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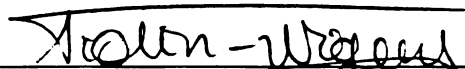
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**THE EFFECTS OF THE EXPLICIT TEACHING METHOD ON LIAISON
ACQUISITION BY L2 LEARNERS OF FRENCH**

By

Micheale Elizabeth Micol

A THESIS

**Submitted to
Michigan State University
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ABSTRACT

THE EFFECTS OF THE EXPLICIT TEACHING METHOD ON LIAISON ACQUISITION L2 LEARNERS OF FRENCH

By

Micheale Elizabeth Micol

The current study examines the effects of teaching method on liaison production by second language learners of French. Three test groups were used to examine the effects of explicit instruction, implicit input, and explicit instruction in addition to implicit input on liaison production. The explicit instruction group consisted of eight students taking French 330 Phonetics. The implicit group consisted of five students taking 300-level French courses that did not include French 330 Phonetics. The implicit plus instruction group consisted of students taking French 330 Phonetics concurrently with another 300-level French course. The groups were tested in a pretest/posttest format and two raters were used to determine the presence or non-presence of liaison consonants. The independent variables used were instructional treatment (implicit, instruction, implicit + instruction), reading style (paragraph, phrase list), and time (pretest, posttest). The dependent variable is correct liaison production. Results suggest that the explicit teaching method had no significant effect on correct liaison production by these learners. In addition to exploring the explicit teaching method, consideration is given to the characterization of liaison usage in these learners' speech.

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CHAPTER ONE

INTRODUCTION

Liaison is a feature of the French language that, succinctly put, causes a characteristically latent word-final consonant to be realized phonetically in certain linguistic environments. For example, one would pronounce ‘my cat’, *mon chat*, as [mɔ̃ʃa] but ‘my friend’ *mon ami* as [mɔ̃nami]. This phenomenon can be loosely compared to *a/an* alternation in English (Tranel 1987: 168). ‘A car’ is pronounced [əkɑr] but ‘an apple’ is pronounced [ænæpl].

Liaison usage is common in French speech and proper employment of it can indicate a mastery of the language system (Battye et al. 2000:112). Thus, liaison usage is important to second language (L2) learners who wish to be proficient in speaking French. Additionally, liaison usage can also be a gauge for speech style since it tends to be employed more frequently in formal situations. Since liaison is an integral part of the French language, attention should be given to it in second language teaching and learning. The present study investigates the effects of a specific teaching method on liaison production by L2 learners, as well as general characteristics of liaison usage by these same learners. In this study, two research questions will be explored.

1. How does an explicit teaching method influence liaison production in second language speech?

An explicit teaching method is one in which the teacher presents the lesson to be learned by explaining the phenomenon and the rules that govern it, usually in lecture format. Learners are not necessarily required to use inductive reasoning and draw their own conclusions, but rather are supplied with the information they need to know at the onset

of the lesson. Exploring this question will provide evidence as to whether this method is effective for teaching liaison.

1. How do (L2) learners of French employ liaison in speech?

Analyzing L2 speech data for liaison usage will provide information as to how learners employ liaison in speech. This will in turn identify areas in which learners may need clarification or practice in liaison.

Finding answers to the aforementioned questions will benefit both second language teaching and second language acquisition research. By examining learners' interlanguage speech, acquisition of liaison can be examined. Additionally, this information will allow instructors to examine the effectiveness of an explicit teaching method on liaison production and to identify areas in which L2 learners may be in need of clarification and/or practice of concepts. Through the examination of the explicit teaching method, instructors will be provided with useful information as to the effectiveness of such a method. By examining the interlanguage speech of L2 learners, the acquisition of liaison can be studied and areas where learners may need help can be identified.

CHAPTER TWO

BACKGROUND INFORMATION

2.1 Liaison

As discussed in the previous section, liaison is only employed, or licensed, in certain linguistic environments. These environments are organized into two categories, obligatory, or those situations in which liaison is required, and optional, or those situations in which liaison licensing depends largely on speaker style and/or speech situation. An example of obligatory liaison has already been mentioned. In *mon ami* [mɔ̃nami] ‘my friend’, liaison is obligatory. Liaison is always licensed after determiners. In an optional liaison, the speaker may choose whether to employ the liaison, and as such, sociolinguistic considerations may apply. As will be discussed later, cases that constitute optional liaison are highly debated between researchers. Impossible liaisons can be defined as those situations in which liaison never occurs. For example, liaison never occurs after a singular noun, as in *Jean en a* [ʒɑ̃ɑna] ‘John has some’.

The occurrence or nonoccurrence of liaison seems to involve numerous factors from a diversity of areas in linguistics. These areas include phonology, phonetics, prosody, syntax, and semantics. Each of these disciplines has attempted to describe liaison from within its own unique framework. In the subsequent paragraphs there will be a brief introduction to liaison within the frameworks of the various aforementioned disciplines in addition to a discussion of research whose focus is the description of appropriate liaison usage in speech, as well as research relating to the teaching of liaison, learner errors in employing liaison, and implicit/explicit learning. For the purposes of the

current study on liaison teaching and production, the following discussion will be mostly limited to answering the question of when liaison occurs, not of how it occurs or why.

2.1.1 Phonology of Liaison

In terms of phonology, liaison causes the pronunciation of a latent consonant, as in the aforementioned example in which [n] in *mon ami* [mɔ̃nami] is realized phonetically as opposed to *mon chat* [mɔ̃ʃa] where it is not. For liaison to occur, the linking consonant must precede a vowel-initial or glide-initial word (Tranel 1987:171).¹ According to Valdman's phonological account of liaison in 1976 (99-105), liaison consonants are latent in their underlying form. They become phonetically realized before vowel-initial words and are deleted before consonant-initial words. For example, this account would argue that the underlying form of the first person plural pronoun, 'nous' is /nuZ/², with the liaison consonant being realized before vowel-initial words as in 'nous avons' [nuzaʋɔ̃] 'we have' and remaining latent before consonant-initial words as in 'nous chantons' [nuʃɑ̃tɔ̃] 'we sing'. Other researchers that retain this view of liaison as an account of consonant-deletion before consonant-initial words include Schane (1968) and Dell (1973). This view contrasts with other research studies completed by Klausenburger (1974, 1984) and Tranel (1981), who attribute liaison occurrence to the insertion of a consonant before vowel-initial words, rather than the deletion of one before consonant-initial words.

In addition to consonant insertion and deletion accounts of liaison, non-linear phonological accounts such those completed Clements, et al. (1983) and also by Tranel (1995) use the prosodic structure of words in order to understand liaison. Non-linear accounts will be examined in more detail in the discussion on prosody.

2.1.2 Phonetics and Orthography

Tranel (1987:174-178) gives a relatively thorough account for the phonetic occurrence of liaison with each of the liaison consonants. In his account, liaison consonants are limited to the set, [t,z,n,ʁ,p,g]. Some accounts use [k] instead of [g], but Tranel contends that [k] is archaic (1987:174). Ayres-Bennett et al. (2001:61) also include [v] as a liaison consonant, citing as proof examples such as *neuf ans* [nœvɑ̃] ‘nine years’ and *neuf heures* [nœvœʁ] ‘nine o’clock’. However this seems to be a case of enchaînement and assimilation rather than liaison. Enchaînement occurs when a word-final consonant attaches to the empty onset of the following vowel-initial word. The syllable boundary for *neuf ans* is represented by a period [nœ.vɑ̃]. Liaison involves enchaînement, but [f] is not a liaison consonant since it is also phonetically realized before consonants as in *neuf chats* [nœfʃa] ‘nine cats’. In this case [f] is a non-latent coda as opposed to the latent [z] in *des chats* [deʃa] ‘some cats’. The latent [z] in *des* [de] ‘some’ cannot attach to the onset of the following word *chats* [ʃa] ‘cats’ since the onset position is filled with [ʃ] as in [de.ʃa]. In *neuf chats* the non-latent [f] is attached to the coda position of *neuf*, as in [nœf.ʃa]. In *neuf ans* the [f] consonant is still non-latent and resyllabifies to the onset position of *ans*. Additionally, the [f] consonant undergoes assimilation, a process by which a phonetic sound takes on characteristics, such as voicing, of the immediately surrounding phonetic sounds. In the example of *neuf ans*, the

[-voiced] [f] consonant takes on the characteristic of [+voiced] from the following vowel [ã] and becomes realized phonetically as [v], thus giving the final pronunciation [nœ.vã].

As a rule spelling indicates the phonetic nature of the linking consonant. Table 2.1 illustrates the distribution of phonetic liaison consonants according to their orthographic representation. If liaison is to occur, orthographic <t> and <d> will produce [t], <s>, <x>, and <z> will produce [z], <n> will produce [n], <r> will produce [ʁ], <p> will produce [p], and <g> will produce [g], or possibly [k] in some accounts.

Table 2.1 Orthographic/Phonetic Liaison Consonants

Orthographic Representation	Phonetic Representation	Examples
t	[t]	<i>petit enfant</i> [ptitãfã] ‘small child’
d	[t]	<i>grand enfant</i> [gãtãfã] ‘tall child’
s	[z]	<i>des oranges</i> [dezɔʁãʒ] ‘some oranges’
x	[z]	<i>aux Etats-Unis</i> [ozetazyni] ‘in the Unite States’
z	[z]	<i>chez eux</i> [ʒezø] ‘at their house’
n	[n]	<i>bon anniversaire</i> [bɔnanivɛʁsɛʁ] ³ ‘happy birthday’
r	[ʁ]	<i>premier automne</i> [pʁɛmjɛʁɔtɔn] ‘first autumn’
p	[p]	<i>trop heureux</i> [tʁopøʁø] ‘too happy’
g	[g] or [k]	<i>un long été</i> [ɛlɔʒetɛ] ‘a long summer’

2.1.3 Liaison Consonants and Grammatical Categories

Grammatical context can also be indicative of which liaison consonant is to be employed. Table 2.2 lists grammatical contexts for which [z] is employed as the liaison consonant. When liaison occurs, [z] will be the phonetic consonant employed for plural determiners, adjectives, and nouns, singular prenominal adjectives and personal pronouns ending in <s>, and the first and second person singular and plural conjugated verbs.

Perhaps due to its widespread occurrence in the French language, the liaison consonant [z] is used widely in false liaisons, such as *vingt-cinq années* ‘twenty-five years’ [vɛ̃tsɛ̃kzane] (Tranel, 1987: 171). In this case of false liaison, the [z] functions as a plural marker.

Table 2.2 Grammatical Contexts Utilizing [z]

Grammatical Context	Examples
Plural determiners	<i>des amis</i> [dezami] ‘some friends’
Plural adjectives	<i>petits enfants</i> [ptizãfã] ‘little children’
Singular pronominal adjectives ending in orthographic <s>	<i>un gros éléphant</i> [œgrozelefã] ‘a fat elephant’
Plural noun + adjective	<i>les enfants aimables</i> [lezãfãzemabl] ‘the pleasant children’
Personal pronouns <i>nous, vous, ils, elles, les</i>	<i>Nous avons du temps.</i> [nuzavõdytã] ‘We have some time.’
First person verbs	<i>Je suis américain.</i> [ʒəsɥizəmɛrikɛ̃] ‘I am American.’
Second person verbs	<i>Vous chantez encore</i> [vuʃãtezãkɔʁ] ‘You are still singing.’

Table 2.3 shows the grammatical contexts in which [t] is the preferred liaison consonant. This liaison consonant is phonetically realized in third person verbs, adverbs ending in ‘-ment,’ and also in certain pronominal, singular adjectives such as *petit* ‘small’ and *grand* ‘tall’. This consonant has also been known to occur in false liaison. For example, the insertion of [t] between a verb and pronoun, as in *a-t-il* [atil] ‘does he

have', is a false liaison from the 16th century that is now commonly accepted as an appropriate liaison (Tranel 1987:170).

Table 2.3 Grammatical Contexts Utilizing [t]

Grammatical Context	Examples
Third person verbs	<i>Ils donnent un bonbon.</i> [ildɔ̃ntɛ̃bɔ̃bɔ̃] 'They give a piece of candy.'
Adverbs ending in <i>-ment</i>	<i>Extrêmement important</i> [ɛkstʁɛmɛmɑ̃tɛ̃pɔ̃ʁtɑ̃] 'extremely important'
Prenominal adjectives ending in orthographic <t> or <d>	<i>un grand arbre</i> [ɛ̃ɡʁɑ̃tʁbʁ] 'a tall tree'

The consonant [n] is also a frequently occurring liaison consonant. Table 2.4 shows the major contexts for which [n] is employed as the liaison consonant. These include singular possessive determiners, singular indefinite determiners, and prenominal adjectives, pronouns, prepositions, as well as monosyllabic adverbs that end in orthographic <n>. Liaison with [n] only occurs in words that end in a nasal vowel. However, a word that ends in a nasal vowel does not necessarily indicate that liaison will occur with [n]. For example, in *dans un mois* [dɑ̃zɛ̃mwa] 'in a month' the word *dans* ends in a nasal vowel, but occurs in liaison with [z] (Tranel 1987:175). In this case, the liaison consonant produced is determined by orthographic <s>.

Table 2.4 Grammatical Contexts Utilizing [n]

Grammatical Context	Examples
Singular possessive determiners	<i>ton appareil-photo</i> [tɔ̃napaʁɛjfoto] 'your camera'
Indefinite singular determiner	<i>un artiste</i> [ɛ̃nartist] 'an artist'
Prenominal adjectives ending in orthographic <n>	<i>ancien ami</i> [ɑ̃sjenami] 'former friend'
Pronouns ending in orthographic <n>	On y va. [ɔ̃niva] 'Let's go.'
Prepositions ending in orthographic <n>	<i>en hiver</i> [ɑ̃niver] 'in winter'
Monosyllabic adverbs ending in orthographic <n>	<i>bien aimé</i> [bjɛ̃nɛme] 'well liked'

The remaining liaison consonants [ʁ, p, ɡ/k] are limited in their usage in the spoken language. Table 2.5 lists grammatical contexts in which each of these consonants is phonetically realized. The linking consonant [ʁ] occurs with adjectives and is possible after certain infinitives. The liaison consonant [p] is only used with *trop* 'too much' and *beaucoup* 'a lot'. The liaison consonant [ɡ] (or [k] in some accounts) is only employed in prenominal adjectives that end in <g>.

Table 2.5 Rare Liaison Consonants

Phonetic Consonant	Grammatical Context	Examples
[ʁ]	Adjectives ending in orthographic <r>	<i>au premier étage</i> [opʁɛmjɛʁetaz] 'on the second floor'
	Certain infinitives	<i>aimer un peu</i> [ɛmɛʁɛ̃pø] 'to love a little'
[p]	Adverbs <i>trop</i> and <i>beaucoup</i>	<i>trop heureux</i> [tʁopøʁø] 'too happy'
[g] or [k]	Prenominal adjectives ending in <g>	<i>un long été</i> [ɛ̃lɔ̃g/kete] 'a long summer'

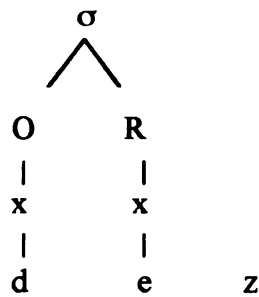
2.1.4 Prosody

In regards to prosody, the liaison consonant can resyllabify with the following vowel, guarding the preferred Consonant-Vowel (CV) syllable structure in French. Recall the example using *mon ami* 'my friend'. The phonetic representation of this phrase is [mɔ̃nami]. [ami] has an open onset position since it begins with a vowel. In liaison, the consonant [n] fills this position, leaving [mɔ̃] as an open syllable and thus restructuring the syllables of [ami] to be [na.mi] in order to create the final structure [mɔ̃.na.mi]. This allows for the retention of the preferred CV syllable structure for French. This phenomenon is exemplified in non-linear phonological accounts since these accounts utilize the prosodic structure on language to in order to comprehend liaison occurrence.

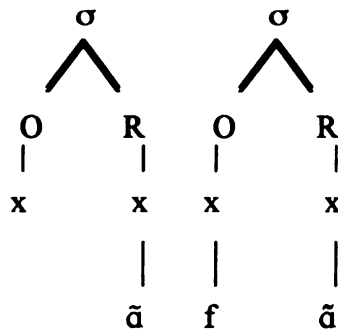
In non-linear phonological accounts of liaison, the liaison consonant is treated as a floating, or latent consonant (Ayres-Bennett 2001: 69). The liaison consonant is floating in the sense that it has no skeletal tier with which to attach. Example (1) shows

such a consonant. In *des* 'some', [d] attaches to the onset slot and [e] to the rime slot, but since there is no skeletal slot for [z] to attach to, it remains a floating, or latent, consonant. For [z] to be realized phonetically, it needs to attach to a skeletal slot. In (2), *enfants* [ãfã] 'children' has an open onset slot. Consequently, when these two words occur in succession, [z] attaches to the open onset slot of [ãfã] to form the structure represented in (3) and thus achieves phonetic realization.

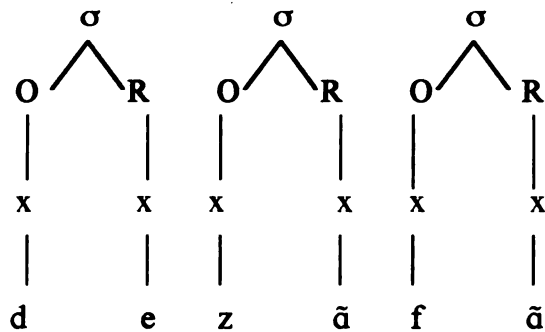
(1)



(2)

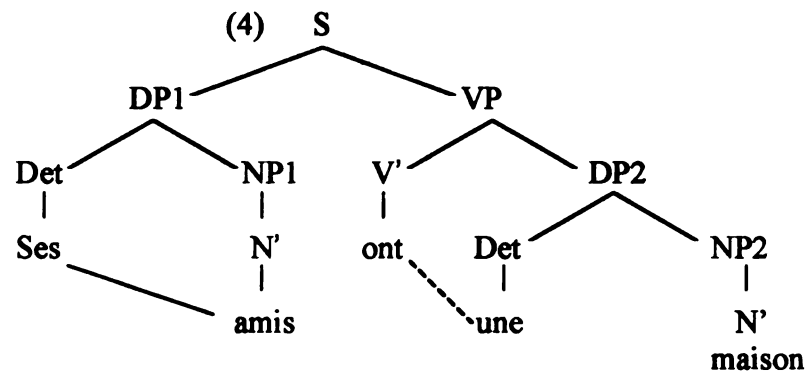


(3)



2.1.5 Syntax of Liaison

In addition to being understood in phonetics, phonology, and prosody, liaison can also be understood in terms of syntax. This is reflected in the following example, which is translated as ‘His friends have a house.’



In (4), liaison is shown between *ses* ‘his’ and *amis* ‘friends’ by a line connecting the two words. Tranel reports that the stronger the syntactic tie, or syntactic solidarity, that exists between two words, the greater the tendency for liaison to occur (1987:184). There are two indications of the strong syntactic solidarity that permits liaison between *ses* and *amis*. First, both *ses* and *amis* belong to the same syntactic constituent, DP1. Syntactic solidarity is stronger within a constituent than between constituents. Thus, liaison is more likely between *ses* and *amis* than between *amis* and *ont*. Secondly, the notion of c-command provides further evidence of syntactic solidarity. C-command can be defined as follows (Hawkins 2001:307):

A c-commands B if and only if A does not dominate B and every category dominating A dominates B.

Dominance can be defined as follows (Jones 1996:8):

Node A dominates Node B if there is a downward path from node A to node B along the branches of the tree.

A path can be defined as “an unbroken series of branches and nodes that does not change direction with respect to the top of the tree” (Culicover 1982:21).

Following these definitions, the determiner (Det) *ses* c-commands the noun (N') *amis* because it does not dominate *amis*, yet every category that dominates *ses*, namely DP1, also dominates *amis*. Thus, this furthers the idea of the existence of syntactic solidarity between the two words. In the case of *amis* ‘friends’ and *ont* ‘have’, the noun (N') *amis* does not dominate the verb (V') *ont*, fulfilling the dominance requirement for c-command, but not every category that dominates *amis* dominates *ont* since DP1 dominates *amis* but not *ont*. Thus, there is no c-command relationship between *amis* and *ont* and liaison is not as likely to occur between these words as it is to exist between *ses* and *amis*.

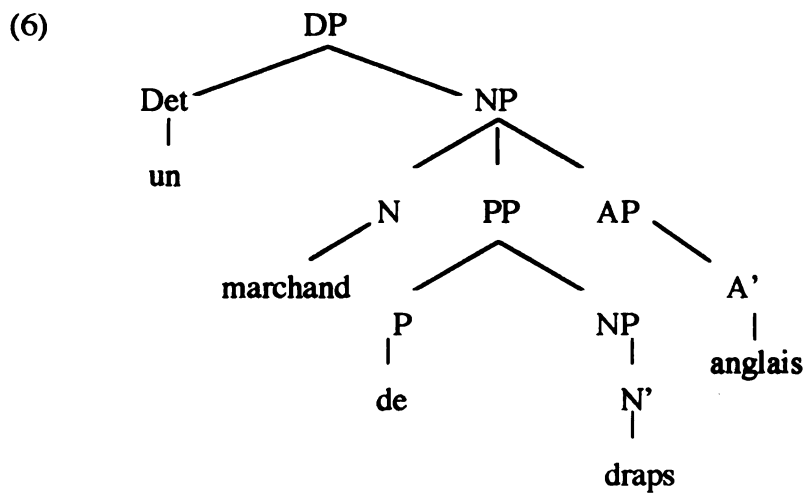
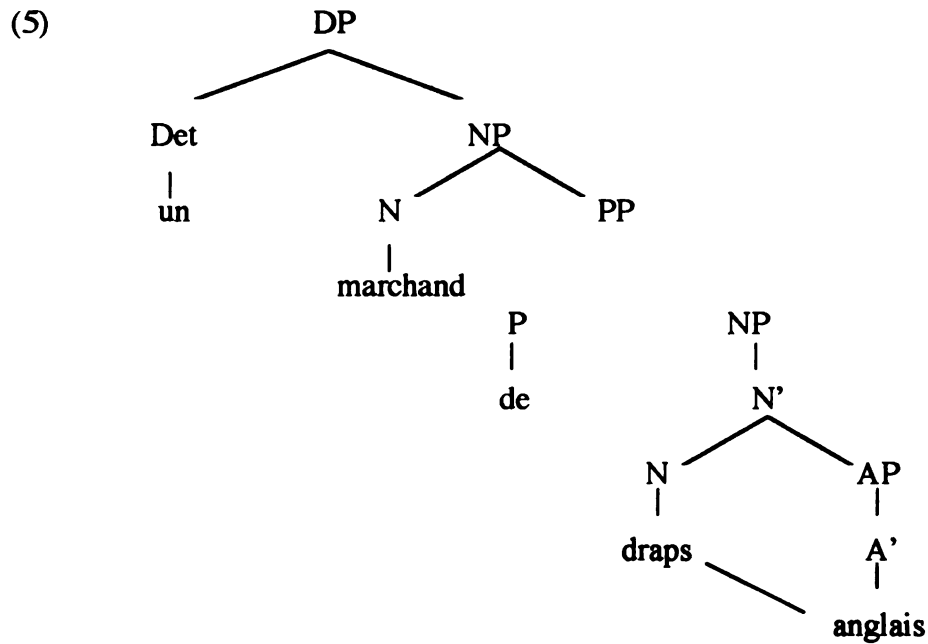
Prunet takes this examination further by using c-command to understand the difference between obligatory and optional liaison. He states the following (Prunet, 1986:226):

If *A* and *B* c-command each other then liaison is obligatory.

If *A* c-commands *B* but the converse is not true, then liaison is optional.

Using these parameters, liaison between *ses* and *amis* in (4) would be obligatory because the two words c-command each other. Liaison between *ont* ‘have’ and *une* ‘a’ would be optional because the verb (V') *ont* c-commands the determiner (Det) *une* but *une* does not c-command *ont*. This optional liaison is indicated by the dotted line connecting *ont* and *une*.

In terms of semantics, liaison can clarify the meaning of a phrase. Compare (5) and (6), both adapted from Selkirk (1974: 59)⁴. Again, a line drawn between the two words represents liaison.



These two phrases contain the same words, but the phrases express different meanings. The representation found in (5) conveys the meaning, 'a merchant of English sheets' and the representation in (6) conveys the meaning, 'an English merchant of sheets.' When

liaison is produced between *draps* and *anglais*, it signals syntactic solidarity between the two words and the unique representation found in (5). When no liaison is used, the meaning is potentially ambiguous (Selkirk, 1974: 583) and thus has the possibility of either the syntactic representation and consequent semantic interpretation given by (5) or the one given by (6). Following is another example of liaison being used to clarify semantic meaning, this time taken from Battye et al. (2000: 111):

(7) Elle donne | un bonbon.

[ɛldɔ̃nœ̃bɔ̃bɔ̃]⁵

‘She gives a piece of candy.’ (Third Person Singular)

(8) Elles donnent un bonbon.

[ɛldɔ̃ntœ̃bɔ̃bɔ̃]

‘They give a piece of candy.’ (Third Person Plural)

In (8) the [t] is pronounced before the vowel-initial word *un* [œ̃] ‘a’, signaling that the phrase is in the third person plural form, as opposed to the third person singular form found in (7).

2.1.6 Contexts of Liaison

From the presentation above, it is evident that liaison has been examined by many different areas of linguistics. Another important aspect of liaison research is liaison licensing. Liaison licensing determines when liaison does or does not occur in speech and is a highly debated issue among researchers. Authors do agree, at least, on one item of importance. They all agree that there exist certain linguistic contexts in which liaison is obligatorily used, some in which it is never used, and some situations where its usage is optional.

The following three tables (2.6, 2.7, 2.8) summarize what six researchers deem obligatory, optional, and forbidden licensing of liaison. The accounts of Delattre

(1966:43), Valdman (1976:43), and Tranel (1987:185-190) are considered as they provide some “traditional” accounts of liaison. The accounts of Dumenil (2003:16) and Battye et al. (2000:110-111) are included as they form the textbook part of the curriculum used to teach liaison at Michigan State University, the base for the current study. Finally, the results from a corpus analysis completed by Booij and de Jong (1987:10) are being presented as they contain an analysis of French liaison usage in Tours that is based on actual speech and that diverges from all other accounts presented for consideration. Examples are provided for each context and liaison is exhibited by the bolding and underlining of the consonants and vowels involved. The nonoccurrence of liaison is exhibited by two forward slashes ‘//’ representing the blocking of liaison in impossible cases.

Table 2.6 lists contexts in which these researchers have determined liaison is obligatory. A number has been assigned to each context in order to aid the reader in locating the appropriate context for discussion. All researchers presented agree that obligatory licensing occurs in the following sequences: determiner-noun (context 1), determiner-adjective (5), personal pronoun-verb⁶ (8), verb-personal pronoun (10), and in set phrases (15). However, there are many areas where these researchers diverge in their accounts of obligatory liaison. These include whether numerals (2 and 3), the sequences determiner-pronoun (4), adjective-noun (6), adjective-adjective (7), and pronoun-pronoun (9) are obligatorily involved in liaison, as well as whether all pronouns or uniquely personal pronouns may occur in liaison with verbs (8 and 10), and whether *c’est* ‘it is’, *il est* ‘it is’ (11 and 12), and monosyllabic adverbs (13) and prepositions (14) may occur in liaison at all.

In comparing these accounts, it appears that Dumenil aligns most closely with Battye et al. This is important to note because these two accounts form the textbook input for the FRN 330 French Phonetics and FRN French 430 French Linguistics courses respectively. It is also relevant to note that although Dumenil most closely aligns with Battye et al., there are still differences between these two accounts. For example, Battye et al. do not discuss numerals (2 and 3) and they limit the number of monosyllabic adverbs (13) and prepositions (14) that occur in obligatory liaison. Additionally, Dumenil does not discuss determiner-proform sequences (4). The differences in these two accounts could be potentially confusing to these learners as they take the two courses using these textbooks.

Where researchers disagree may be due to a variety of reasons. First, disagreements may be due to the way in which the syntactic categories were labeled and organized. For example, Valdman's account holds that liaison occurs between adjectives (7), as in *de vrais anciens documents*, or 'genuine old documents'. While Delattre does not seem to agree with Valdman's claim because he does not include the adjective-adjective sequence in his list of obligatory contexts, he does include *de vrais anciens amis*, or 'real old friends' in the category of "determiner + adjective." Thus, this seems to be a representational difference and not a true disagreement regarding when liaison is employed. Additionally, this adjective-adjective sequence is a rare occurrence as the number of prenominal adjectives is low and their possibility for occurring in liaison is even lower. Consequently, other researchers may not have considered it imperative to include it in their descriptions of obligatory liaison. Secondly, dissent among researchers may be due to differences in types of corpora analyzed. Booij and de Jong are the only

researchers listed in Table 2.6 that give information about the corpus they analyzed. No other researcher presented provides background information on the corpora they used for their analyses, nor do they give any indication that they used a corpus for analysis. Finally, the differences in these accounts may be due to a genuine disagreement about when liaison is obligatorily licensed. Whatever the case may be, it is important that researchers find an agreement on liaison licensing in order that it be correctly presented to second language learners.

Table 2.6 Obligatory Liaison Licensing

Context number	Delattre (1966:43-48)	Valdman (1976: 106)	Tranel (1987: 185-190)	Battye et al. (2000:110-112)	Dumenil (2003:164, 170,172)	Booij and de Jong (1987:1010)	Examples
1	Det. + Noun	Det. + Noun	Det. + Noun	Det. + Noun	Det. + Noun	Det. + Noun	<i>des enfants</i> 'some children'
2		Numeral + Noun			<i>un</i> 'one', <i>deux</i> 'two', <i>trois</i> 'three', <i>six</i> 'six', <i>neuf</i> 'nine', <i>dix</i> 'ten' + _		<i>deux enfants</i> 'two children'
3					numeral + <i>et un</i> 'and one' + <i>ans</i> 'years' or <i>heures</i> 'hours'		<i>trente et un ans</i> 'thirty-one years old'
4	Det. + Pron.	Det. + Pron.		Det. + Proform		Det. + Pron.	<i>les autres</i> 'the others'
5	Det. + Adj.	Det. + Adj.	Det. + Adj.	Det. + Adj.	Det. + Adj.	Det. + Adj.	<i>un ancien ami</i> 'an old friend'
6		Adj. + Noun	Adj. + Noun	Adj. + Noun	Adj. + Noun		<i>un petit enfant</i> 'a small child'
7		Adj. + Adj.					<i>de vrais anciens documents</i> 'genuine old documents'
8	Pers. Pron. + Verb	Pron. + Verb	Pron. + Verb	Proform + Verb	Pron. + Verb	Pers. Pron. + Verb	<i>vous êtes</i> 'you are'
9	Pers. Pron. + Pers. Pron.	Pron. + Pron.	Pron. + Pron.	Pron. + Pron.	Pron. + Pron.		<i>vous y êtes</i> 'you're here'
10	Verb + Pers. Pron.	Verb + Pron.	Verb + Pron.	Verb + Proform	Verb + Pron.	Verb + Pron.	<i>allez-y</i> 'go on'
11	<i>c'est</i> (impersonal) + 'it is' + _	<i>c'est</i> + NP 'it is' + NP	<i>c'est</i> (impersonal) + 'it is' + _				<i>c'est un avocat</i> 'he's a lawyer'
12	<i>il est</i> (impersonal) + 'it is' + _	<i>il est</i> (impersonal) + NP 'it is' + NP	<i>il est</i> (impersonal) + 'it is' + _				<i>il était une fois</i> 'once upon a time'
13	Monosyl. Adv. + _	Monosyl. Adv. + NP	<i>très</i> + _ 'very' + _	<i>très</i> + _ 'very' + _	Monosyl. Adv. + _		<i>très utile</i> 'very useful'
14	Monosyl. Prep. + _	Monosyl. Prep. + NP	<i>dans</i> 'in', <i>sans</i> 'without', <i>sous</i> 'under', <i>chez</i> 'at/to', <i>en</i> 'in' + _	<i>dans</i> 'in', <i>sans</i> 'without', <i>sous</i> 'under', <i>chez</i> 'at/to', <i>en</i> 'in' + _	Monosyl. Prep. + _		<i>dans un livre</i> 'in a book'
15	Set Phrases	Set Phrases	Set Phrases	Set Phrases	Set Phrases	Set Phrases	<i>Etats-Unis</i> 'United States'

Optional liaison is highly dependent on speaker style and speech situation. People tend to use liaison less frequently when involved in an informal conversation and more frequently when speaking formally. The correct usage of optional liaisons can signal mastery of the French system (Battye et al. 2000: 112) Table 2.7 presents differing accounts of optional liaison. Dumenil does not give a syntactic account of optional liaison and thus will not be included in the current discussion.

Notice the vast divergence between the accounts presented in Table 2.7. Complete agreement is not met on any syntactic context. Delattre, Tranel, Battye et al., and Booij and de Jong agree that liaison is optional after plural nouns (1) and after verbs (4). Delattre, Tranel, and Battye et al. agree that liaison is optional after polysyllabic adverbs (7), and polysyllabic prepositions (8). However, the extent to which researchers agree ends here. Even the “traditional” accounts of Delattre and Valdman completely disagree. The vast disagreement found in the case of optional liaison may be due its variable nature since it is largely dependent on speaker style and speech situation. However, it is important to reiterate the point that this disagreement may also be due to differences in corpora used for analysis. The need for comprehensive research in liaison becomes even more evident with impossible liaison.

Table 2.7 Optional Liaison Licensing

Context Number	Delattre (1966:43-48)	Valdman (1976: 107)	Tranel (1987: 185-190)	Battye et al. (2000:110, 112)	Booij and de Jong (1987: 1011)	Examples
1	Pl. Noun + _		Pl. Noun + _	Pl. Noun + _	Inflected head + Complement	<i>des personnes âgées</i> 'some older people'
2	Pron. (not personal) + _					<i>d'autres arriveront</i> 'others will arrive'
3	Post-posed Pers. Pron. + _					<i>avons-nous un livre</i> 'do we have a book'
4	Verb + _		Verb + Complement	Verb + Complement	Inflected head + Complement	<i>je vais essayer</i> 'I'm going to try'
5	_ + Past Participle					<i>ils n'ont rien acheté</i> 'they bought nothing'
6	Pl. Adj. + invariant word					<i>bons ou mauvais</i> 'good or bad'
7	Polysyl. Adv. + _		Adv. + Complement ⁷	Polysyl. Adv. + _		<i>souvent absent</i> 'often absent'
8	Polysyl. Prep. + _		Preps. + Complement ⁸	Prep. + _		<i>pendant une semaine</i> 'during one week'
9				<i>pas, trop</i> + _ 'not', 'too much' + _		<i>trop heureux</i> 'too happy'
10	Monosyl. Conjunctions + _		<i>quand</i> (subord. conj.) + _	<i>mais</i> + _ 'but' + _		<i>mais alors</i> 'but then' <i>quand il arrivera</i> 'when he arrives'
11			<i>quand, comment</i> + <i>est-ce que,</i>			<i>Quand est-ce qu'il arrivera?</i> 'When will he arrive?'
12			<i>quand, comment</i> in indirect questions			<i>Savez-vous comment ils reviendront?</i> 'Do you know how they will come back?'
13		Present forms of <i>être</i> 'to be'				<i>je suis américain</i> 'I'm American'
14		-ont third person plural ending				<i>ils font un effort</i> 'they're making an effort'
15				Set Phrases		<i>à bras ouverts</i> 'to open arms'
16					Complement + Complement	<i>des attaques nucléaires américaines</i> 'American nuclear attacks'
17					Inflected Word + Non-complement	<i>ils réfléchissent avant de répondre</i> 'they think before answering'

The domain of impossible liaison is exhibited in Table 2.8. Recall that impossible liaisons are marked with two forward slashes ‘//’ to show that liaison is not possible between the two words being examined. These are contexts in which liaison is never licensed. Research presented by Booij and de Jong, as well as that presented by Valdman, do not give explicit accounts of forbidden liaison, although it might be assumed that impossible liaison would constitute any context not covered by their presentations of obligatory and optional liaison. The authors are not included in Table 1.8 due to their lack of overt discussion of impossible liaison contexts. Delattre, Dumenil, Battye et al., and Tranel agree that liaison cannot occur after a singular noun (1), after the conjunction *et* ‘and’ (8), and before words that begin with an h-aspiré (12). Delattre, Tranel, and Dumenil agree that liaison is impossible after interrogative adverbs such as *quand* ‘when’ and *comment* ‘how’ (9)⁹. Delattre, Battye et al., and Dumenil agree that liaison is also impossible in certain fixed, or set phrases (11). Dumenil mostly aligns with Delattre, although differences exist in their treatments of pronouns (4, 5, 6, 7), polysyllabic conjunctions (10), numerals (13), glides (14), and the affirmative response word, *oui* ‘yes’ (16). Tranel’s account provides the smallest number of cases for impossible liaison, but this may be due to the fact that he largely concentrated on when liaison actually occurs in language. He provides a list of obligatory liaison contexts, but only mentions contexts of impossible liaison when needed for clarification. The accounts of Dumenil and Battye et al. give two different descriptions of liaison usage, which is important to note because again these two presentations form the textbook input for the French Phonetics 330 and French Linguistics 430 courses respectively. The two accounts do not necessarily disagree per se, but they do give parameters for liaison usage that are

not consistent with each other. For example, Battye et al. do not treat proper nouns (2), complex plural nouns (3), post-posed personal pronouns (5), or interrogative adverbs (9) while Dumenil's account does not treat sense groups or pauses (15) in terms of liaison and only lists liaison with *oui* 'yes' as forbidden in the case of *mais oui* 'but yes' (16) and says nothing to the effect of liaison being impossible in cases of emphasis.

Table 2.8 Impossible Liaison Licensing

Context number	Delattre (1966:43-48)	Tranel (1987: 185-190)	Dumenil (2003:165-168,172)	Battye et al. (2000:110-111)	Examples
1	Sing. Noun + _	Sing. Noun + _	Sing. Noun + _	Sing. Noun + _	<i>un soldat // espagnol</i> 'a Spanish soldier'
2	Proper Noun + _		Proper Noun + _		<i>Jean // a</i> 'John has'
3	Complex Pl. Nouns		Complex Pl. Nouns		<i>des salles // à manger</i> 'dining rooms'
4	Pron. (not pers.) ending in a nasal vowel + _				<i>Chacun // y va</i> 'each one is going'
5	Post-posed Pers. Pron. ending in a nasal vowel + _		Post-posed Pers. Pron. + _		<i>qu'a-t-on // à faire</i> 'what is one to do'
6	Post-posed 3 rd Pers. Pron. + _				<i>ont-ils // un livre</i> 'do they have a book''
7	on, ils, elles + Past Part.				<i>Où sont-elles // allées</i> 'where did they go'
8	<i>et</i> + 'and'	<i>et</i> + 'and'	<i>et</i> + 'and'	<i>et</i> + 'and'	<i>un homme et // une femme</i> 'a man and a woman'
9	Interrogative Adv.	<i>quand</i> 'when', <i>comment</i> 'how' in direct questions	<i>quand</i> 'when', <i>comment</i> 'comment' (except in <i>Comment allez vous?</i> 'How are you?'), <i>combien</i> 'how much' + inversion		<i>quand // est-il venu</i> 'when did he come'
10	Polysyl. Conjunctions + _				<i>néanmoins // elle resta</i> 'nevertheless she stayed'
11	Set Phrases		Set Phrases	Set Phrases	<i>une fois // où l'autre</i> 'one time or another'
12	_ + h-aspiré words	_ + h-aspiré words	_ + h-aspiré words	_ + h-aspiré words	<i>un // héros</i> 'a hero'
13	+ <i>un</i> 'one', <i>huit</i> 'eight, onze 'eleven', <i>unième</i> 'first', <i>huitième</i> 'eighth', <i>onzième</i> 'eleventh'		<i>et un</i> + ¹⁰ and one, as in thirty one', _ + <i>onze</i> 'eleven'	<i>un</i> 'one', <i>huit</i> 'eight', <i>onze</i> 'eleven'	<i>dans // onze jours</i> 'in eleven days'
14			_ + (some) glides	_ + (some) glides	<i>les // yuccas</i> 'the yuccas'
15				Across a sense group boundary or pause	<i>ils se sont levés // à cinq heures</i> 'they got up at five o'clock'
16	_ + <i>oui</i> _ + 'yes'		<i>mais oui</i> 'but yes'	When emphasis or clarity is used	<i>il dit // oui</i> 'He said yes'

As evidenced by the discussion above, liaison context is a debated topic within French linguistics. The implications this has for teaching are important in that in order to promote acquisition of liaison, accurate and native-like input needs to be provided for learners. Table 2.9 presents a summary of the individual contexts of obligatory and impossible liaison in which researchers agree. These will form the contexts to be used in the present study.

Table 2.9 Obligatory and Impossible Liaison Contexts

Obligatory	Examples	Impossible	Examples
determiner + noun	<i>des enfants</i> 'some children'	singular noun + _	<i>un soldat // espagnol</i> 'a Spanish soldier'
determiner + adjective	<i>un ancien ami</i> 'an old friend'	<i>et</i> + _ 'and' + _	<i>un homme et // une femme</i> 'a man and a woman'
personal pronoun + verb	<i>vous êtes</i> 'you are'	h-aspiré words	<i>un // héros</i> 'a hero'
verb + pronoun	<i>allez-y</i> 'go on'	set phrases	<i>une fois // ou l'autre</i> 'one time or another'
set phrases	<i>Etatg-Unis</i> 'United States'		

Due to the variable nature of optional liaison and the fact that there are minimal accounts of agreement among researchers as to which contexts of liaison are optional, this type of liaison will not be treated in the current study. Additionally, optional liaison is not treated by Dumenil in terms of syntactic contexts. Since her account forms the basis of input for participants in the study, it would not be useful to test participants on optional liaison for the purposes of the current study.

2.2 Teaching Liaison

Thus far, the discussion has centered on understanding the phenomenon of liaison through various areas of linguistics, as well as understanding when liaison occurs.

Another area of concern with regards to liaison is the teaching methods used to teach it.

There appears to be very little research done in this area. In 1973, Olsen proposed and

implemented a plan for a corrective phonetics course in which she contended that teaching must focus on oral usage of liaison and not just explicit liaison rules. In her discussion of liaison, she argued that instructors should focus on oral practice in addition to the explicit teaching of rules. However, she provided no description of what types of oral practice activities should be used nor did she provide empirical analysis of the effects her teaching methodology had on liaison production by L2 learners. In Tranel's account of liaison (1987:168-190), he suggested that second language learners should only learn obligatory contexts. However, here again there was no information provided on methods that should be used to teach liaison contexts nor did he present information examining the effects of teaching only obligatory contexts on liaison production by L2 learners. In 1998, Thomas completed a study of a French immersion course in Canada. He proposed an alternative to liaison instruction that typically involves complex textbook presentations. He suggested that instructors adopt the following two rules for teaching liaison: (1) teach liaison only with consonants [z], [t], and [n], and (2) only teach obligatory liaisons, including fixed expressions. His basis for these rules is that liaison usage is continually declining and consequently only the most common liaisons should be taught. Again, there was no information offered on teaching methods that should be used nor empirical research testing the effectiveness of following his two rules for liaison teaching. In order to truly know the effectiveness of a teaching method, empirical research should be done. This type of research has largely been ignored in regards to liaison.

In addition to considering research relating to instruction, it is important to consider errors committed by L2 learners employing liaison in speech. Errors can prove

to be a useful tool to teachers because they can highlight concepts that need clarification. Additionally, information about the types of errors committed can provide insight into the second language acquisition process for liaison.

There have been numerous studies that look at error correction, but very few that have recorded the types of errors actually committed by learners. In 1953, Gaudin published a study that accounts for liaison errors in American learners of French. In her report, which is now over 50 years old, she gives a partial list of examples of liaison errors made by these learners (1953:460). This list corresponds to the following syntactic situations: between personal pronouns and verbs, after monosyllabic prepositions and adverbs, between pronominal adjectives and the nouns they modify, and in set phrases. She claims that learners produce liaison in forbidden cases such as after *et* 'and', before h-haspiré words, and after singular nouns. However, she provides no empirical support for her analysis. Additionally, she gives no account for methods used to determine errors. According to Walz (1980:424), errors have typically been treated perceptually and not empirically in research. These treatments, in which the researcher relies on his/her personal impressions of what errors are commonly being made by learners, may in fact ignore error patterns that could provide useful information to language teachers. If errors are improperly determined because they are based on perceptions, then it is possible that some errors may go unnoticed and fossilize in the L2 learners' interlanguage. Tranel (1987:188) contends that learners tend to err in making too many liaisons rather than making too few. He states that English speakers learning French have a tendency to produce more liaisons than needed due to pronunciation conventions in their native language. Because most written letters in English are pronounced, they

pronounce most written letters in French. Again, there is no empirical support provided for this analysis. In his 1998 study, Thomas gave some indication of empirical findings, but still fell short of taking into account individual occurrences of learner errors. Recall that Thomas studied a French immersion course in Canada. He observed that learners did not use liaison in 20% of obligatory cases (547-548). This is a more helpful examination of learner errors than a perceptual study, but it still does not give any information the specific types of errors committed.

2.3 Explicit and Implicit Instruction

Finally, as this study will be looking at the effectiveness of explicit instruction, there needs to be some discussion of implicit versus explicit learning. Implicit learning can be defined as the “acquisition of knowledge about the underlying structure of a complex stimulus environment by a process that takes place naturally, simply and without conscious operations” (Ellis 1994:1). The learner usually cannot explain the knowledge rules acquired through this type of learning experience. For example, a learner might hear a new structure, enter it into memory, use it accurately in a language situation, but not be able to explain why or how the structure works. Ellis defines explicit learning as “a more conscious operation where the individual makes and tests hypotheses in a search for structure” (Ellis 1994:1). Explicit knowledge is attained when a learner searches for and builds a repertoire of information on a structure and then tests hypotheses or when a learner assimilates a rule after explicit instruction (Ellis 1994:1-2). In explicit instruction, focus is put on learner input such that the learner receives direct explanation and practice of a language feature. For example, the group receiving explicit instruction in the current study will be told directly what the rules are that govern liaison

production and then they will practice identifying appropriate grammatical situations for liaison to occur as well as situations where it should not occur.

While knowledge is attainable through both implicit and explicit learning, there is much debate as to which cognitive abilities are acquired implicitly and which are learned explicitly (Ellis 1994:2). According to Gass and Selinker (2001:209), simple and salient features are most easily acquired implicitly. However, a study completed by Green and Hecht (1992:179) supports the idea that explicit instruction is most effective for learning simple language features such as word order. Additionally, Gass and Selinker (2001:209) note that the effects of explicit instruction on complex language features are unclear. Liaison, with its high variability of usage among native speakers, would fall towards the complex side of the simple-complex language feature continuum. The present study will examine the effectiveness of explicit instruction on a language feature that falls into this area.

In 2002, Hulstijn argued that “explicit learning and practice often form efficient ways of mastering an L2 by creating opportunities for implicit learning” (193). In a study completed in 1997, MacWhinney contended that both implicit and explicit processes contribute to language learning. Researchers seem to agree that both implicit and explicit processes are important in learning a language. The current study will look to see what effect implicit input and/or explicit instruction has on the liaison production of L2 learners.

2.4 Conclusion

In summary, liaison has been examined in numerous linguistic disciplines, namely phonology, phonetics, prosody, syntax, and semantics. Liaison usage falls into three

categories. These categories are obligatory, optional, and impossible. There is little agreement among researchers as to what types of syntactic contexts fall into each of these categories. For the ease of the reader, the contexts in which all of the researchers reached agreement are reprinted here in Table 2.10.

Table 2.10 Researcher Agreement

Obligatory	Impossible
determiner + noun	singular noun + _
determiner + adjective	<i>et</i> + _ 'and' + _
personal pronoun + verb	h-aspiré words
verb + pronoun	set phrases
set phrases	

More research needs to be done in this area in native French liaison usage in order that L2 learners be provided with accurate input in their courses. In terms of teaching liaison there is little known about the effects of teaching methods on liaison production or on the types of errors committed by L2 learners. Research in both these areas is necessary in order to find effective ways to teach liaison to L2 learners. Implicit and explicit learning are important processes to language acquisition and as such, continued research in this area will benefit both second language acquisition research and instructors as they search for better ways to meet the needs of their students.

Liaison is an integral part of the French language. If native-like fluency is the goal of language study, then appropriate language teaching methods are needed in order to provide learners with the necessary resources to approach the level of fluency. For language learners who wish to be proficient in French, acquisition of liaison is key, for proper employment of it can indicate a mastery of the language system (Battye et al. 2000:112). This desire for language proficiency, in addition to the lack of empirical

research examining the effects of teaching methods used to teach liaison on liaison production by second language learners, have become the driving force for the current study. The explicit teaching method, currently in use at MSU, will be examined in order to study its effects on liaison production by L2 learners. In addition to information on the effectiveness of the explicit teaching method, this study will hopefully provide insight on how learners use liaison in their speech in order to highlight areas that may need more emphasis in teaching.

CHAPTER THREE

EXPERIMENTAL DESIGN

3.1 Research Questions and Hypotheses

Recall that the research questions for the present study are as follows:

1. How does an explicit teaching method influence liaison production in second language speech?
2. How do second language learners of French employ liaison in speech?

In order to answer these questions, the following seven hypotheses have been formed.

1. There will be a significant difference between groups (Implicit, Instruction, Implicit + Instruction) in terms of appropriate, or correct liaison production.
2. There will not be a significant difference between liaison production and speech style (Paragraph, List).
3. There will be a significant difference between the number of obligatory and impossible liaisons produced by learners.
4. There will be no significant difference between the number of liaisons produced in determiner-noun and determiner-adjective sequences.
5. There will be a significant difference between the number of liaisons produced in personal pronoun-verb and verb-pronoun sequences.
6. There will be a significant difference between the number of liaisons produced in obligatory set phrases and impossible set phrases.
7. There will be a significant difference between the number of liaisons produced with the consonants [z], [t], and [n] as the liaison consonant.

The first hypothesis serves to answer the first research question relating to explicit instruction and liaison production since it test differences between instruction treatments.

A significant difference is expected to occur between the groups in this case since groups receiving instruction should produce liaison in a more native-like manner than the group receiving no instruction.

The last six hypotheses relate to the second research question regarding how students employ liaison in speech since they look at how learners use liaison in various instances. No significant difference is expected to occur between liaison production and speech environment since students should produce the same number of obligatory and impossible liaisons irrespective of reading style. Rules governing obligatory and impossible liaison do not change based on reading style. Thus, learners are expected to produce approximately the same number of liaisons in the contextualized reading section as they do in the decontextualized phrase list.

In regards to obligatory and impossible liaison usage, a significant difference is expected because learners should be exposed to liaison occurring in obligatory contexts and should receive little to no examples of impossible liaison in input. Thus, there should be more occurrences of liaison in obligatory contexts than in impossible contexts in L2 speech.

Determiner-noun and determiner-adjective sequences should show no significant difference because determiners are quite common in the French language and always occur in liaison¹¹. Students would have frequently encountered speech in the course of their French study that included determiners occurring in liaison.

A significant difference is expected between personal pronoun-verb and verb-pronoun sequences even though they both occur obligatorily in liaison. This is expected for two reasons. First, personal pronoun-verb sequences seem to occur more frequently in the French language than verb-pronoun sequences. Secondly, personal pronoun-verb sequences are taught earlier than verb-pronoun sequences. Thus students should have

been exposed to enriched input including personal pronoun-verb sequences occurring in liaison.

The difference between the number of liaison occurrences in obligatory and impossible set phrases is expected to be significant since these phrases should occur in input categorically with liaison in respect to obligatory cases and categorically without liaison in respect to impossible cases. Learners are expected to produce liaison in obligatory set phrases and to refrain from producing liaison in impossible set phrases because should have little to no evidence in their input to the contrary.

Finally, the liaison consonant [z] is expected to be the most frequently employed liaison consonant since it is the most frequently occurring liaison consonant in French speech (Tranel 1987: 176). Due to the pervasiveness of [z], these learners probably have been exposed most frequently to the occurrence of this liaison consonant in their input.

3.2 Method

3.2.1 Experiment Variables

The independent variables are instructional treatment (implicit, instruction, implicit + instruction), reading style (paragraph, phrase list), and time (pretest, posttest). The dependent variable is correct liaison production.

3.2.2 Participants¹²

Participants were selected from a volunteer base gathered at Michigan State University. This volunteer base was formed using four courses: two FRN 321 Oral Expression courses, one FRN 340 Survey of French Literature course, and one FRN 330 French Phonetics course. Volunteers were selected to participate if they did not have any of the following characteristics: participation in an immersion program, participation in a

study abroad program, visitation to a French speaking country or province for longer than six weeks, or previous participation in FRN 330 French Phonetics or an equivalent course.

The 21 respondents (males = 4, females = 17) were all native speakers of English between the ages of 18 and 21 (mean age = 19.5). All reported to be studying French either for personal enrichment, for future employment opportunities, or both. They spent an average of 20 minutes speaking in French and an average of 45 minutes practicing pronunciation weekly outside of class. Only three people participated in extracurricular activities involving the use of French.

Participants were divided into three experimental groups based on their educational background information. Each group was labeled according to type of instruction received.

3.2.2.1 Implicit Group (IMP)

This group consisted of eight students (males = 1, females = 7) that received only implicit input. These participants were taking either FRN 340 Survey of French Literature or FRN 321 Oral Expression. In these courses, discussion of L2 readings was a primary focus and these learners did not receive any formal teaching of liaison but were exposed to it in implicit input presented in the speech of their instructor, who was a native speaker of French.

3.2.2.2 Instructional Group (INS)

These eight participants were taking FRN 330 French Phonetics and received explicit instruction¹³ of liaison. Liaison was mentioned in passing as examples occurred in other lessons¹⁴ and then formally taught with rules and practice during four class

periods of 50 minutes each. The instructor, who was a native speaker of French, spent four 50-minute periods on explicit instruction on liaison, one 50-minute period on review, and then one 50-minute period on written testing. Approximately 31% of class time was spent on written transcription exercises in which students identified both obligatory and forbidden liaison situations, 28% on oral pronunciation activities in which students read phrases aloud that included both obligatory and impossible liaison situations, and the remaining 41% was spent on lecture. Both oral and written exercises were assigned as homework. The textbook used for liaison instruction was *Facile à dire!* (Dumenil, 2003).

3.2.2.3 Implicit + Instructional Group (IMPINS)

The IMPINS group represented participants that received both formal instruction and extra implicit input. These participants were taking FRN 330 Phonetics in addition to FRN 340 Survey of French Literature or FRN 321 Oral Expression. These students received the same formal instruction as the INS group in addition to receiving implicit input from either the FRN 340 or the FRN 321 courses.

The pretest served as a way to equate the three groups. The groups showed a normal distribution and a one-way ANOVA on the total correct score indicated that there was no significant difference between the groups. Thus, the groups were at comparable levels with regards to liaison usage prior to instruction.

3.2.3 Raters

Two raters analyzed the data for the presence of liaison. One rater was a native speaker of French and the second rater was a native speaker of English. They were provided with written instructions and were given opportunities to ask questions two days before examining the data.¹⁵ They were instructed to listen for the presence of a liaison

consonant in the targeted environments and were allowed to listen to the data as many times as necessary before recording their observations.

3.2.4 Test Medium¹⁶

Since it is difficult to elicit needed data from learners in a conversational style setting, the researcher constructed a test composed of two parts, a reading passage (paragraph) and a phrase list (list). Liaison situations were examined within sentential context in the paragraph section and without sentential context in the list in order to examine whether obligatory and impossible liaison production could be related to speech style. The paragraph section consisted of a letter written by a girl to her aunt. The letter was constructed by the researcher and then approved by a native speaker of French. The test was organized such that all participants read first the reading passage and second the phrase list. The test components were organized in this way for practicality reasons. In the first task, participants were asked to read the paragraph section for understanding and afterwards they were given an opportunity to ask any comprehension questions. This was done to familiarize the participant with the passage in order to aid in fluency when reading on tape. It seemed more pragmatic to complete this task using the paragraph reading section since it provided a framework in which participants could negotiate the meanings of vocabulary items. The same test was used for the pretest and posttest so as to reduce the threat to validity due to test equality. The pretest and posttest should be comparable since they are the same test. The syntactic contexts chosen for testing were taken from the agreement among researchers in regards to liaison licensing discussed in the previous section. These contexts are repeated in Table 3.1.

Table 3.1 Obligatory and Impossible Liaison Contexts

Obligatory	Impossible
determiner + noun	singular noun + _
determiner + adjective	<i>et</i> + _ 'and' + _
personal pronoun + verb	h-aspiré words
verb + pronoun	set phrases
set phrases	

These contexts were chosen as they reflect the agreement between the researchers presented in the last section and also the input that the INS and IMPINS groups were to receive in their textbook. Words in the categories of 'set phrases' and 'h-aspiré' were chosen directly from the textbook (Dumenil 2003:164, 166-167) used in FRN 330 Phonetics so as to ensure that participants were being tested on information that was present in their input. Because these words are specific cases of liaison usage or nonoccurrence, as opposed to entire syntactic categories (i.e. determiner-noun), these words need to be memorized. The data set used for obligatory contexts is found in Table 3.2 and the data set used for impossible contexts is found in Table 3.3. The specific obligatory liaison that is being examined is underlined and the impossible liaison is represented by two bars '/' placed in between the words in question. Each category contains four phrases with the exception of the set phrases. The set phrases had to be limited to two for obligatory contexts and two for impossible contexts because there were only two set impossible phrases presented in the textbook input.

Table 3.2 Obligatory Context Data Set

Determiner + Noun	<i>mon activité préférée</i> 'my favorite activity'
	<i>les après-midis</i> 'the afternoons'
	<i>Son activité préférée</i> 'his favorite activity'
	<i>Ces animaux</i> 'these animals'
Determiner + Adjective	<i>un immense jardin</i> 'an immense garden'
	<i>mon ancien jardin</i> 'my former garden'
	<i>des horribles bêtes</i> 'some horrible bugs'
	<i>des énormes éléphants</i> Some horrible elephants
Personal Pronoun + Verb	<i>ils étaient</i> 'they were'
	<i>nous avons</i> 'we have'
	<i>elles avaient</i> 'they had'
	<i>elles ont</i> 'they have'
Verb + Pronoun	<i>Viennent-ils chez nous?</i> 'Are they coming to our house?'
	<i>Sont-ils à l'université?</i> 'Are they at the university?'
	<i>Que choisissent-ils comme métier?</i> 'What are they studying?'
	<i>travaillent-ils toujours ensemble</i> 'do they still work together'
Set Phrases ¹⁷	<i>Etats-Unis</i> United States
	<i>petit à petit</i> 'little by little'

Table 3.3 Impossible Context Data Set

Singular Noun + _	<i>un lutin // ancien</i> 'an antique gnome'
	<i>Manon // a</i> 'Manon has'
	<i>Martin // a</i> 'Martin has'
	<i>un enfant // insupportable</i> 'an unbearable child'
<i>et + _</i>	<i>un lutin ancien et // artisanal</i> 'an antique handmade gnome'
	<i>Jean et // Anne</i> 'John and Anne'
	<i>Martin, Manon, Sébastien et // Alice</i> 'Martin, Manon, Sebastian, and Alice'
	<i>et // elles m'ont dit</i> 'and she told me'
_ + h-aspiré ¹⁸	<i>petit // hamac</i> 'little hamack'
	<i>les // hamburgers</i> 'the hamburgers'
	<i>les // haricots¹⁹</i> 'the beans'
	<i>des beaux // hiboux</i> 'some beautiful owls'
Set Phrases ²⁰	<i>à tort // et // à travers</i> 'wildly'
	<i>nez // à nez</i> 'face to face'

3.2.5 Questionnaire²¹

Upon completion of the posttest, participants belonging to the INS and IMPINS groups were provided with an anonymous questionnaire asking for their perceptions on how the various classroom activities helped them recognize and produce liaison appropriately.

3.2.6 Procedure

Participants were scheduled individually to complete the pretest and posttest. The tests took place approximately five weeks apart so as to reduce the threat to validity due

to test recollection. The pretest took place approximately two weeks before instruction and the posttest took place the week after instruction. During the initial appointment, each participant was furnished with a consent form and a code to protect his/her identity.

Before taping, the researcher read through the task instructions with the participant.²² The participant was asked to first read through the paragraph section silently and was then subsequently provided an opportunity to ask questions about the passage. This provided each participant with an opportunity to clarify unclear vocabulary meanings and also allowed them to familiarize themselves with the reading passage in order to aid in fluency when being recorded on tape. Next they read the paragraph section and list section on tape. All taping took place in a language lab equipped with tape recorders and headsets at individual stations.

On the pretest, there was an odd occurrence where a participant produced an atypical consonant in liaison. This participant produced an [s] as opposed to a [z] in the phrase *elles ont* [ɛlzɔ̃] 'she has'. This is simply a difference in voicing and so was treated as a legitimate attempt at liaison production. Another participant produced a [d] as opposed to [z] in the phrase *Etats-Unis* [etazyni] 'United States'. This was also treated as a legitimate attempt at producing liaison because this is simply a difference in airstream features. [d] is [-continuant, -strident], while [z] is [+continuant, + strident]. This phenomenon also occurred once in the posttest. One participant produced [pɔtidamak] as opposed to [pɔtiamak]. Albeit an incorrect usage of liaison, this was treated as a legitimate attempt at producing it because this difference is simply in voicing.

After the data was recorded, the primary researcher averaged the scores of the raters and then analyzed them statistically using Minitab. Interrater reliability was calculated using the Pearson Product-Moment Correlation. A correlation of 0.89 existed between the two raters. This is a significant correlation ($p < .001$). This is appropriate considering the rating task relied on the raters' perception of a pronounced consonant.

A three-way ANOVA test was conducted in order to look for the existence of significant improvement in the three groups with regard to overall correct liaison production, as well as to see if there was a significant difference in speech style. Tukey post hoc tests were used to pinpoint specific differences between variables. The posttest was used for testing hypotheses dealing with how L2 learners produce liaison in speech acts since it represented the most recent sampling of learner data. One-way ANOVAs were calculated in order to compare obligatory and impossible liaison usage, determiner-noun and determiner adjective sequences, personal pronoun-verb and verb-pronoun sequences, obligatory set phrases and impossible set phrases, and also the liaison consonants [z], [t], and [n]. A General Linear Model ANOVA was used for each test because it is a robust test that can handle unbalanced designs.

CHAPTER FOUR

RESULTS AND DISCUSSION

Caution must be taken when interpreting these results. The small group size limits generalizeability, so the conclusions drawn from the results may be true for these learners uniquely. Each hypothesis will be restated for the convenience of the reader and discussed individually.

4.1 Hypothesis One: Teaching Methods

The first hypothesis states that there will be a significant difference found between groups (IMP, INS, IMPINS) in terms of liaison production. In order to test this hypothesis, the number of appropriate, or correct, liaison productions and the number of appropriate refrains from production were calculated and then totaled in order to give an overall correct liaison production. Table 4.1 compares the number of correct liaisons produced during the pretest with the number produced during the posttest.

Table 4.1 Correct Liaison Production versus Time

Group	Number of Correct Liaison Productions		
	Implicit (IMP)	Instruction (INS)	Implicit + Instruction (IMPINS)
Pretest	348/512 68.0%	342/512 66.8%	235.5/320 73.4%
Posttest	357/512 69.7%	380/512 74.2%	246.5/320 76.9%

It is important to note that the IMPINS group only had 320 possibilities to produce liaison because that group contained three less people than the other groups. Table 4.1 shows that there is very little change in score between the pretest and posttest for any of the groups. A three-way ANOVA revealed that there was, in fact, no significant difference between the pretest and posttest for the groups and no significant interaction between group (IMP, INS, IMPINS), time (pretest, posttest), and speech style (reading,

list). Additionally, there was no significant difference found between the three groups at the posttest. These results suggest that the explicit teaching method employed had no effect on liaison production for these students. However, remember that these results need to be treated with caution due to the small number of participants.

A closer examination of the data using a Tukey post hoc test reveals that there appears to be a tendency for the IMPINS (Implicit + Instruction) group to produce liaison more correctly than the IMP (Implicit) group ($T=2.2802, p=.065$). This shows that learners receiving implicit input in addition to explicit instruction tended to produce liaison more correctly than those only receiving implicit input.

Given these results, it is possible that the combination of implicit input and explicit instruction was more helpful for these learners in developing better or more native-like patterns of liaison usage than merely receiving implicit input was able to accomplish. More research will need to be done in order to appropriately validate this claim for a larger group of students.

4.2 Hypothesis Two: Speech Style

The second hypothesis states that there will be no significant difference between number of liaison occurrences and speech style (Paragraph, List). Table 4.2 compares the number of correct liaison productions for each speech style.

Table 4.2 Correct Liaison Production According to Speech Style

Speech Style	Number of Correct Liaisons		
	Implicit	Instruction	Implicit + Instruction
Paragraph	171/256 66.8%	176.5/256 68.9%	118.5/160 74.1%
List	186/256 72.7%	203.5/256 79.5%	128/160 80.0%

A two-way ANOVA and Tukey post hoc test on correct liaison usage versus reading style and group indicated that there was a significant difference between the paragraph reading and list ($F=13.88, p<.01$) in all three groups and that no significant interaction occurred between reading style and group. Overall, there was a higher number of more appropriate, or correct liaisons produced in the phrase list than in the paragraph reading. This may suggest that the liaison production of these learners is dependent on speech style. This could be explained by Labov's description of the effects of different reading styles on pronunciation. He states that "people have little conscious control over their use of variables in reading style. The actual content of the test is more influential" (1972:81). It appears that people pay more attention to understanding content when reading a passage in paragraph form. Word lists, because they direct the participants' attention to one word at a time, may produce more careful speech than a reading passage (Trudgill, 2000:86). Thus, these learners may have paid more attention to their pronunciation during the word list activity, consequently producing a higher number of correct liaisons and more attention to content during the reading activity, resulting in a lower number of correct liaison productions.

4.3 Hypothesis Three: Obligatory versus Impossible Liaisons

The third hypothesis states that there will be a significant difference between the number of obligatory and impossible liaisons produced by learners. Table 4.3 compares the total observed liaison production, the correct liaison production, and incorrect liaison production for obligatory and impossible contexts.

Table 4.3 Obligatory and Impossible Production

	Number of Obligatory Productions	Number of Impossible Productions
Observed	498/756 65.9%	96/588 16.3%
Correct	498/756 65.9%	492/588 83.7%
Incorrect	258/756 34.1%	96/588 16.3%

A one-way ANOVA revealed a significant difference between the number of obligatory and impossible liaisons produced by these learners ($F=51.97, p<.001$). Of the 756 opportunities to produce an obligatory liaison, these learners produced a total of 498 of them, or 65.9 percent. Of the 588 potential impossible liaisons that could be produced, learners produced a total of 96, or 16.3 percent. These learners appear to produce liaison most frequently in situations that are obligatory, but still do not produce it in all the situations in which it should be produced. Additionally, they appear to make overgeneralization errors by incorrectly producing liaison in impossible contexts. However, these learners do appear to be making fewer errors in impossible contexts than in obligatory contexts. They incorrectly produced liaison in impossible contexts 16.3 percent of the time, while they incorrectly chose not to produce liaison in obligatory contexts 34.1 percent of the time. From this data, it appears that these learners are making fewer production errors in impossible contexts than in obligatory contexts. This is inconsistent with Tranel's claim that learners with an L1 of English tend to err in over-producing liaison as opposed to under-producing it (1987:188). It is possible that these learners have focused more on impossible liaison situations than on obligatory situations and consequently produced fewer errors in impossible contexts than in obligatory contexts.

4.4 Hypothesis Four: Sequences with Determiners

The fourth hypothesis states that there will be no significant difference between the number of liaisons occurring in determiner-noun and determiner-adjective sequences. Table 4.4 shows the number of liaisons produced in determiner-noun and determiner-adjective sequences.

Table 4.4 Determiner-Noun versus Determiner-Adjective

Grammatical Context	Liaison Licensing	Observed Usage
Determiner-Noun	Obligatory	124.5/168 74.1%
Determiner-Adjective	Obligatory	104.5/168 62.2%

Of the 168 opportunities for liaison to be produced in a determiner-noun sequence, learners actually produced liaison 74.1 percent of the time while they produced liaison 62.2 percent of the time in determiner-adjective sequences. A one-way ANOVA revealed that there is in fact, no significant difference between liaisons produced in these two sequences. This seems appropriate because learners should have been exposed to input that includes the consistent occurrence of determiners occurring in liaison since they fall into the obligatory category of liaison. Additionally, determiners are among the first syntactic categories learned in French. Since liaison after determiners is obligatory²³, learners should have been exposed to very little input to the contrary.

4.5 Hypothesis Five: Sequences with Verbs and Pronouns

The fifth hypothesis states that there will be a significant difference between the number of liaisons produced in personal pronoun-verb sequences and verb-pronoun sequences. Table 4.5 shows liaison production in pronoun-verb and verb-pronoun sequences.

Table 4.5 Personal Pronoun-Verb versus Verb-Pronoun Sequences

Grammatical Context	Liaison Licensing	Observed Usage
Personal Pronoun-Verb	Obligatory	125.5/168 74.7%
Verb-Pronoun	Obligatory	85/168 50.6%

A one-way ANOVA revealed that there is a significant difference between personal pronoun-verb sequences and verb-pronoun sequences produced by these learners ($F=-3.63, p<.05$). These learners produced significantly more liaisons in personal pronoun-verb sequences than in verb-pronoun sequences. They produced liaison in personal pronoun-verb sequences 74.7 percent of the time while they only produced liaisons 50.6 percent of the time in verb-pronoun sequences. This difference is possibly due to the fact that personal pronoun-verb sequences are generally taught earlier and they seem to occur more frequently in speech than verb-pronoun sequences.

4.6 Hypothesis Six: Set Phrases

The sixth hypothesis states that there will be a significant difference between the number of liaisons produced in obligatory set phrases and impossible set phrases. Table 4.6 shows liaison productions for obligatory and impossible set phrases.

Table 4.6 Obligatory versus Impossible Set Phrases

Grammatical Context	Observed Usage
Obligatory Set Phrases	58.5/84 69.6%
Impossible Set Phrases	10.5/84 12.5%

A one-way ANOVA revealed that there is a significant difference between the number of liaison occurrences in obligatory set phrases and the number of liaison occurrences in impossible set phrases produced by these learners ($F=-4.30, p<.01$). These learners produce significantly more liaisons in obligatory set phrases than

impossible set phrases. These learners produced liaisons 69.6 percent of the time in obligatory set phrases, while only producing them 12.5 percent of the time in impossible set phrases. Again, this is possibly due to input presented to students. Liaison in obligatory set phrases should be categorically present in learner input and liaison occurrences in impossible set phrases should be categorically absent from input.

Additionally, these learners seem to be making fewer production errors in impossible set phrases. They made production errors only 12.5 percent of the time in impossible set phrases and 30.4 percent of the time in obligatory set phrases. These results are consistent with those obtained for the hypothesis discussed in section 4.3, comparing obligatory and impossible contexts as a whole. Consequently, the same explanation that follows the results in 4.3 should also apply here, namely that these results are inconsistent with Tranel's claim that learners with an L1 of English tend to err in over-producing liaison as opposed to under-producing it (1987:188), and that learners could have focused more on impossible liaison situations than on obligatory situations and consequently produced fewer errors in impossible contexts than in obligatory contexts.

4.7 Hypothesis Seven: Liaison Consonants

The seventh hypothesis states that there will be a significant difference between the number of liaisons produced with [z], [t], and [n] as the liaison consonant. Table 4.7 shows the correct, observed liaison production of these learners according to the liaison consonants [z], [t], and [n].

Table 4.7 Liaison Production According to Liaison Consonant

Liaison Consonant	Observed Usage	Individual/Total Usage
[z]	276/378 73.0%	276/484.5 57.0%
[t]	103.5/210 49.3%	103.5/484.5 21.3%
[n]	105/168 62.5%	105/484.5 21.7%

A one-way ANOVA revealed no significant difference between the number of liaisons correctly produced with the consonants [z], [t] and [n]. Out of 378 obligatory contexts in which the last consonant of the word was <z>, <x>, or <s>, these learners produced a [z] consonant a total of 276 times, or 73.0 percent. Out of 210 contexts in which the last consonant of the word was <t> or <d>, learners produced [t] a total of 103.5 times, or 49.3 percent. Out of 168 contexts in which words ended in <n>, learners produced [n] a total of 105 times, or 62.5 percent. The [z] consonant comprised 57.0 percent of all liaisons produced. The [t] consonant comprised 21.3 percent of all liaisons produced. The [n] consonant comprised 21.7 percent of the total liaisons produced. These results are consistent with Tranel's observation that [z] is the most frequently occurring consonant in liaison (1987:176). However, it is important to note that this difference may be due to the fact that half of the 756 words that were tested ended in <z>, <x>, or <s>, the orthographic letters that encourage the production of [z], thus giving learners more opportunity to produce it than to produce [t] or [n]. Words ending in <t> or <d> comprised 27.8 percent of the total words and words ending in <n> comprised only 22.2 percent.

4.8 Further Discussion

At the posttest respondents who participated in the INS and IMPINS groups were asked to fill out an anonymous questionnaire²⁴ regarding their perceptions of how classroom activities and instruction have helped them recognize and produce liaison. Participants rated a series of ten statements on a likert scale ranging from one to five, with one being “Strongly Disagree” and five being “Strongly Agree.” There were five statements relating to liaison recognition and five statements relating to liaison production. Eight statements concerned the four activities completed during liaison instruction, namely the textbook presentation, lecture, written transcription, and oral reading. Two statements concerned other French courses being currently taken and consequently these statements were only responded to by the IMPINS group. The breakdown of participant responses is shown in Tables 4.8 and 4.9. Table 4.8 shows how students rated the effectiveness of each of the activities in aiding them to recognize and produce liaison appropriately. Table 4.9 reports ratings on how helpful the various activities were to these learners in producing liaison in appropriate, or correct, situations.

Table 4.8 Recognition of Liaison

	Textbook Presentation	Lecture	Written Transcriptions	Oral Reading	Other Courses ²⁵
Strongly Agree	6	5	4	4	0
Agree	6	7.5	6	7	3
Neutral	0	.5	2	2	2
Disagree	0	0	1	0	0
Strongly Disagree	1	0	0	0	0

Table 4.9 Production of Liaison

	Textbook Presentation	Lecture	Written Transcriptions	Oral Reading	Other Courses²⁶
Strongly Agree	3	2	1	7	0
Agree	6	9	6	4	3
Neutral	4	2	4	1	2
Disagree	0	0	1	1	0
Strongly Disagree	0	0	1	0	0

These students most strongly agreed that the textbook presentation was most beneficial in helping them to recognize liaison situations and that reading sentences aloud was most beneficial in helping them to produce liaison correctly. In regards to overall agreement, these students perceived that both the textbook presentation (12 total) and the lecture (12.5 total) were helpful to them in perceiving when liaison should or should not be produced and most students indeed found every activity helpful to some degree. There were only two participants that felt that an activity (textbook presentation and written transcription) were not beneficial in helping them to recognize when liaison should occur.

Additionally, these students most strongly agreed that the oral reading exercise was the most beneficial activity for helping them to produce liaison in appropriate situations. In regards to overall agreement, these students perceived that both the oral reading exercise and the lecture were helpful to them in producing liaison in appropriate situations. There were three students that felt that activities (written transcriptions, reading aloud) were not beneficial in helping them produce liaison.

It is important to note that while these students perceived that these activities were helpful, the results of the posttest indicate that these activities did not significantly improve students' production of liaison in appropriate situations. This disconnect between the insignificant improvement in liaison production and these learners'

perceptions maybe due to the fact that these activities provided the first overt teaching of liaison that these learners experienced and as such, they may have perceived the activities to be more helpful than they actually were.

Each question asking for the participant's perception of how effective the activity was in helping them to recognize appropriate liaison situations had a corresponding question relating to its effectiveness in aiding correct liaison production in speech. A Pearson Product-Moment correlation was run on each pair of questions in order to see if these learners felt that the activity had the same effect on their ability to recognize and produce liaison. There was a significant correlation found between two sets of questions. The first set corresponds to questions three and eight on the questionnaire.

3. In the French 330 Phonetics course, the written transcription exercises helped me recognize when liaison should occur.
8. In the French 330 Phonetics course, the written transcription exercises helped me to correctly produce liaison in speaking situations.

A significant correlation was discovered between the responses of these two questions ($r = .61, p < .05$). A breakdown of the responses to this question is presented in Table 4.10.

Table 4.10 Survey Questions 3, 8

Response	Recognition	Production
Strongly Agree	4	1
Agree	6	6
Neutral	2	4
Disagree	1	1
Strongly Disagree	0	1

Overall, these learners perceived that the transcription exercises were equally effective in helping them recognize and produce liaison. The other significant correlation occurred

between questions four and nine ($r = .81, p < .001$). These questions are repeated below and the breakdown of responses is shown in Table 4.11.

4. In the French 330 Phonetics course, reading sentences aloud in class helped me recognize when liaison should occur.
9. In the French 330 Phonetics course, reading sentences aloud in class helped me to correctly produce liaison in speaking situations.

Table 4.11 Survey Questions 4, 9

Response	Recognition	Production
Strongly Agree	4	7
Agree	7	4
Neutral	2	1
Disagree	0	1
Strongly Disagree	0	0

Overall these learners perceived that reading sentences aloud helped them equally recognize and produce liaison.

Surveys such as the one discussed can be helpful to teachers because they give information about what activities students feel are most productive in helping them learn. However, care must be taken in interpreting surveys such as these. The survey should be compared with student output in order to examine the relationship between their perceptions and their ability to employ the structure correctly. Although these learners perceived that certain activities aided them in liaison recognition and/or production, there was no significant improvement in their actual production on the test. It may be the case that since this was their first overt experience with liaison, they felt that certain activities were more helpful than they actually were.

CHAPTER FIVE

CONCLUSION

Recall again the research questions for the current study:

- 1. How does an explicit teaching method influence liaison production in second language speech?**
- 2. How do second language learners (L2) of French employ liaison in speech?**

While it is not possible to draw general conclusions about the data presented due to the small group sizes, the data do bring some interesting insights into the acquisition of liaison. It seems that the results indicate that the explicit teaching method does not significantly improve the correct liaison usage of these learners. The results of the IMPINS group show a tendency for these learners to use liaison more correctly than the IMP group. It is possible that if the experiment is repeated with larger group sizes then the explicit teaching method may be found to be statistically significant in improving liaison usage among learners when used in combination with extra implicit input. It is also possible that a simple increase in input may produce the same results.

The second research question has been treated by comparing learner usage of liaison in obligatory versus impossible contexts, determiner-noun sequences versus determiner-adjective, personal pronoun-verb sequences versus verb-pronoun sequences, obligatory set phrases versus impossible set phrases, as well as in terms of liaison consonant choice. These learners produced significantly more liaisons in obligatory settings than in impossible settings, which may suggest that they are in the process of acquiring liaison. Because they produced liaison in impossible, or forbidden, situations as well, they may have been making overgeneralization errors. However, it is important to note that these learners were actually better at appropriately restraining from

employing liaison in impossible contexts than producing liaison in obligatory contexts. This may indicate that they placed more focus on learning impossible liaisons than obligatory liaisons. Learners also produced significantly more liaisons in personal pronoun-verb sequences than in verb-pronoun sequences. Because these are both obligatory cases of liaison, this may suggest that more emphasis needs to be put on verb-pronoun sequences in teaching liaison. Learners produced significantly more liaison in obligatory set phrases than in impossible set phrases, which further supports the idea that learners are producing significantly more liaisons in obligatory contexts overall than in impossible contexts. Finally, these learners produced liaisons most often with the [z] consonant.

The anonymous questionnaire revealed that these learners strongly agreed that the textbook presentation helped them the most in recognizing liaison. They also strongly agreed that the oral reading activity helped them the most in producing liaison. They perceived the transcription exercises to help them equally in recognizing and producing liaison. Additionally, they perceived the oral reading activity to also help them equally in recognizing and producing liaison. Although these learners perceived these activities to be helpful, there was no significant improvement in their actual liaison usage in speech. This may be due to the fact that these activities provided the first overt teaching of liaison that these learners experienced and as such, they may have perceived the activities to be more helpful than they actually were.

There are a few evident limitations on this study. The group size limits the generalizeability of results. Any conclusions drawn from this data may only apply to these learners. Also, the reading style is a potential confound because the paragraph and

list styles produced statistically different results. Finally, the mode of analysis by the raters may be a limitation because it relied on raters' perceptions of the presence of liaison consonants between words. When phrases are pronounced quickly, it can be difficult to perceive whether a liaison consonant was produced.

As for additional research, it is necessary to replicate this study with more participants and more raters in order to achieve more accurate and generalizeable results. Also, a replication study might consider using acoustic analysis to determine the presence of a liaison consonant. Doing this will avoid issues of rater perception. It would also be interesting to test another teaching method in regards to its effect on liaison production. This would prove helpful to teachers as they search for better methods to meet their students' needs. Additionally, a longitudinal study that looks at the effects of teaching liaison contexts incrementally, as part of their introductory French curricula, might prove to be another useful study for teachers. The effects of studying abroad on liaison production would provide insight into the importance of enriched input on interlanguage development and liaison production. There also needs to be more research completed on the process of the acquisition of liaison by L2 learners. Finally, it would also be useful to complete a time-series design study on learners in order to gain a more complete picture of the process of liaison acquisition.

APPENDIX A

PARTICIPANT INFORMATION

Table A.1 Participant Information

Participant Code	Sex	Age	Major/ Cognate	Motivation	# Previous 300-Level Courses	Current Courses	Extracurricular French Activities	Speaking Practice in Minutes/Week	Pronunciation Practice in Minutes/Week
IMP 1	F	21	C	1	2	FRN 340	None	30	40
IMP 2	F	19		1,2	2	FRN 321	French Play	20	10
IMP 3	M	20	C	1	0	FRN 321	None	20	15
IMP 5	F	20	C	1	1	FRN 340	None	30	0
IMP 6	F	20	C	1,2	1	FRN 321	None		15
IMP 7	F	19		1	1	FRN 321	None	<5	5
IMP 8	F	19		1	0	FRN 321	None	60-70	30
IMP 9	F	19	C	2	0	FRN 321	None	0	10-20
INS 1	F	20		1	0	FRN 330	None	0	180
INS 2	M	20		1	1	FRN 330	None	0	60
INS 3	F	18		1	0	FRN 330	None	15	60
INS 4	F	20		1	1	FRN 330	None	30	20
INS 5	F	19	C	1,2	2	FRN 330	None	0	90-135
INS 6	F	21	M	1	3	FRN 330	None	30	5-10
INS 7	F	20		1,2	0	FRN 330	Singing	15	60
INS 10	M	20	C	1	1	FRN 330	None	60	60
IMPINS 1	F	20	M	1	1	FRN 330, 340	None	≤5	120
IMPINS 2	F	19	M	1	2	FRN 330, 340	None	20	60
IMPINS 3	F	18	M	1,2	2	FRN 330, 340	None	30	45
IMPINS 5	F	20	M	2	1	FRN 330, 321	French Play	30	30
IMPINS 6	M	18		1,2	2	FRN 330, 321	None	20	30

APPENDIX B

EXPLICIT INPUT FROM TEXTBOOK (Dumenil 2003:161-180)

The chapter on liaison begins with a short history on word-final consonants followed by a definition of liaison. Liaison is defined as follow (162):

Liaison is the linking of a final consonant that is not normally pronounced with the initial vowel of the following word.

Two examples are given for comparison:

deux filles ‘two girls’ [døfiʃ] versus *deux amis* ‘two friends’ [døzami]

un petit garçon ‘a small boy’ [ẽptigaʁsõ] versus *un petit outil* ‘a small tool’ [ẽptituti]

After defining liaison, Dumenil discusses how liaison can both clarify meaning and cause ambiguity. Following are two of the examples she gives (162-163):

Example of clarification:

C’est où? ‘Where is it?’ [seu]

C’est tout? ‘Is that all?’ [setu]

Example of ambiguity:

Elle a un petit ami. ‘She has a boyfriend.’ [elaẽptitami]

Elle a un petit tamis. ‘She has a small sieve.’ [elaẽptitami]

Next, Dumenil presents some phonetic effects of liaison (163). Among these are included denasalization, voicing and devoicing, and syllabification. In regards to denasalization, she states that nasal vowels denasalize in liaison with the exception of *mon* ‘my’, *ton* ‘yours’, *son* ‘his’, *on* ‘one’ (impersonal), *en* ‘in’, *un* ‘one/a’, *bien* ‘well’, *rien* ‘nothing’, *aucun* ‘any’, *commun* ‘common’. She gives examples of both the general rule of denasalization and the exceptions:

un bon élève ‘a good student’ [ẽbõnelev] (denasalization)

mon ami ‘my friend’ [mõnami] (exception)

In regards to voicing and devoicing, Dumenil states that occlusives devoice and fricatives become voiced in liaison, stating the following examples (163):

un grand ami 'a tall friend' [ẽgratami] (devoicing)

des amis 'some friends' [dezami] (voicing)

Finally, in terms of syllabification, Dumenil states that the liaison consonant re-syllabifies to the following syllable in the majority of liaison cases. She gives the following example (163):

les amis 'the friends' [le.za.mi]

Learners are encouraged to make a strong effort to re-syllabify the liaison consonant to the following word.

After discussing the linguistic background on liaison, Dumenil presents cases of obligatory liaison. She tells learners that liaison is only made between words belonging to the same rhythmic group, but also that belonging to the same rhythmic group does not necessarily indicate that liaison will occur between two words. She tells learners they need to memorize the following cases where liaison is obligatory (164):

Table B.1 Obligatory Liaison

Context	Examples
determiner +noun	<i>un ami</i> ‘a friend’, <i>mon ami</i> ‘my friend’, <i>les amis</i> ‘the friends’, <i>des amis</i> ‘some friends’, <i>ces amis</i> ‘these friends’, <i>deux amis</i> ‘two friends’, <i>un petit ami</i> ‘a boyfriend’, <i>quells amis</i> ‘which friends’, <i>un ancien ami</i> ‘a former friend’
pronoun (pronoun) + verb/(pronoun) + verb + pronoun	<i>ils ont</i> ‘they have’, <i>ils en ont</i> ‘they have some’, <i>ont-ils</i> ‘do they have’, <i>en ont ils</i> ‘Do they have some?’
fixed expressions (partial list)	<i>les Etats-Unis</i> ‘the United States’, <i>les Champs-Élysées</i> ‘the Champs-Élysées’, <i>petit à petit</i> ‘little by little’, <i>accent aigu</i> ‘acute accent’, <i>avant hier</i> ‘before yesterday’, <i>sous entendu</i> ‘insinuation’, <i>commun accord</i> ‘common agreement’, <i>tout à l’heure</i> ‘in a little while’, <i>Comment allez-vous?</i> ‘How are you?’, <i>quand est-ce que</i> ‘when is it that...’, <i>tout à coup</i> ‘suddenly’, <i>tout à fait</i> ‘quite’, <i>de plus en plus</i> ‘more and more’, <i>de temps en temps</i> ‘from time to time’, <i>de fond en comble</i> ‘from top to bottom’, <i>de haut en bas</i> ‘from top to bottom’
after monosyllabic adverbs and prepositions	<i>très intéressant</i> ‘very interesting’, <i>bien évident</i> ‘well evident’, <i>dans un livre</i> ‘in a book’, <i>en un instant</i> ‘in a moment’

After presenting cases for obligatory liaison, Dumenil notes that obligatory occurrence is largely observed for the first three cases, while the last case (monosyllabic adverbs and prepositions) is subject to variation.

At the end of the section on obligatory liaison, there are five sentences in which learners are asked to repeat, transcribe, and mark the obligatory liaisons. Following are the first two of them (165):

1. *Ils sont allés à Rome en avion.* ‘They went to Rome by plane.’
2. *Il n’est pas très intelligent, mais il est amusant.* ‘He is not very intelligent, but he is fun.’

After the transcription exercises, Dumenil presents cases of impossible liaison. She begins by stating that liaison is forbidden between words belonging to different rhythmic groups. She then goes on to state that within rhythmic groups there are some classes of words for which liaison is forbidden. She begins by discussing h-aspiré. She

states that French has two types of <h>, one of which permits liaison, and one that does not. She gives *heure* ‘hour’ as an example that permits liaison and *héros* ‘hero’ as an example that does not. She then provides a partial list of h-aspiré words for learners to memorize (166):

Table B.2 H-aspiré

H-aspiré word	Translation
<i>la hache</i>	the axe
<i>la hachisch</i>	the hashish
<i>la haie</i>	the hedge
<i>la haine</i>	the hate
<i>les Halles</i>	the Halles
<i>le halo</i>	the halo
<i>le hamac</i>	the hammock
<i>le hameau</i>	the hamlet
<i>le hamburger</i>	the hamburger
<i>la hanche</i>	the haunch
<i>le handball</i>	the handball
<i>le handicap/les handicapés</i>	the disabled
<i>le hangar</i>	the shed
<i>le harcèlement</i>	the harassment
<i>le haricot</i>	the bean
<i>la harpe</i>	the harp
<i>le hasard</i>	the chance
<i>la hausse</i>	the increase
<i>la hauteur</i>	the height
<i>la hernie</i>	the hernia
<i>le héros</i>	the hero
<i>le hibou</i>	the owl
<i>la hiérarchie</i>	the hierarchy
<i>le hippie</i>	the hippie
<i>le hockey</i>	the hockey
<i>la Hollande</i>	Holland
<i>le homard</i>	the lobster
<i>la honte</i>	the shame
<i>le hoquet</i>	the hiccup
<i>le huit</i>	the eighth
<i>le hurlement</i>	the howling

After presenting the list of h-aspiré words, Dumenil makes note of some false liaisons that have been known to occur in speech. Among them she lists:

Les haricots ‘the beans’ *[lezariko]

Il va aller ‘He is going to go’ *[ilvazale]

Quatres amis ‘four friends’ *[katʁəzami]

Il ira à toi ‘He will come to you’ *[ɪratatwa]

Dumenil continues the discussion of impossible liaison by stating other cases for which liaison is never licensed (167):

Table B.3 Impossible Liaison

Context	Examples
Singular Noun + _	<i>un soldat // anglais</i> ‘an English soldier’
After <i>et</i>	<i>et // il</i> ‘and he’
After a proper noun	<i>Jean // a dit</i> ‘Jean said’
After a post-posed personal pronoun	<i>Ont-ils // un livre?</i> ‘Do they have a book?’
After <i>quand</i> + inversion, after <i>comment</i> and <i>combien</i>	<i>Quand // a-t-il dit qu’il partirait?</i> ‘When did he say he will leave?’
Plural complex nouns and certain fixed expressions	<i>des salles // à manger</i> ‘dining rooms’ <i>nez à nez</i> ‘face to face’
Words beginning with <y> (except for <i>les yeux</i> ‘the eyes’), <w>, before the number eleven, and between the conjunction <i>mais</i> ‘but’ and the affirmative response word <i>oui</i> ‘yes’	<i>Les // yaourts</i> ‘the yogurts’ <i>Les week-ends</i> ‘the weekends’ <i>Ils ont habité aux Etats-Unis pendant // onze ans.</i> ‘They lived in the United States for 11 years.’ <i>Mais // oui</i> ‘but yes’

After presenting cases of impossible liaison, Dumenil provides five exercises for practice. Learners are instructed to read aloud each phrase, transcribe it, and mark all obligatory and impossible liaisons. The first two sentences from the exercises are presented below (168):

1. *Quand a-t-elle annoncé qu'elle allait rendre les interrogations écrites?*
'When did she announce she was going to return the written questions?'
2. *Léon en a profité pour aller au magasin.*
'Leon made the most of his trip to the store.'

Dumenil continues her presentation of liaison by discussing cases where it is optional. She informs learners that optional liaison is dependent on speaker style and that as the formality of the speech situation increases, so does the number of optional liaisons that occur in speech. She states that optional liaison frequently occurs in political discussions, in radio and television interviews, and in televised newscasts. She goes on to say that the higher frequency of liaisons in the speech situations just mentioned is due to the fact that they typically involve speech that has been practiced and is not spontaneous (168). She then presents four cases for optional liaison (169):

Table B.4 Optional Liaison

Speech situation	Type of liaison occurrence	Example
Theatrical performance (poem reciting, a play, etc.)	All possible liaisons	<i>Des hommes illustres ont attendu.</i> [dezɔmzilystʁəzɑ̃tatɑ̃dy] 'The illustrious men waited.'
Formal discourse	Most liaisons	<i>Des hommes illustres ont attendu.</i> [dezɔmzilystʁɑ̃tatɑ̃dy] 'The illustrious men waited.'
Elevated conversation	Some liaisons	<i>Des hommes illustres ont attendu.</i> [dezɔmilystʁɑ̃tatɑ̃dy] 'The illustrious men waited.'
Familiar conversation	Only obligatory liaisons	<i>Des hommes illustres ont attendu.</i> [dezɔmilystʁɑ̃tatɑ̃dy] 'The illustrious men waited.'

Dumenil then cautions learners to only make obligatory liaisons when participating in informal conversation in order to achieve a more native-like pronunciation (169). She ends the discussion on optional liaison by giving five exercises. She instructs learners to repeat the phrases aloud, transcribe them, and mark the obligatory, optional, and

impossible liaisons. Following are the first two phrases she gives along with translations (169-170):

1. *Les Halles sont à Rungis depuis plusieurs années.*
'The Halles have been at Rungis for several years.'
2. *Les autres étudiants que vous avez sont-ils aussi mauvais?*
'Are the other students that you have bad?'

Dumenil treats numbers as a separate entity with regards to liaison. She provides some general guidelines for using numbers in liaison. She treats the numerals one, two, three, six, nine, and ten in her account. Her presentation (170) is summarized in the following table:

Table B.5 Numerals in Liaison

Numeral	Occurrence in liaison	Example
<i>un</i> 'one'	Obligatory after <i>un</i> but does not occur after <i>vingt et un</i> 'twenty-one', <i>trente et un</i> 'thirty-one', etc. except if followed by <i>ans</i> 'years' or <i>heures</i> 'hours'	<i>J'ai un enfant.</i> 'I have one child' <i>Il a vingt et un étudiants.</i> 'He has 21 children.'
<i>deux</i> 'two'	Obligatory but some speakers do not make liaison in cases of multiples of two such as <i>trente-deux</i> 'thirty-two'	<i>trente-deux étages</i> 'thirty-two floors'
<i>trois</i> 'three'	Obligatory but some speakers do not make liaison in cases of multiples of three such as <i>trente-trois</i> 'thirty-three'	<i>quarante-trois ouvriers</i> 'forty-three factory workers'
<i>six</i> 'six'	Obligatory but some speakers do not make liaison in cases of multiples of six such as <i>trente-six</i> 'thirty-six'	<i>vingt-six erreurs</i> 'twenty-six errors'
<i>neuf</i> 'nine'	Obligatory before <i>ans</i> 'years' and <i>heures</i> 'hours', but occurs in enchaînement everywhere else ²⁷	<i>neuf ans</i> 'nine years'
<i>dix</i> 'ten'	Obligatory but some speakers do not make liaison in cases of multiples of dix such as <i>quatre-vingt-dix</i> 'ninety'	<i>quatre-vingt dix églises</i> 'ninety churches'

Dumenil completes this section by providing an exercise consisting of ten sentences in which learners are expected to repeat aloud and transcribe in writing,

marking the obligatory, optional, and impossible liaisons. The first two exercises are given below (171):

1. *Nous irons aux Etats-Unis le trente et un octobre à huit heures.*
'We will go to the United States on October 31 at 8 o'clock.'
2. *Jean et Marie vont essayer d'aller à la plage avec elles.*
'John and Marie are going to try to go to the beach with them.'

Dumenil ends the chapter on liaison by providing a quick reference table for obligatory and impossible liaisons and three sets of review exercises. The first exercise requests learners to repeat twenty phrases, while inserting liaison where appropriate.

Following are the first two sentences of the exercise (173):

1. *Les autres enfants arrivaient en autobus.*
'The other children were arriving by bus.'
2. *Prends-en un autre, il y en a beaucoup.*
'Take another, there are a lot of them.'

In the second exercise, the phrases of the first exercises are given along with a phonetic transcription. Students are requested to read each phrase according to its transcription.

Following are the first two sentences of the exercise (174):

1. *Les autres enfants arrivaient en autobus.*
[lezotʁəzɑ̃fɑ̃akriveɑ̃notobys]
'The other children were arriving by bus.'
2. *Prends-en un autre, il y en a beaucoup.*
[prɑ̃zɑ̃ɑ̃notʁɛiljɑ̃aboku]
'Take another, there are a lot of them.'

In the final exercise, learners are provided with 15 sentences in which to transcribe and label the obligatory, optional, and impossible liaisons. The first two sentences of the exercise are repeated here (175):

1. *Quand est-ce qu'il aura trente-neuf ans? Le premier avril?*
'When will he be 39? April first?'

2. *Ils se sont acharnés à peindre des arcs-en-ciel.*
'They persisted to paint rainbows.'

APPENDIX C

RATER INSTRUCTIONS

Instructions to the rater:

Take a glance at the following letter and word list. You will be listening to see if the participant produces liaison between the words in red. Please follow these conventions for recording your responses to the data presented to you.

1. If the participant produces a liaison consonant, circle the two words and write the sound they used next to the phrase, as in example (a) and (b).

(a)  for '**beaux hiboux**'

or

(b)  for '**beaux hiboux**'

If the participant does not produce liaison, do nothing, as in example (c).

(c) [bo] hiboux for '**beaux hiboux**'

You do **not** need to determine whether or not the liaison is correct or appropriate. You only need listen to see if the participant **produces** a liaison consonant between the words in red.

There are 21 participants and each one has a code. Please write both the code and the tape title on the rater sheet.

Thank you for your help. Please let me know when you are finished. If you could finish them in a week, that would be great. I understand that you are busy, so if you need longer, just tell me.

Code Number of Participant: _____

Tape Title (1a, 1b, 2a, 2b): _____

Chère tante Georgette,

Bonjour! Je suis très contente d'être aux **Etats-Unis**. Le Colorado est si beau. Il y a des arbres partout. Près de la maison, il y a **un immense** jardin. Il ressemble à **mon ancien** jardin à la Bernerie. La seule différence est qu'il y a **des horribles** bêtes partout. Il y a beaucoup de fleurs diverses et **un lutin ancien et artisanal** au milieu. **Mon activité** préférée est de me reposer sur un **petit hamac** au jardin. J'aime bien faire les magasins aussi. Ma famille américaine m'a dit que je dépense de l'argent **à tort et à travers**.

J'aime bien le travail au pair. Jean et **Anne** ont quatres enfants. Ils s'appellent Martin, Manon, Sébastien, et **Alice**. Je m'occupe d'eux tous **les après-midis** sauf le Samedi. Alice a neuf ans, **Manon a** six ans, Sébastien a huit ans et **Martin a** onze ans. Les filles ont vu des photos de toi et oncle Antoine et **elles** m'ont dit "**Viennent-ils** chez nous?" Elles voudraient bien de faire vos connaissances **nez à nez**. Sébastien est le comédien de la famille. Il aime beaucoup les plaisanteries. Martin, il est coquin. C'est un **enfant insupportable**, mais il devient sage **petit à petit**. **Son activité** préférée est manger. Il aime beaucoup **les hamburgers** et **les haricots**.

Les enfants aiment beaucoup les animaux. **Ils étaient** bien excités quand nous sommes allés au zoo hier **Nous avons** vu **des énormes** éléphants, des **beaux hiboux**, des petits agneaux, et beaucoup d'autres animaux. Manon et Alice ont pris plusieurs photos avec leurs appareils-photos. **Elles avaient** plusieurs photos de **ces animaux** déjà, mais **elles** ont insisté qu'on ne peut jamais prendre trop de photos.

Enfin, comment vas-tu tante Georgette? Et mes cousins Charles et Monique? **Sont-ils** à l'université? Que **choisissent-ils** comme métier? Et oncle Antoine et oncle Bernard, **travaillent-ils** toujours ensemble ou est-ce que oncle Antoine a trouvé d'autre emploi?

Alors, il faut que je parte.

Ecris-moi vite!

A bientôt,

Sandrine

II. Please read the following phrases aloud. Please read down each column.

les après-midis	le Colorado	des photos	au pair
le Colorado	près de	les hamburgers	Martin a
je parte	et artisanal	ecris-moi	j'aime bien
choisissent-ils	il est	autre emploi	mes cousins
elles veulent	la semaine	et Alice	lutin ancien
me reposer	et Anne	à bientôt	il aime
nez à nez	des plaisanteries	plusieurs photos	très contente
nous sommes	mes cousins	viennent-ils	à tort et à travers
je suis	Etats-Unis	comme métier	le travail
mon ancien	ils s'appellent	chez nous	il ressemble
le zoo	comme métier	des énormes	des horribles
de photos	Manon a	écris-moi	seule différence
beaux hiboux	plusieurs photos	le travail	au milieu
écris-moi	la maison	elles avaient	ils étaient
il faut	ces animaux	le Samedi	il devient
et elles	le travail	tante Georgette	les filles
le comédien	Alice a	enfant insupportable	sont-ils
le travail	nous avons	fleurs diverses	la maison
petit à petit	il aime	je parte	si beau
au pair	au zoo	son activité	travaillent-ils
mes cousins	les haricots	je dépense	le comédien
mon activité	famille américaine	tante Georgette	a dit
les magasins	oncle Antoine	elles ont	les magasins
autre emploi	petit hamac	il faut	le zoo
un immense	à bientôt	il devient	me reposer

APPENDIX D

TEST FOR PARTICIPANTS

I. Please read the following letter first to yourself. Ask the researcher any questions you have about the reading selection (vocab., etc.). Now read through the letter twice on tape.

Chère tante Georgette,

Bonjour! Je suis très contente d'être aux Etats-Unis. Le Colorado est si beau. Il y a des arbres partout. Près de la maison, il y a un immense jardin. Il ressemble à mon ancien jardin à la Bernerie. La seule différence est qu'il y a des horribles bêtes partout. Il y a beaucoup de fleurs diverses et un lutin ancien et artisanal au milieu. Mon activité préférée est de me reposer sur un petit hamac au jardin. J'aime bien faire les magasins aussi. Ma famille américaine m'a dit que je dépense de l'argent à tort et à travers.

J'aime bien le travail au pair. Jean et Anne ont quatre enfants. Ils s'appellent Martin, Manon, Sébastien, et Alice. Je m'occupe d'eux tous les après-midis sauf le Samedi. Alice a neuf ans, Manon a six ans, Sébastien a huit ans et Martin a onze ans. Les filles ont vu des photos de toi et oncle Antoine et elles m'ont dit "Viennent-ils chez nous?" Elles voudraient bien de faire vos connaissances nez à nez. Sébastien est le comédien de la famille. Il aime beaucoup les plaisanteries. Martin, il est coquin. C'est un enfant insupportable, mais il devient sage petit à petit. Son activité préférée est manger. Il aime beaucoup les hamburgers et les haricots.

Les enfants aiment beaucoup les animaux. Ils étaient bien excités quand nous sommes allés au zoo hier. Nous avons vu des énormes éléphants, des beaux hiboux, des petits agneaux, et beaucoup d'autres animaux. Manon et Alice ont pris plusieurs photos avec leurs appareils-photos. Elles avaient plusieurs photos de ces animaux déjà, mais elles ont insisté qu'on ne peut jamais prendre trop de photos.

Enfin, comment vas-tu tante Georgette? Et mes cousins Charles et Monique? Sont-ils à l'université? Que choisissent-ils comme métier? Et oncle Antoine et oncle Bernard, travaillent-ils toujours ensemble ou est-ce que oncle Antoine a trouvé d'autre emploi?

Alors, il faut que je parte.

Ecris-moi vite!

A bientôt,

Sandrine

II. Please read the following phrases aloud. Please read down each column.

les après-midis	le Colorado	des photos	au pair
le Colorado	près de	les hamburgers	Martin a
je parte	et artisanal	ecris-moi	j'aime bien
choisissent-ils	il est	autre emploi	mes cousins
elles veulent	la semaine	et Alice	lutin ancien
me reposer	et Anne	à bientôt	il aime
Nez à nez	des plaisanteries	plusieurs photos	très contente
nous sommes	mes cousins	viennent-ils	à tort et à travers
je suis	Etats-Unis	comme métier	le travail
Mon ancien	ils s'appellent	chez nous	il ressemble
le zoo	comme métier	des énormes	des horribles
de photos	Manon a	écris-moi	seule différence
beaux hiboux	plusieurs photos	le travail	au milieu
écris-moi	la maison	elles avaient	ils étaient
il faut	ces animaux	le Samedi	il devient
et elles	le travail	tante Georgette	les filles
le comédien	Alice a	enfant insupportable	sont-ils
le travail	nous avons	fleurs diverses	la maison
petit à petit	il aime	je parte	si beau
au pair	au zoo	son activité	travaillent-ils
Mes cousins	les haricots	je dépense	le comédien
Mon activité	famille américaine	tante Georgette	a dit
les magasins	oncle Antoine	elles ont	les magasins
autre emploi	petit hamac	il faut	le zoo
un immense	à bientôt	il devient	me reposer

APPENDIX E

ANONYMOUS QUESTIONNAIRE

The Effects of the Explicit Teaching Method on Oral Production by Second Language Learners

This is an anonymous questionnaire. For each question, circle the most appropriate answer given your classroom experiences in the French courses you are taking this semester.

Questions 1-5 deal with recognizing liaison (i.e. being able to tell when liaison should occur).

1. In the French 330 Phonetics course, the explanation presented in the textbook helped me recognize when liaison should occur.

1.....	2.....	3.....	4.....	5.....
Strongly	Disagree	Neutral	Agree	Strongly
Disagree				Agree

2. In the French 330 Phonetics course, the explanation presented in lecture helped me recognize when liaison should occur.

1.....	2.....	3.....	4.....	5.....
Strongly	Disagree	Neutral	Agree	Strongly
Disagree				Agree

3. In the French 330 Phonetics course, the written transcription exercises helped me recognize when liaison should occur.

1.....	2.....	3.....	4.....	5.....
Strongly	Disagree	Neutral	Agree	Strongly
Disagree				Agree

4. In the French 330 Phonetics course, reading sentences aloud in class helped me recognize when liaison should occur.

1.....2.....3.....4.....5
Strongly Disagree Neutral Agree Strongly
Disagree Agree

5. Other French courses I am taking this semester helped me recognize when liaison should occur.

1.....2.....3.....4.....5
Strongly Disagree Neutral Agree Strongly
Disagree Agree

Questions 6-10 deal with producing liaison (i.e. being able to produce liaison correctly in speech).

6. In the French 330 Phonetics course, the textbook helped me to produce correct liaison in speaking situations.

1.....2.....3.....4.....5
Strongly Disagree Neutral Agree Strongly
Disagree Agree

7. In the French 330 Phonetics course, the lecture helped me to correctly produce liaison in speaking situations.

1.....2.....3.....4.....5
Strongly Disagree Neutral Agree Strongly
Disagree Agree

8. In the French 330 Phonetics course, the written transcription exercises helped me to correctly produce liaison in speaking situations.

1.....2.....3.....4.....5
Strongly Disagree Neutral Agree Strongly
Disagree Agree

9. In the French 330 Phonetics course, reading sentences aloud in class helped me to correctly produce liaison in speaking situations.

1.....2.....3.....4.....5
Strongly Disagree Neutral Agree Strongly
Disagree Agree

10. Other French courses I am taking this semester helped me to correctly produce liaison in speaking situations.

1.....2.....3.....4.....5
Strongly Disagree Neutral Agree Strongly
Disagree Agree

ENDNOTES

¹ There are certain glide-initial words that do not permit liaison. For example, *mon whisky*, [mɔ̃wiski], ‘my whisky’ and *les yaourts*, [lejauʁt], ‘the yogurts’ typically do not occur in liaison while *les oiseaux*, [lezwazo], ‘the birds’ *les yeux*, [lezyø], ‘the eyes’ do. H-aspiré words form an additional exception to this rule of liaison occurrence. For example, the phonetic representation for *les hamburgers* is [leãbuʁgœʁ] and not [lezãbuʁgœʁ].

² Valdman represents the underlying form of liaison consonants by using a capital letter (Valdman, 1976: 102).

³ Note that in this case, the vowel denasalizes. This phenomenon occurs in numerous prenominal adjectives in standard French (Tranel 1987:84).

⁴ Notation conventions have been altered in order to be consistent with the conventions used in (4).

⁵ The nasal vowel [œ̃] seems to be in the process of merging with [ɛ̃] in most varieties of French (Ayres-Bennett et al: 2001). It is presently common to see [œ̃] and [ɛ̃] used interchangeably in phonetic transcriptions that have traditionally used [œ̃].

⁶ Personal pronouns form a subset of general pronouns and so accounts that use the general term ‘pronoun’ are assumed to also include ‘personal pronouns’. This is consistent with the examples these researchers provided in their analyses.

⁷ These are adverbs that are not listed in Table 2.6.

-
- ⁸ These are prepositions that are not listed in Table 2.6.
- ⁹ Tranel and Dumenil make an exception for *Comment allez-vous?* ‘How are you?’, which they treat as a case of obligatory liaison.
- ¹⁰ An exception to this rule occurs with *_ et un ans/heures*. See table 2.6.
- ¹¹ An exception to this rule occurs when a determiner combines with an h-aspiré word as in *des hiboux* [deibu] ‘some owls’.
- ¹² See Appendix A for a breakdown of background information for participants.
- ¹³ See Appendix B for input for explicit instruction.
- ¹⁴ The liaisons mentioned in passing fell under the category of determiner-noun and were mentioned while the class was working on transcriptions focusing on another topic.
- ¹⁵ See Appendix C for rater instructions.
- ¹⁶ See Appendix D for the test medium.
- ¹⁷ Set phrases were chosen directly from the textbook used for instruction.
- ¹⁸ H-aspiré words were chosen directly from the textbook input used for instruction.
- ¹⁹ Although l’Académie Française has recently recognized this liaison as appropriate, it is still treated as an impossible context by many speakers as well as textbooks and curricula.
- ²⁰ Set phrases were chosen directly from the textbook used for instruction.
- ²¹ See Appendix E for the questionnaire.
- ²² See Appendix D for task instructions.
- ²³ An exception to this rule occurs when a determiner combines with an h-aspiré word.
- ²⁴ See Appendix E for questionnaire.
- ²⁵ This question only applied to the IMPINS group.
- ²⁶ This question only applied to the IMPINS group.

²⁷ Note that this is really a case of enchaînement and assimilation and not liaison. See page five for further explanation.

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