to what extent the knowledge of a second language (e.g., English) is helpful to the learning of a third language (e.g., French). It would also be important to investigate whether the native language Chinese still has a role to play and what effects or interactions the two previous languages with different tense systems would exert on the learning of a new foreign language with tenses.

Third language acquisition (henceforth TLA) was once subsumed under the field of second language acquisition, in which "second" indicates all non-native languages acquired after the first. It was not until the 1980s that multilinguals' cognitive and socio-psychological processes began to be examined closely and systematically (De Angelis, 2007). A number of researchers started to seriously explore the phenomenon of L3/multilingualism as a separate domain of inquiry due to the interwoven relationship among the different languages involved which complicated the issue (Leung, 2007). Recently, Cenoz and Gorter (2011) proposed a holistic approach of looking at multilingualism as informed by the Dynamic Systems Theory (de Bot, Lowie & Verspoor, 2007) in which bilingual/multilingual learner are considered different from the native speaker model, and instead of looking at different languages as isolated entities, their interactions and dynamics in the learning process gains the spotlight.[1] This perspective is favoured in this study, but it was not intentionally adopted as the guiding principle before the research. The naturalistic data from the think aloud report pointed towards this perspective of interpretation, which will be shown in the results and discussion section below). In addition, linguistic (e.g., typology) and non-linguistic factors (e.g., proficiency, recency of use, order of acquisition, etc.) have been identified to affect cross linguistic influence/interaction (see De Angelis, 2007; Jarvis & Pavlenko, 2008).[2] In the current study, two dominant factors will be studied and discussed in detail, they are typology (language distance) and language proficiency (especially in the source language (L2)).

2. Background

Numerous studies have shown that cross-linguistic influence from an L2 is favoured if the L2 and the L3 are typologically similar, especially if the L1 is typologically distant (e.g., Cenoz, 2001, 2003; Dewaele, 1998; Kellerman, 1995; Ringbom, 1987; Williams & Hammarberg, 1998). Even though L2 proficiency has been considered as one of the major factors for the transfer in L3 (e.g., De Angelis, 2005; Ringbom, 1987; Williams & Hammarberg, 1998), little research has been done to analyze proficiency level in the source language as a central concern, and it is not yet clear how L2 proficiency would influence the source or the nature of transfer. For example, is there an L2

proficiency threshold beyond which L2 transfer could happen to the TLA? In addition, it has been pointed out quite some time ago that the transfer process is different in production and in comprehension where the latter may involve more positive effects (e.g., Ringbom, 1992). Surprisingly however, transfer effects in perception and comprehension received much less attention than those in production in the literature of CLI so far (Jarvis & Pavlenko, 2008). Furthermore, more emphasis has been laid on negative effects of transfer while *positive* transfer has usually been given remarks in passing (Ringbom, 2007). In order to contribute to the existing literature of L2 transfer and transfer in comprehension, this study sets out to explore the effect of an L2 ([+tense]) typologically close to L3 with an L1 typologically distant from L3 on the comprehension of L3 past tense.

• *The definition of cross-linguistic influence/transfer*

CLI is generally used as an umbrella term covering instances of transfer, such as native language transfer, interlanguage transfer, or even reverse transfer. Previous definitions unanimously believed that transfer is the "use" (Gass & Selinker, 1983, p. 372; Selinker, 1992, p. 208) or "influence" (Smith, 1994, p. 148; Odlin, 1989, p. 27) of the native language or any other language(s) previously learned on the target language, including performance, acquisition or development. However, a look at the history of research in SLA studies also reveals that transfer is a much more diversified phenomenon than was originally expected in early studies of contrastive analysis where the mainly negative influence of the L1 on the L2 formed the dominant object of investigation. Herdina and Jessner (2002) further argued that there is conflicting evidence found in the study of transfer, which is attributed to terminological confusion concerning the type of phenomena to be classified as transfer phenomena, and a theoretical confusion relating to the nature of transfer. They believed that transfer is of "an intermodular nature and that a large number of transfer phenomena are not transfer phenomena at all but are to be attributed to *cross-linguistic interaction"*(p. 27).

Based on the previous literature, this study proposes a new definition of transfer with a focus on the learner-self. This idea is compatible with Herdina and Jesnner's (2002) observation and Cenoz and Gorter's (2011) notion of "focusing on multilingualism" in the sense that the *interactions* of languages in the learners' minds are closely examined rather than looking at transfer merely as the carry-over of the features of one language to another. It will present a picture of the cognitive processes in multilingual comprehension, and the positive and negative effects of the knowledge of the previous languages on the third. Transfer/cross-linguistic influence in this study is thus defined as: Consciously or unconsciously applying, "retaining" (Jarvis & Odlin, 2000, p. 540) or hypothesizing about the knowledge (or features) of the

previous language(s) for the comprehension or production of the target language.

• *Passé Composé in French its Equivalence in English and Chinese*

Passé composé (PC) is one of the major past tenses in French. In French, the main aspectual distinction is between perfective and imperfective; while in English, it is between progressive and perfective (e.g., Quirk, Greenbaum, Leech & Svartvik, 1985). The perfective in French (here only past is discussed) is realized through the morphology of *passé composé* and *plus-que parfait*. The imperfective is realized through the morphology of the *imparfait*. In English aspectual system of past, the perfective is realized through the *past perfect*, and the progressive through *past progressive*, leaving the simple past tense as the tense *unmarked* for aspect. In Mandarin Chinese, however, there is no marker for tense. Chinese language is considered as a non-inflected language. It does not even have grammatical tenses or aspect encoded through verb markers, but rather by aspect markers, which determines the state or progress of an action (Xiao & McEnery, 2004).

Table 1
Passé Composé and its English and Chinese Equivalents

	Languages	Tense: Le Passé Composé
French	Type I: aux. « avoir » + past participle	J'ai fini mon travail. I-have-finished-my-work. (literal translation)
	Type II: aux. «être» + past participle (agreement with the subject in gender and in number)	Elles sont sorti*es*. They (FEM)-are-gone-out (PL)
English Equivalents	Type I= simple past tense or perfect aspect present tense	= I have finished my work. /I finished my work.
	Type II= simple past tense or perfect aspect present tense	= They have gone out. /They went out.
Chinese Equivalents	Type I	= 我做完作业了. I-do-done (RVC)-homework-(SF-le).
	Type II	= 他们出去了. They-go-out-(VF/SF-le).

Notes: FEM: female, PL: plural, RVC: resultative verb compound, SF-le: *le* appears in sentence-final position, VF/SF-le= *le* appears in both verb-final and sentence-final positions.

There are two possible constructions of PC in French if a speaker wants to express a past completed action. Two verbs are needed for the perfective form, the auxiliary (*être* or *avoir*) and the past participle. In most French textbooks, PC is thus introduced in the order of type I (with aux. *avoir*) and type II (with aux. *être*). Both types have two possible English equivalents,

namely simple past or present perfect tenses, as illustrated in Table 1. In real situations however, usually there would be only one exact English equivalent, depending on the exact time setting of the context. For example, if "*J'**ai fini** mon travail*" in Table 1 has a specific time adverbial indicating "this morning (*ce matin*)", then the most accurate English equivalent of this sentence should be in past tense instead of present perfect.

In addition, whenever the main verb takes *être* as the auxiliary, the past participle (whether regular or irregular) is inflected for gender and for number. However, only a limited number of intransitive verbs in French have to take *être* as the auxiliary, such as the verbs express motion or a change of place, state, or condition (e.g., *devenir* : to become; *revenir*: to come back; *sortir*: to go out, etc.) More detailed examples are provided in Table 1.

To put it simply, the PC (with two forms of presentation) in French covers two meanings that English conveys through two different forms ("has/have done" and "did"). This difference between the two languages could constitute a potential source of problems for English speaking learners of French for expressing a completed action. The PC is even more difficult to acquire for an English speaker because of its structural or morphological complexity (Macaro & Graham, 2008).

3. Research goals and questions

The present research has the following purposes: first of all, it investigates the role of prior linguistic knowledge in multilingual comprehension rather than in production, while under the latter context transfer is usually studied; secondly, it specifically looks at the comprehension of French PC, which bears similarities and differences with L2 English but is an absent feature in the native language Chinese. Thirdly, it draws on L2 proficiency and the proficiency of specific L2 grammar items as potential variables that may have a relationship with the comprehension of the target language French. Finally, from the introspective data gathered from the 20 participants, the ultimate goal for this research is to provide insights and implications for L3 instructions on French PC. The above purposes give rise to the research questions of the present study:

1. For L1 Chinese-L2 English-L3 French learners, what is the source(s) and nature of transfer in tense and aspect in the comprehension of French *passé composé*?
2. What is the relationship between L2 English proficiency and the nature of transfer? And how does it influence the overall performance in L3 comprehension?
3. What are the possible reasons underlying the participants' negative

transfer occurred in the comprehension of French PC?

4. Method

4.1. Participants

Twenty L1 (native) Chinese-L2 English-L3 French beginners at a university in south China participated in the study. They were all year-three English majors aged between 20 and 25 with varying proficiency levels. All participants had learned English as an L2 since high school and had enrolled in the same second foreign language course of French for a year at the time of the study. The participants were carefully selected to ensure that all of them learned only three languages and in the order L1 Chinese-L2 English-L3 French with the same type of French instruction and similar amount of French exposure. After the training session of the think aloud protocol, none of them was found having problem in expressing out loud what they were thinking.

4.2. The think-aloud protocol

Ericsson and Simon (1993) distinguished between two verbalizing procedures: *concurrent verbal report* and *retrospective verbal report*. *Concurrent verbal report* includes *think-aloud*—"where the cognitive processes, described as successive states of heeded information, are verbalized directly" (Ericsson & Simon, 1993, p. 78). The second type of verbal report is *retrospective report*, "which is given by the participants immediately after the completion of the task while much information is still in short term memory and can be directly reported or used as retrieval cues" (Ericsson & Simon, 1993,p. 19). Both types of verbalization were used in this research. In the comprehension task, the participants were first asked to *think-aloud*, but after each sentence, they were asked to do a *retrospective report* with prompt questions from the interviewer. The rationale for this practice is that these participants are beginners of French as L3. It takes them more working memory capacity to process the new language, which is not yet automatized. Therefore, they might not be able to articulate their thoughts clearly at the moment of reporting. A retrospective report was applied in which they could retrospect and report some thoughts which were not originally in the verbal code or neglected during the think-aloud process.

4.3. Procedure

One-to-one meetings were conducted. They were given ample time to complete the following two empirical tasks one after another: an on-line comprehension task and a test on English past and perfect tenses. After completing the two tasks, the researcher conducted follow-up interviews with each individual where they could talk directly about their metalinguistic

awareness of the association of English simple past or present perfect tense with French PC, and the underlying reasons for any type of transfer or non-transfer. In order not to interfere with the learners' natural and intuitive comprehension of PC, these interview questions were kept confidential before the completion of the tasks.

Following the tasks, the TEM-4 scores were gathered to investigate whether transfer in tense and aspect in L3 French would have any relationship with the learners' general L2 English proficiency besides the proficiency of English past and perfect tenses, and whether L2 English proficiency would make a difference in the overall accuracy of comprehension in L3 French PC. The following sections will provide detailed description of each task.

Task 1: On-line comprehension task. This task consisted of two parts: part one involved a text of passé composé (PC) in French while part two was composed of twelve sentences of PC. The text and sentences were extracted from established French textbooks in China and abroad. The purpose of this task was to probe into the process of the L3 learners' comprehension of French PC and the role of their prior linguistic knowledge. The participants were asked to think-aloud while comprehending the French text and sentences. After the think-aloud process, they were invited to do a second round of comprehension which is an informal translation of the text *and* sentences they have just read (This will be elaborated later).

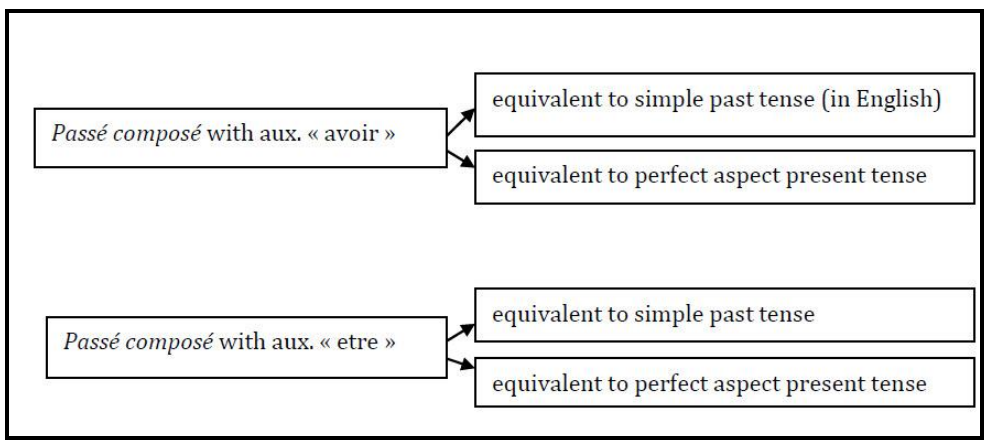

Figure 1. Categorizations of sentences in task 1.

In the first part of the task, the text has a general context of "time" given from the very beginning, which says that all the events happen "last night (*heir soir*)". The twelve sentences were not in a pre-set time frame. They were isolated from each other, with time adverbials indicating the general temporal setting. The rationale behind choosing these sentences was to categorize the

twelve items into four types of English equivalents, with three sentences in each (see Figure 1).

The comprehension of Task One consisted of two rounds. The first round was natural comprehension, where participants comprehended as they normally do while using the think-aloud technique, and retrospected after each sentence by answering the interviewer's prompting questions. In order to detect more about their cross-linguistic hypotheses, the following prompts were given in the retrospective report, such as "What language did you think of when comprehending the sentences?" "Did English/Chinese help/hinder you in understanding the sentence just now?", "Do you think that English/Chinese is similar to/different from French in this regard? How and why?" The report language could be in English or Chinese, or mixed, according to the participants' preference. In the second round, they were asked to *translate* each sentence in both parts into English informally, starting from the beginning till the end, in the process of which they did not need to report anything. In this round, they could choose to (or not to) think-aloud while doing the translation according to their own preferences, as it was afraid that some students would feel stressful if they misinterpret the comprehension task as a formal interpretation, in which they had to produce a 100 % correct sentence once for all. Some other students may prefer to talk to themselves while doing translation or do self-repair from time to time. The researcher would thus sit aside and let the participants translate verbally according to their own paces without interruption. The addition of the second round comprehension was justified by the observations in the pilot study. The students tended to report to the researcher in Chinese, the language they felt comfortable with, especially in terms of meaning, despite the fact that they actually thought of English as well while completing the task. But because of the nature of Chinese language, the researcher could only see the lexical meaning, not the temporal system they are referring to. Through informal translation, the researcher would be able to know exactly what English tense(s) they are trying to equate with French PC. The validity of all task items were examined by a native speaker of French and two professors in applied linguistics.

Assessment and analysis of Task 1. The task was scored in negative numbers based on both the first and second round of comprehension, but mostly on the latter. Points were deleted one for each error in the informal translation. The transcription of the first round comprehension was used to compare with the second round in case there was any inconsistence of comprehension in the two rounds. The final scoring was based on the final version of the translation. The self-report data including the think-aloud and the retrospective report were transcribed, coded and analyzed quantitatively with some qualitative elements. The researcher identified and studied different types of transfer

involved (e.g., item/system transfer and positive/negative transfer) and how they are manifested in each individual's cognition, namely intersubjectively, and intrasubjectively (Jarvis & Pavlenko, 2008). It was relatively easier to detect a case of negative transfer as it was usually reflected in errors. However, it was much harder to identify positive transfer or positive effect on L3 comprehension. The researcher therefore developed a rationale for judging whether there was positive or negative transfer involved as shown in Figure 2.

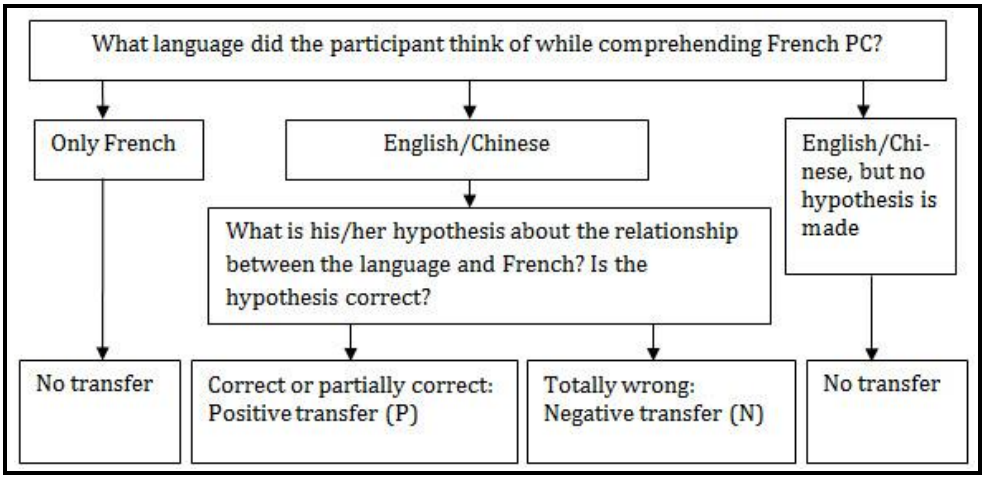

Figure 2. Rationale for judging the nature of transfer.

Task 2: a test on English past and perfect tenses. The purpose of doing this task was to compare the students' performance of comprehending the PC with their actual understanding of the past and perfect tenses in English. In particular, it was aimed to see if the learners know the contexts in which they should use perfect aspect present or simple past tense. This is essential in the comprehension of French PC, as it is closely related to how they tend to equate the French past tense with English tenses.

This task was adapted from Chalker (1992, p. 25), "Exercise 32 Past simple or present perfect? [SGE 4.5-8]" This exercise particularly dealt with simple past and present perfect tense in English grammar. It was originally in the form of a cloze text. The researchers modified the exercise into a choice of two alternatives. The whole task consisted of 21 items.

The test was then scored; with each verb form taking one point. The scores were used to compare with the transfer in tense and aspect identified from the previous comprehension task.

5. Data analysis

The think-aloud data were fully transcribed. It was originally in three languages, Chinese, English and French. All the languages were kept in their original form as it would be more accurate for the coding and analysis. Transcriptions are available upon request.

• *The coding scheme*

There are two levels of coding (please refer to the example in Figure 3 as an illustration).

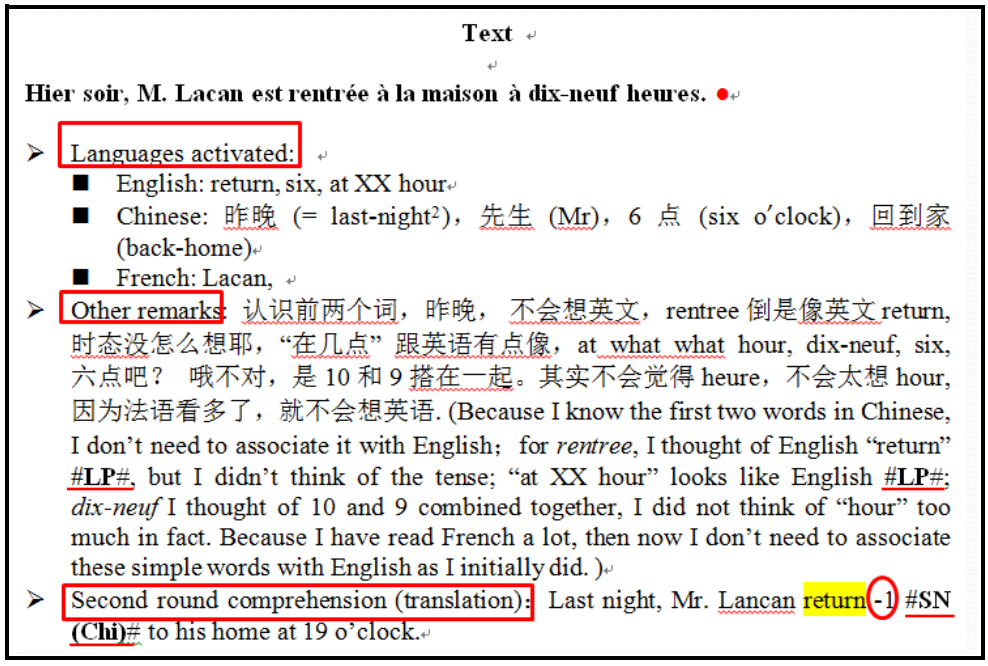

Figure 3. Example of the coding (of the first sentence in Part 1, Task 1); Note that the codings are highlighted in red rectangles.

The first level is to abstract the full transcriptions of the think-aloud into different categories of report. The three categories are "activation of words in Chinese/English," "other remarks" and the "second round comprehension." The first category "activation of words in Chinese/English," refers to where the participants merely spell out the single words, or word chunks in the comprehension process. In this process, the words are not activated in order; there may be jumps from one word to another, or repetition of one word several times, sometimes even in two different languages. Whenever they started to describe their thoughts instead of comprehending the content, or saying anything metalinguistically concerning tense or syntax, this part of

report was put into the second category—"other remarks"—what the students said about his/her process of thinking immediately after the comprehension of that particular sentence. This is also called retrospective report, in which the participants may add more detailed thinking process which they were not able to report during the think-aloud process.

In the second level of coding, specific codes were developed for each type of transfer. In total, from the verbal report in the first and second round of comprehension, two major categories of transfer were identified: "transfer in tense and aspect" and "other types of transfer" (such as lexical and syntactic) with the former as the focus of this study. Given space limitation, the category of "other types of transfer" has to be saved for another paper. Under the category of "transfer in tense and aspect," there are two subcategories: item transfer in tense and aspect (I) and system transfer in tense and aspect (S). Item transfer is "a concretely perceived similarity of form and an associated, assumed similarity of function or meaning between source and target language" (Ringbom, 2007, 55). In this case, the learners make use of oversimplified one-to-one equivalence hypothesis--possibly L2=L3, or L1=L3--directly mapping the L2 items on to existing L1 items in comprehension. System transfer is a higher level of transfer, "the imposition of higher level rules" (Ringbom, 2007, p. 55). It is the transfer of abstract principles of organizing information in the previous language to the target. Ringbom (2007, p. 5) states that, "It assumes cross-linguistic functional equivalence while formal item similarity is normally not involved." For each subcategory, two dimensions of transfer are also investigated in parallel; they are source of transfer (whether it is from English or from Chinese) and nature of transfer (whether it is positive, negative or unclear). Therefore, all four possibilities of codes in the coding scheme are shown in Table 2 (on next page).

It should be noted that there is no transfer from Chinese in the categories of "item transfer in tense and aspect (I)" and "positive system transfer in tense and aspect (SP)"because Chinese is typologically distant from French as it is not an alphabetical language and it is tenseless. In other words, transfer from Chinese is identified only in system negative transfer in tense and aspect. With regard to "item transfer in tense and aspect" particularly, there was no positive transfer found, as it is negative in nature, already shown in the definition. In addition, item transfer in tense and aspect is different from lexical transfer in the sense that the English and French words being associated are grammatical morphological words, which can directly result in the wrong use of tense and aspect. For example, if someone says that "'Il y a deux semaines, j'ai visité ma grand-mère.' meaning 'Two weeks ago, I have visited my grandma'.' is because *ai visité*looks like 'have visited' (which is ungrammatical in English),", it shows that the participant has the wrong message about French PC because of this one-to-one equivalence. It should be

Table 2:
The Coding Scheme

	Codes	Definition	Example
System transfer of tense and aspect: S	SN (Chi): System negative transfer in tense and aspect from Chinese	The participant does not mark any tense or aspect in their comprehension where it is needed.	*Hier soir, M. Lacan est rentrée à la maison à dix-neuf heures.* Last night, Mr. Lacan return* to his home at 19 o'clock. (Standard: Last night, Mr. Lacan returned home at 19 o'clock.)
	SN (Eng): System negative transfer in tense and aspect from English	The participant marks tense and aspect, but with a wrong hypothesis about the association between French PC and English	*Ils ne sont pas descendu de l'avion encore.* They didn't* go off the plane yet. (Standard: They haven't got off the plane yet.)
	SP (Eng): System positive transfer in tense and aspect (all from English)	The participant marks tense and aspect correctly and holds a correct hypothesis about the association between English and French tenses	*Il a pris son manteau et il est sorti.* He took his coat and went out.
Item transfer in tense and aspect: I (all from English)	IN (Eng): Item negative transfer in tense and aspect	The participant marks the tense and aspect wrongly, and it is because he/she holds a one-to-one equivalence between a French word of grammatical morphology and an English one.	*On a installé Microsoft Office la semaine dernière.* Last week, we have installed* Microsoft Office. (Standard : Last week, we installed Microsoft Office)

noted that this judgment was based on a cross- comparison between the first and second round comprehension and also the evidence of comprehension of other sentences. That is to say, in the retrospective interview, the learner in the above example did not show any systematic understanding of the tense use by comparing English and French tenses and at the same time she did sometimes used simple past tense for other sentences or made other kinds of one-to-one equivalent mapping of words. In contrast, it is assumed that positive item transfer always happens in the form of lexical transfer.

6. Results and discussion

In this section, the results of each research question are presented respectively, followed by a discussion and interpretation in relation to the literature.

Research Question 1: What is the source(s) and nature of transfer in tense and aspect in the comprehension of French PC?

As explained in the previous section, there are four categories of transfer in tense and aspect. Table 3 demonstrates the total number of cases of transfer identified in all participants' report. In terms of the types of transfer, item transfer only takes up a very small percentage of total cases of transfer in tense and aspect (less than 10%) compared with system transfer. System transfer takes the dominance in the transfer in tense and aspect.

Table 3
Cases of transfer in tense and aspect identified

Types of transfer in tense and aspect identified			Number of cases	Percentage (of total cases)
System transfer of tense and aspect: S	From Chinese	Negative: SN (Chi)	62	14.90%
	From English	Positive: SP (Eng)	283	68.03%
		Negative: SN (Eng)	36	8.65%
Item transfer in tense and aspect: I	Negative (from English only): IN		35	8.41%

With regard to the source of transfer, the dominant source of transfer in tense and aspect in the comprehension of French PC is from English, accounting for 85% (354 cases) of the total cases of transfer, while transfer from Chinese is very scarce, around 15% (62 cases). As expected, the negative system influence in tense and aspect is mainly generated from Chinese, the tenseless language, constituting more than 63% of all while there is only 37% from English. From the participants' reports, the typical case of system negative transfer from Chinese is the neglect of tense in the comprehension of French PC manifested in the non-inflected main verbs in the translation.

In terms of the nature of transfer in tense and aspect, a very positive overall picture is observed, with positive transfer (68%) more than twice as much as negative transfer (32%). In the current study, positive transfer in tense and aspect (SP) comes entirely from English, the language with typological proximity. Looking at system transfer specifically, this contrast is even more salient. The number of positive transfer cases (74%) is nearly three times the amount of the negative (26%). 26% is not a negligible number. The general reason to account for such a percentage in negative transfer seems to be that the learners' knowledge of *English* tense system is not accurate and complete (they are not able to distinguish between simple past and perfect present well). The introspective data also showed that some of them made systematically wrong connections with English and French tenses—there were more tenses in English being associated with French PC than the only two possible equivalents. According to the detailed qualitative analysis (which will be elaborated in the next paper due to limited space), there are three major reasons identified for the negative transfer: (a) the influence of L1 Chinese tense system, (b) the wrong assumption about the association between French PC and English tenses, and (c) the failure of inhibition on the item mapping between French and English grammatical morphology.

In summary, the general descriptive analysis on transfer in tense and aspect provided the following results: first of all, there are fewer cases of item transfer in tense and aspect than system transfer. Secondly, more transfer in tense and aspect is from English than it is from Chinese. Thirdly, there are more cases of positive transfer in tense and aspect than negative. All these show that the Chinese learners of French with a proficient L2 of English seldom make superficial connections but rather systematic associations between French and English tenses; and that English is a language that is typologically similar to French and thus induces more transfer, and more positive transfer in this study. Finally, it also indicates that the students' previous knowledge of a foreign language (English) is advanced enough for them to make some correct self-initiated (they were not taught about this) associations between French and English.

According to the researchers' knowledge, there is hardly any study that has particularly addressed the issue of transfer in tense and aspect in the acquisition of a third language that is typologically similar to a second language, but distant to the native language. The result in this study can be added to the existing literature: for learning a third language that is more marked in terms of tense than the native language, a learner transfers from both the native and the non-native languages, but is likely to transfer negatively more from the native language tense system than from the second language system which is similar to the third language. This might be in conflict with the results from the generative perspective (Leung, 2005) that in

the initial stage of L3 acquisition, transfer in TLA does not come from L1, while there is partial transfer from L2. The reason for this difference in findings might be due to (a) the definition of transfer from different perspectives, (b) Leung (2005) did not make particular distinction between positive and negative transfer, and (c) different L3 features were chosen for investigation because of different research purposes. This study shows that a learner of a third language still has to go through the stage of transferring the tense marking in the native language to the third language; while the process towards 'nativeness' may be quicker with the help from the knowledge of a previous foreign language that has a tense marking system.

Research Question 2: What is the relationship between L2 English proficiency and the nature of transfer? And how does it influence the overall performance in L3 comprehension?

The variables in the present study that were expected to have a relationship with the nature of transfer is (a) overall L2 proficiency based on TEM-4 scores, and (b) knowledge of English past and perfect tenses based on Task 2 scores. First of all, Pearson's correlation analyses were conducted between the scores of the tests. Results indicate that TEM-4 test scores are not correlated with Task 2 scores, with $r(20) = .079$, $p = .713$. It reveals that the two tests are independent measures for different types of proficiency.

Table 4
Correlation Matrix Between Transfer in Tense and Aspect and Task Two Scores

	Task 2 scores
SP	$r = .564^{**}$, $p = .010$ (2-tailed)
SN	$r_s = -.420$, $p = .065$ (2-tailed)
IN	$r = -.008$, $p = .973$ (2-tailed)

As displayed in Table 4, the number of positive system transfer in tense and aspect is significantly correlated with the Task Two scores (test on English past and perfect tenses), with $r(20) = .564$ and $p = .01$. This suggests that the better the learners understand the difference between English simple past and present perfect tenses, the more correctly they associate French PC with English past and perfect tenses.

As the data for negative system transfer (SN) is not normally distributed, the Spearman rho statistic was calculated, with r_s (20) = -.420, and $p = .065$, closely approaching significance. The direction of the correlation is negative, which means that the better one is at understanding English past and perfect tenses, the less possible he/she would engage in system negative transfer in tense and aspect in French.

In the case of item transfer, it does not have a relationship (r (20) = -0.08, p

= .973) with Task 2 scores. It reflects that the amount of superficial one-to-one mapping between English and French grammatical morphology is not directly associated with the understanding of specific English tenses.

Correlation analyses were also conducted between SP/SN/IN and TEM-4 scores. It is observed that transfer in tense and aspect has no distinct relationship with general L2 proficiency. As shown in Table 5, all the *p* values are not even approaching significance. In other words, having high/low overall L2 proficiency does not predict that the participant will have more/less positive/negative transfer in learning French PC, and vice versa.

Table 5
Correlation Matrix Between Transfer in Tense and Aspect and TEM-4 Scores

	TEM-4 scores (General L2 proficiency)
SP	r = -.077, Sig. (2-tailed): .748
SN	r_s = -.119, Sig. (2-tailed): .309
IN	r = .303, Sig. (2-tailed): .193

Where general L2 proficiency does have an influence is the overall performance of L3 comprehension. As mentioned earlier, the participants were divided into two groups according to the TEM-4 scores. Ten were in high proficiency group while the other ten were in the low proficiency group. Afterwards, an Independent Samples t-test was run on overall performance based on overall accuracy in second round comprehension in Task One.

The high proficiency group has a mean score of -27.3 (*SD* = 4.54) compared to -34.45 (*SD* = 8.33) for the low proficiency group. Therefore generally speaking, the high proficiency group out-performed the low one. Furthermore, the *t*-test confirmed previous assumption that this difference was significant at .05 level, with $t(14) = 2.383$, $p=.032$.

The above results show that general L2 proficiency affects overall performance in L3 comprehension. In other words, the better one learns a second language, the better he or she will do in the comprehension of the L3, which is typologically similar to the second. These comprehensive accuracy scores reflect the individuals' overall understanding of French PC, the vocabulary in French and the accuracy in translation in English as well. The errors identified for deletion of points include all cases of negative transfer (lexical, aspectual and syntactic), and inappropriate usages of words, tenses or chunks and expressions in English.

Results of Research Question 2 have demonstrated the relationship between transfer in tense and aspect with the knowledge of English past and perfect tenses and the general L2 English proficiency. The following section will

further explain the findings with reference to the previous literature.

- *Discussion on the relationship between transfer in tense and aspect and knowledge of English past and perfect tenses*

The reason why positive transfer in tense and aspect is positively correlated with Task Two scores is quite straightforward. French PC has only two possible English equivalents: simple past and present perfect. When PC should be associated with a present perfect tense or a simple past is directly related to how these tenses are used in English. Therefore, if a learner can distinguish between these two tenses in English, he/she may be able to produce correct English translations, or the opposite. Furthermore, system negative transfer is more negatively correlated (approaching significance) with Task Two scores than item transfer is. It suggests that if a learner is not able to distinguish between English past and perfect tenses well, he/she would be more likely to make negative systematic connections rather than formal item mappings between English and French tenses in the understanding of French PC.

The report of one case provided insights into the above discussion. Participant #17 scored the highest in Task 2, and got the lowest negative transfer rate and highest positive transfer rate in tense and aspect. She noted in the interview that she "likes English grammar," and she was particularly interested in comparing French with English while learning French. She perceived that the two languages are similar. Her learning style was very analytic in nature as she liked "thinking and finding out rules" or higher principles to guide her learning. She was able to spot the similarities and differences in the two language systems rather than equating the superficial similar forms between them. She termed this way of learning as "compare and contrast method," meaning that making positive associations while bearing in mind the differences. She concluded that in making the tense right, she used a lot of tactics comprehensively, such as the contextual clues, the chronological order, lexical expressions, and more importantly, the time adverbial (especially the preposition involved) as tense reminder. This can be seen as evidence for interlanguage transfer (Gass & Selinker, 2001): the participant is transferring the interlanguage tense system to another interlanguage.

In short, it might be important for Chinese students to understand English tenses well before the mastering of new French tenses. The idea of taking French PC as a new tense in a new language while completely avoiding the comparison with English (the monolingual perspective) emphasized by their instructor may not be the most optimized way for students in a non-immersion classroom in China. Furthermore, one participant #14 in the interview further noted that by doing this French exercise and retrospective

report, she became clearer about the distinction between English past and perfect tenses. In other words, the understanding of French tense may have a "washback" effect on the understanding of tenses in the previous underdeveloped interlanguage. This echoes with the notion of cross-linguistic interaction (Jessner, 2003) previously mentioned. Comparing the tenses in the two languages may help them reinforce the concept of tense in both interlanguages.

- *Discussion on the relationship between transfer in tense and aspect and general English proficiency*

Another important finding for Research Question two is very intriguing, as no relationship was found between L2 general proficiency with the nature of transfer in tense and aspect. It appears that the comprehension of PC in tense and aspect are more concerned with learners' grammar ability which is less directly linked to their overall L2 proficiency. In addition, the distinction between English present perfect and simple past was not specifically tested in the TEM-4 test, and the behavior of transfer is a complicated issue in which other factors such as learning style and instruction may also be at play. Instead, as will be discussed later, the general L2 proficiency affects overall performance in L3 comprehension.

At this moment, it would be important to look back at the literature on CLI in L3 where L2 proficiency has been identified as one of the most important non-linguistic factors in cross-linguistic influence in L3 acquisition. However, previous research (e.g., Clyne, 1997; Ringbom, 1987) has been unanimously focusing on the discussion of the issue of threshold levels—how proficient a learner should be in the language before it begins to affect their production or development of the target language to a significant extent. Results are mixed. On the one hand, the threshold seems to be low (e.g., De Angelis, 2005) as transfer can occur from the language the learner does not know well and also evenly from the native language the learner knows well. On the other, there is counter evidence that "unless a threshold level of L2 proficiency is achieved, CLI from L2 on L3 is very marginal" (Tremblay, 2006, p. 117). These results should be interpreted with caution as interaction of different factors might get involved. For example, typology should be seriously taken into consideration. If an L1 and an L2 are both typologically close to L3, transfer can occur from any language, but more cases might occur from L1 as it is more proficient. However, if L1 is less close to L3 than L2, despite the fact that L2 may be non-proficient, it could still have an influence. Therefore, the "threshold level" may actually depends on how close the L1 and L2 is to L3 respectively, not on the L2 proficiency only. Furthermore, previous studies have seldom looked at three languages with an L1 very distant from the L3 where source of transfer is not of major concern (largely from L2), while this study indicates that

higher L2 proficiency does not guarantee higher positive transfer rate from L2 in the understanding of certain feature in L3. Instead, the knowledge of L2 features related to the target feature in L3 may influence the comprehension of the target feature.

Results also showed that general L2 proficiency affects overall performance of comprehension in L3 French. The high proficiency group scored significantly higher than the low proficiency group. This result supports the most recent study by Jaensch (2009) suggesting that L1 Japanese learners of similar L3 German proficiency with a higher L2 English proficiency outperformed learners with a lower L2 English proficiency on the forms that realize uninterpretable gender and case values on the determiner and adjective. The implication under these similar results is that L3 learners with a higher L2 English proficiency have generally established metalinguistic awareness of how to learn a language well by using cognitive skills. The experience of learning a foreign language English has prepared them the knowledge of learning a new foreign language which is typologically close to the previous one. Similarly, researchers such as Bialystok (1986; 1987; 1991) and Thomas (1988; 1992) claimed that bilinguals have a better understanding of metalanguage, i.e. explicit language information or the organization of language systems. Another possible reason is foreign language aptitude. These students with higher L2 English proficiency may be better at learning languages inherently, because they have advanced language learning aptitude. In the similar vein, there have been well-established claims traced back to McLaughlin and Nayak (1989), who remarked that "once a person has learned a few languages, subsequent language learning is greatly facilitated" (6). The most recent research (Thomson, 2008) even shows that language aptitude seems to be a better predictor than previous language experience for success in the learning of beginner Portuguese as an L3 with various language backgrounds.

Research question 3: What are the possible reasons underlying the participants' negative transfer occurred in the comprehension of French PC?

Besides knowing the fact that the number of cases of positive transfer in the comprehension of French PC from English is directly related to how well the learners understand English past and perfect tenses, it may be worthwhile as well to further explore the reasons for the 32 percent of negative transfer in tense and aspect. There are three major reasons identified from the participants' verbal reports, namely the influence of L1 Chinese tense system, the wrong assumption about the association between French PC and English tenses, and the failure of inhibition on the item mapping between French and English grammatical morphology.

• *System negative transfer from Chinese*

The highest percentage of negative transfer comes from the system negative transfer from Chinese. As defined previously, whenever there is no tense marker observed on a verb where it should be, it shows influence from Chinese. In English, the use of tense-aspect morphology is obligatory for indicating temporal locations of events or states. Chronological sequencing and contextual clues are helpful only in ordering a sequence of events as one following another and temporal adverbials only serve to provide *more specific* information about temporal locations. In contrast to native norms, as documented in Yang and Huang (2004), Chinese students learning English quite often ignore the necessity to mark tense-aspect because, to them, contextual clues and lexical expressions have provided enough temporal information.

Bardovi-Harlig (1999) summarizes the three natural stages that L2 learners of temporality of all L1 backgrounds have to go through, which is a gradual sequence of shift from relying on pragmatic, to lexical, and finally to grammatical devices. Yang and Huang's (2004) study adds that an L1 (tenseless) language may reinforce learners' natural tendencies and as a result prolong the more pragmatic and lexical period in the tense-aspect acquisition process. It can thus be inferred that this "prolonged period" is likely to be extended even to the upper-intermediate to advanced learners of L2 such as the English majors in the present study. It still influences the initial stage of learning of L3 with a tense system.

The influence from Chinese was identified most obviously in the comprehension of the part of "text" in Task 1. This part induced more transfer from Chinese than the part of "sentences" simply because the context of time was given only once at the very beginning of the "text" while the "sentences" had time settings within each sentence. For example, for Verb 2 (V2), six participants had negative transfer from Chinese; V5 had seven cases; and V6 seven cases. These participants all mentioned in the recall that they did not mark past tense because they failed to pay attention to the general temporal setting at the beginning of the text, while they were only looking at the lexical meaning of each single sentence. Some even remarked that they completely "forgot" about tense.

Participant #20 is an outstanding case of being seriously influenced by the temporal system in Chinese. It was not until the completion of the two rounds of comprehension that she finally recognized the content in Task One was all about PC. When the researcher asked which tense in English she thought was equivalent to PC, she could not name any. Her knowledge about English tenses is unsystematic as well. She did not notice the temporal setting of sentences regardless of the presence of time adverbials. For most of the sentences, she

did not mark any tense, or used present tense. The verbs stood there in isolation, with no morphological inflections, such as V10 ("you still not finish [*sic*] your homework?"), and V11 ("I still not start [*sic*] yet"). When she was asked in the follow-up interview the reason why she did not mark any tense, she noted that she was just "interpreting the meaning". This is typical Chinese characteristic of tense development as documented in Yang and Huang (2004): the early stage of tense acquisition with dependence on lexical and pragmatic devices. This incomplete system of tense development in L2 influenced by L1 Chinese, or this non-acquisition (Ayoun, 2005) of English past and perfect tense morphology, has been carried over to the understanding of L3 French tense, manifested as not being able to tell the accurate form for the PC.

Negative transfer from English takes several forms of representation. The first is the wrong assumption about the association between French PC and English tenses, the other is item transfer.

- *Wong assumptions about French PC and English tenses because of lack of instruction*

Looking at the choices of tenses across 20 participants in general, the results demonstrate that they were not systematically aware of what tenses PC was equivalent to in English.

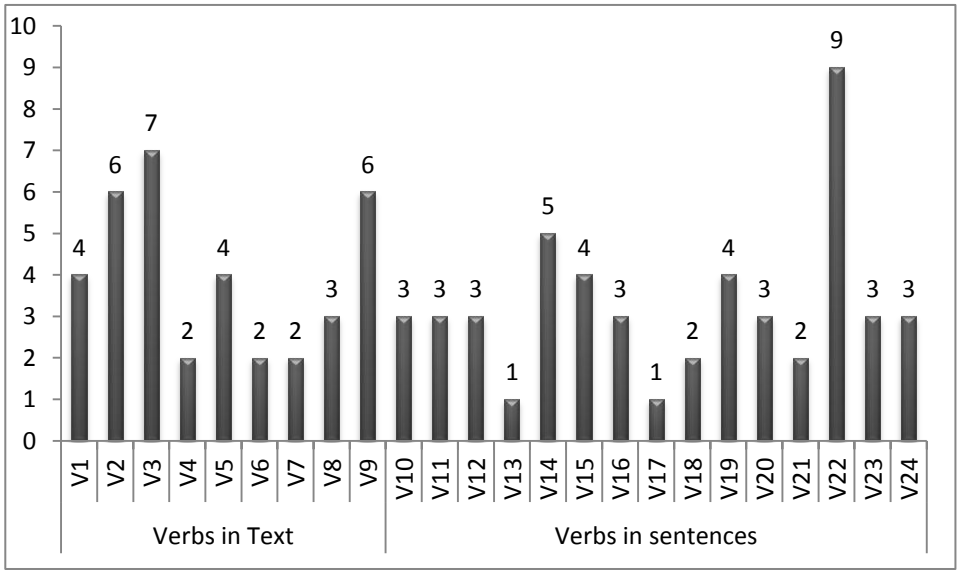

Figure 4. Types of English tenses associated with each verb in Task 1 given by 20 students.

As can be seen in Figure 4, for most sentences (18 out of 24), the translations involve more than the only two possibilities. It shows that the problem not only lies in students' incompetence to distinguish between present perfect and simple past tense, but also the ignorance of the cross-linguistic similarities and differences between French PC and English tenses, i.e., what tenses PC *can be* equivalent to in English metalinguisticly. For some sentences, they even came up with seven or nine possibilities.

Four verbs stand out by having more than 5 possible English equivalents mentioned by the 20 participants—Verbs 2, 3, 9 and 22. If we take verb 3 as an example, all the English tense associations the participants made with French PC are shown in Table 6.

Table 6
Tenses in the English Translations by 20 Participants for Verb 3

V3 : Puis leurs enfants ont regardé la television. Standard translation: Then their children watched (the) TV. [simple past tense]	
Tenses in translations by 20 participants	Frequency
1. simple past	7
2. progressive past	5
3. progressive present	4
4. perfect progressive present	1
5. perfect present	1
6. present (indicating future)	1
7. simple present	1

Seven out of 20 participants made the right association of French PC with simple past tense in English for this verb. As shown clearly in the table, progressive aspect, with a total frequency of 9, is the aspect participants prefer to associate with French PC for the verb "watch." Participant #13 mentioned in the follow-up interview that "the verb 'watch' feels like activity that lasts for a while." Apart from this, the incorrect recall of the meaning for the conjunction *puis* (= "then") also induced the mis-association between French PC and English tenses. Participant #6 and #8 mistook it for the preposition "during," which indicates an action happening for some period of time (progressive). Participant #20 even thought of the modal "will" indicating future. This is also a piece of evidence for another important observation on the reason for the mis-association between French and English tenses, which is the influence of the understanding of French time adverbials. Participant #20 and #18 mistook *ont* (= "have") for *sont* (= "are"), which gave them more reason to associate this PC verb with the English progressive "are/were doing." As for the use of perfect aspect, some of them (e.g., #12 and #15) were superficially making equivalence between *ont*

(conjugation of *avoir* = "have") and the English "have". All these have pointed to the fact that the students had not been informed of the similarities and differences between French and English past tenses due to the lack of explicit instruction which possibly resulted in this lack of knowledge in temporal representation of French tenses.

• *Item transfer—the failure of inhibition on "avoir"="have"*

Item transfer takes up similar proportion as system negative transfer in the total number of negative transfer, but this type of negative transfer deserves closer attention. As mentioned earlier, item transfer means the oversimplified one-to-one equivalence between the source and target language. In terms of French PC, it usually happens on one type of French PC among the four.

The first type of PC (Type I) is the most distracting and confusing for learners of French with an English background in the present study. It has the lowest accuracy among all types of PC. Unfortunately however, it is the most common type. Collins (2002) has documented the reverse situation for the influence of this type of PC on the learning of English. He noted that the simple past is expressed in French with morphology that is structurally similar to English perfect morphology, so the French speaking learners of English correspondingly show a tendency to mark simple past with perfect morphology. For participants in this study, in a similar fashion, they have a tendency to translate the French PC with a structure of "*avoir* (= "have") +p.p." meaning simple past tense into tenses with perfect morphology.

For example, for Verb 9 in the part of "text" which belongs to the first type of PC, 6 participants used perfect aspect morphology, and all of them did the same for both Verb 2 and 3. This suggests that they were making superficial analogy between all forms of *avoir* (= "have") and the English word "have" to indicate the perfect aspect. The Type Four verbs in the part of "sentences" have the lowest accuracy rate among all verbs in Task 1. These participants, as Participant #14 put it, experience the cognitive process that "when I saw the verb *avoir* (= "have"), I had to try very hard to inhibit the tendency of associating it with the English equivalent word 'have', and in most cases I could not."

In contrast, participant #17, who was successful in understanding all the French PC sentences in Task One, told the researcher that she never treated *avoir* (= "have") as an isolated word "have" in English. Instead, she conceived "'*avoir* (= "have") +p.p.' structure as a complete whole." This "complete whole" was equivalent to past tense or present perfect tense in English. When it is the context where perfect present tense should be used, she chose the right tense without thinking about what exactly *avoir* (= "have") is equivalent to.

In follow-up interviews, the first question the researcher asked the participant was: "Do you know which tense(s) in English is equivalent to French PC?" Only eight students out of twenty could give a very definite answer. None of the eight students told the researcher that they had been instructed about this metalinguistic knowledge about French and English tenses. Instead, they figured it out by themselves through their own observation or by searching for materials introducing English vs. French tenses. However, surprisingly, even within these eight students who are comparatively clearer about the possible equivalent tenses in English with French PC, only two of them consistently implemented this perception into their real task (which means that they used the above two tenses only). After the interview, by calculating the number of noticing of errors for each individual during the interview, it was found that this discussion has actually helped them notice their errors in Task One and most of them eventually realized that their previous understanding of French PC was problematic. The majority remarked that they were glad to be informed of which tense PC is equivalent to in English as it is actually facilitative in understanding the reference of French tenses.

The above demonstrates that there is a the need to explain the PC in the form of contrastive analysis between French and English, drawing the students' attention to this special difficult feature in the French PC in order to avoid negative transfer derived from the simple speculation from the form.

7. Conclusion

The results and discussions have revealed that most students in the present research could make self-initiated positive and correct association between English and French tenses to help with their comprehension of French past tense, and the better they understood English tenses, the more positive influence L2 had in the comprehension of L3 French. On the other hand, as the participants did not previously receive explicit instruction on the possible tenses in English equivalent to the French PC, they showed wrong associations between English and French tenses due to their incomplete and inaccurate understanding of the English tense system. Teachers for L3 French language teaching in the EFL context could help learners speed up the process in the acquisition of French PC with an introduction to this contrastive knowledge.

In fact, numerous comparative studies on the exponents of inductive and deductive approaches (or implicit and explicit methods) have been conducted in the past decades with evidence arguing for the latter (e.g., Alanen, 1995; Dekeyser, 1997; Doughty, 1991; Ellis, 1993; Rosa & O'Neill, 1999). Sheen's (1996) study has demonstrated that the treatment of the contrastive analysis

input in the deductive approach has been more effective than the inductive approach in minimizing the error rate. In the current study, the readdress of the use of CA as a deductive approach in teaching grammar in a third language is the result of the special needs from learners of a second foreign language which is closer to the previous one but distant to the native language. The cross-linguistic interactions in the multilinguals' minds demonstrate that they are constantly searching for linguistic resources available to help their comprehension in the third language even though they were instructed under the monolingual paradigm. The use of CA in language classroom should not be completely abandoned, especially in facilitating the explanations on grammar. As also pointed out in recent literature on bilingual education and multilingual education (Cenoz & Gorter, 2011; Creese & Blackledge, 2010), pedagogical activities such as translanguaging and creating connections between languages could be applied in multilingual classroom as previous linguistic resources are facilitative in the learning of additional languages with similar features. As noted by Lin (2013): "Central to all these multilingual developments is the recognition of the plurilinguistic nature of classroom interactions and communicative repertoires of both learners and teachers in multilingual settings, and the affirmation of plurilingualism as a resource rather than a barrier to language and content teaching and learning." However, at the same time we should be aware of the potential setbacks (such as the subtle differences between the languages) it may also bring to the learners once they start comparing them. It is not yet clear by far which linguistic aspects are more positive for applying previous linguistic resources for the instruction of other foreign language(s) in class which is left for further research. Base on the results of this study, the use of CA is only encouraged particularly for instruction on L3 French PC.

Notes:

1. Salmani Nodoushan (2013) argues in favor of bilingual selves rather than bilingual identities, and Salmani Nodoushan and Garcia Laborda (2014) also favor such a perspective on the question of bilingual selves versus entities.
2. In connection to L3, Salmani Nodoushan (2010) has worked on the impact of formal schemata on L3 reading recall, and Karami and Salmani Nodoushan (2014) have conducted research on the impact of analogy on L3 reading comprehension.

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