



Crossing the Frontier: An Investigation Into the Effects of  
Explicit Cross-Linguistic Awareness-Raising on the  
Subsequent L2 Written Performance of Japanese Learners

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Signed *M W Lucas*

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## ABSTRACT

Several decades of research have indicated that the relationship between a learner's mother tongue (L1) and second language (L2) is a significant one. This study examined the effects of cross-linguistic comparisons and contrasts between learners' L1 (Japanese) and L2 (English) on subsequent L2 written performance. Two linguistic features thought to be problematic for Japanese learners were the focus of these comparisons and contrasts: articles and plural suffixes. To meet this end, the effects of such cross-linguistic awareness-raising on the subsequent noticing and frequency of associated errors was investigated. 'Noticing' was defined as successful identification through sentence correction of erroneous use of articles and plural endings, while 'frequency' was defined as how often these language items were successfully produced in written tasks. A mixed-methods quasi-experimental design of sixty-nine participants from two Japanese universities was implemented, in which an experimental group was exposed to a cross-linguistic awareness-raising treatment and compared with a counterpart control group. It was predicted that such treatment would have a positive effect on the subsequent noticing and frequency of errors, and thereby improve L2 written accuracy. The results indicated that, for the most part, this hypothesis was supported. Specifically, the quantitative data revealed a significant improvement in the identification of articles, as well as in both the identification and production of plurals, but not for the production of articles. This latter finding might be accounted for by the fact that articles appear to be a highly complex issue, in addition to certain aspects relating to the study's validity. The qualitative data generally suggested that the awareness-raising techniques employed were beneficial in helping to improve L2 written accuracy, particularly L1 translation exercises. The study is important in that it is able to offer concrete pedagogical applications for a wide variety of settings, as well as provide rich potential for further research.

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# **1 INTRODUCTION**

## **1.1 General background of the field**

The way in which the mother tongue (L1) might interweave with the learning of a second language (L2) has long been an area of interest in the field of second language acquisition (SLA). One particular area of debate is the extent to which L1 may bear an influence on the production of L2, and, as a result, the degree of accuracy that it might reflect.

Historically, one of the earliest means of investigating this relationship was through contrasting particular elements of the target language with the learner's mother tongue in an attempt to predict patterns of L1 influence onto L2 (e.g. Fries, 1945; Lado, 1957). Early research predicted that, while some features of L1 might be similar and facilitate the learning of L2, others may be different enough to produce instances of negative transfer, and thus have the potential to infringe upon certain aspects of learning (Bley-Vroman, 1989). Later, attention shifted away from the prediction of L2 error patterns and more towards their identification (Corder, 1967). Further significant efforts to interpret the interplay between L1 and L2 came from Selinker (1972), who attempted to describe the phenomenon of a developing linguistic system of a L2 learner which results from typically approximating the target language from generalisations from L1, along with their unique experiences of L2.

## **1.2 Purpose of the study**

The weight of related research in the field suggests the importance of the L1-L2 relationship. It would therefore seem that investigating the similarities and differences between L1 and L2 in conjunction with the role of errors would be useful in helping to further unravel the seemingly complex fabric of SLA. In particular, the significance of this relationship between languages raises the question as to whether it would be useful in

some way to exploit the mother tongue in the L2 classroom, and, if so, which ways would be most beneficial.

Since it is uncertain whether simple teacher correction of learner errors is efficacious in significantly reducing their future recurrence (eg. Vyatkina, 2010; Yingliang, 2008), perhaps a more appropriate strategy would be that of awareness-raising. Recent research has indicated that specific L1-referencing is especially of benefit, particularly in relation to accuracy-oriented tasks (e.g. Atkinson, 1993; Butzkamm, 2003; Ferrer, 2011). There are also those who believe that L1 use in the L2 classroom is not only acceptable, but also indispensable (e.g. Wechsler, 1997, Yamamoto-Wilson, 1997). It would therefore appear that the implementation of cross-linguistic awareness-raising is a justifiable means of attempting to facilitate the foreign language learning process. This is essentially the backbone of the present study and provided its purpose.

### **1.3 Significance of the study**

The present study attempted to investigate the effects of such cross-linguistic awareness-raising within a Japanese context. While there might be several issues of relevance related to common errors for Japanese learners, much of the literature points heavily towards those associated with articles (e.g. Nagata, 2006; Izumi et al, 2003; Park, 1998; Master, 1998; Mizuno, 1998; Koizumi, 1998; and Kawai et al, 1984) and countability (e.g. Iwasaki *et al*, 2010; Kobayashi, 2009; Butler, 2002; and Yoon, 1993). Since these two items alone are seemingly vast issues, for the purpose of research manageability, they were specifically honed to addressing the written omission of articles and plural endings.

While these two aspects of articles and plural endings have not been neglected in previous research connected with Japanese learners, the exact means of cross-linguistic awareness-raising to have been employed has tended to not only be vague, but also to lack concrete pedagogical application. Identifying this research-gap provided a firm foundation from which to base the research questions.

#### 1.4 Basis of the study

The investigation involved a double-pronged research question. The first question asked what the effects of explicit cross-linguistic comparisons and contrasts would be on subsequent L2 written performance through the specific L1-referencing of articles and plural endings. In order to accomplish this, a second research question was posed which asked how the effects of such cross-linguistic awareness-raising might affect the subsequent noticing and frequency of written errors. The 'noticing' aspect specifically related to whether or not written errors connected with articles and plural endings were successfully identified by being corrected, while 'frequency' related to whether such errors were significantly reduced in written production tasks, thereby increasing L2 accuracy. This was considered tangible as it enabled these variables to be measured.

A mixed-methods quasi-experimental design of sixty-nine participants from two Japanese universities was implemented in which an experimental group was exposed to a cross-linguistic awareness-raising treatment and compared with a counterpart control group. The control group continued with traditional EFL teaching and did not explicitly focus on L1-L2 comparisons and contrasts. This process consisted of two distinct phases. The first was mainly quantitative, and sought to statistically measure the effects of the intervention; while the second was qualitative, and attempted to both supplement and inform the primary data through content analysis of focus group interviews.

The *a priori* research hypothesis predicted that cross-linguistic awareness-raising would both increase the identification of errors relating to articles and plural endings and reduce the frequency of such errors in writing tasks, thereby improving written L2 accuracy.

The results indicated that, for the main part, this hypothesis was supported. In spite of certain limitations, the present study provides concrete pedagogical applications, and is therefore relevant to not only Japanese learners, but also to those of other L1 learner backgrounds wishing to improve their written accuracy.

## **1.5 Overview**

To conclude this introductory chapter, it would be useful to provide a brief overview of the chapters contained herein.

In the next chapter, an extensive review of the literature is presented in which all relevant themes are gathered and explored in order to garner the research questions. Before the research questions are posed, however, the setting of the study within a Japanese context is examined in the third chapter. The fourth chapter outlines a critical account of the research design and its underlying principles and methodology, along with details of the participants, data collection methods and analysis techniques. This also entails addressing issues related to validity, reliability and ethical considerations. The fifth chapter presents the quantitative results, while the sixth chapter interprets them extensively in conjunction with the qualitative data, and offers possible explanations for unexpected aspects of the findings. The seventh chapter concludes with a general summary and sequential outline of the study's limitations, pedagogical implications and suggested avenues for related future research.

## **2 LITERATURE REVIEW**

### **The significance of the relationship between L1 and L2**

#### **2.1 Introduction**

This chapter presents a general overview of the literature, and aims to discuss the significance of the relationship between L1 and L2 in order to legitimise the basis of the present study. It begins with a historical perspective that details the way in which the prevailing ideas towards this relationship have evolved over time. This is followed by an exploration of the role the mother tongue may have in foreign language learning, and later by issues specifically related to L2 errors; both of which are funnelled so as to provide focus. From this axis, the possible connection between awareness-raising and the subsequent noticing of errors is then examined, and finishes by placing the study in context through identifying common errors possibly implied in the L1-L2 relationship for Japanese learners.

#### **2.2 A historical perspective**

For decades, the interplay between L1 and L2 has been subject to great debate. Although research in this arena has been immense, much of it principally falls within three theoretical models, with each offering its unique attempt to shed light on the matter. Namely, these are Contrastive Analysis Hypothesis, Error Analysis and Interlanguage theory. Since these are generally considered key models in SLA, they will now be presented and evaluated in detail.

##### **2.2.1 Contrastive Analysis Hypothesis**

While the roots of the debate concerning the L1-L2 relationship can be traced back to the early part of last century (e.g. Jespersen, 1912; Palmer, 1917), empirical investigations first began to take place in earnest between the mid-forties and mid-sixties, and led to the Contrastive Analysis Hypothesis (CAH). This was largely initiated by Fries (1945, p9), who

believed that a “scientific description of the language to be learned” should be necessarily used in conjunction with “a parallel description of the native language of the learner”. This was later developed by Lado (1957), who subscribed to the behaviourist view that linguistic competence is a series of learnt habits (e.g. Bloomfield, 1933). On this premise, he made the bold claim that it is possible to *predict* and describe patterns of learning that affect the ease or difficulty with which L2 can be acquired, depending on how similar or different it is from L1. Thus, he famously stated:

*We assume that the student who comes into contact with a foreign language will find some features of it quite easy and others extremely difficult. Those elements that are similar to [a] native language will be simple...and those elements that are different will be difficult.* (Lado, 1957, p2)

CAH also assumes that formal features of a learner’s L1 are effectively *transferred* onto L2 production. This notion of ‘transfer’ is a recurrent theme in SLA theory, and will be addressed as it duly arises in its various manifestations. It implies the “carrying over of habits of (the) mother tongue into the second language” (Corder, 1971, p158), and can exert an influence in a number of different ways, such as on a phonetic, semantic, syntactic and discourse level (Odlin, 1989).

Where there are notable similarities between L1 and L2 – known as cognates – such an influence could be useful (*ibid.*, p26). One illustration of this is the Japanese phrase 「鉄は熱い内に打て」 (Romanised as *‘Tetsu wa atsui-uchi ni ute*), which can be literally rendered into the English equivalent of *‘Strike while the iron’s hot’*. However, this kind of direct correlation is rather unusual. CAH claims that due to a learner overgeneralising and assuming that aspects of L1 are universal, a negative influence tends to be more prevalent, thus causing negative transfer more frequently than positive transfer (Bley-Vroman, 1989).

In the wake of CAH, a large amount of subsequent research has ensued and sparked considerable controversy. In some quarters, it has been noted for its “intuitive appeal” (Brown, 1987, p154). Others such as Klein (1986, p26) have stated assertively that “the existence of various forms of transfer is too obvious to be ignored”, while Mingorance (2010, p1) posited unequivocally that “transfer is a reality in the process of SLA”. In terms

of practical application, Rivers & Temperley (1978, p152) believed that “teachers continue to find its insights [*i.e. of CAH*] useful in understanding their students’ problems, and in helping their students with what needs to be learned”.

However, CAH – at least in its original form – has tended to receive more criticism than it has done praise. Firstly, much of the support for CAH has come from research predominantly on pronunciation-based forms of transfer and consequently failed to provide compelling evidence for other aspects of language production (Odlin, 1989). Additionally, and perhaps more importantly, it has been noted that not all difficulties in L2 are the result of significant differences in L1. For example, a study by Lance (1969) reported that between one- and two-thirds of errors were not attributable to L1 transfer. Whitman & Jackson (1975, p40) also found that predicted levels of difficulty for Japanese learners in fact turned out to be the reverse of what was expected, and concluded that CAH is “inadequate theoretically and practically”. Moreover, not all differences between L1 and L2 are enough to produce difficulties, thus errors are not necessarily bi-directional (Zobl, 1979; Ellis and Barkhuizen, 2005).

Other criticisms have also surfaced. Hughes (1980) argued that CAH undervalues the learner’s own contribution to learning, as well as lacking a precise framework from which to apply to a practical teaching context. This argument is based on the assumption that even if an objective measure of similarity or difference between L1 and L2 were to be obtained, it would be extremely difficult to predict specific *degrees* of difficulty with any accuracy. Furthermore, Kellerman (1986; 2000) believed that learners generally have a certain amount of ‘intuition’ as to which features of L1 may not be transferrable. This could be especially true for idiomatic and metaphorical expressions, and also for when such constraints might be related to ‘prototypicality’. For example, although English L1 learners understand the verb ‘*break*’ can be used for an object, it might be approached with more caution in L2 when attempting to describe a voice deepening during adolescence.

In light of these shortcomings, and particularly in an attempt to overcome the restrictions of the predictive assumptions made in the orthodox ‘strong’ version of CAH, a ‘weak’ version has since evolved. Wardaugh (1970, p123) argued that even though “many experienced

teachers still cannot reject CAH”, cross-linguistic analyses are instead better-suited for having *explanatory* power rather than relying solely on prediction. Furthering this, Brown (1987) suggested that such a weak version is also perhaps more appropriate for post-production *a posteriori* analyses, as opposed to pre-production *a priori* analyses. Interestingly, Oller & Ziahosseiny (1970, p186) also suggested a ‘moderate’ version, in which they attempted to bridge the two versions. They proposed that “...perceived similarities and differences is the basis for learning; therefore, wherever patterns are minimally distinct in form or meaning in one or more systems, confusion may result.” Here, it seems an acknowledgment is being made that any form of notable discrepancy between what is known and unknown could have the potential to create some degree of difficulty in learning.

However, even after attempts of revision, it would appear that CAH remains rather one-dimensional. Since other factors may also be implicated in SLA, further models may add a greater depth of insight into the L1-L2 relationship.

### **2.2.2 Error Analysis**

In a bid to overcome the weaknesses of CAH, Error Analysis (EA) subsequently emerged during the late-sixties and early-seventies, placing more of an emphasis on error *identification* rather than on prediction or explanation. Upon identification, errors themselves might suggest something about their cause and why, if any, L1 might have an influence on L2. Through fostering a taxonomical approach, the main goal was to “discover and describe different kinds of errors in an effort to understand how learners process second language data” (Lightbrown & Spada, 2006, p80). Thus, according to Brown (2000), EA fundamentally involves a three-step process of observing, analysing and classifying errors.

Corder (1967; 1981), a major proponent of EA, began with the assumption that errors are not random, but are in fact systematic and reveal information about a learner’s stage of L2 development. Similarly, Ellis (1997, p18) stated that “errors are, to a large extent, systematic and, to a certain extent, predictable”; and that in being systematic, arise from a “rule, albeit a rule different from that of the target language.”

On the basis of error classification, Burt and Kiparsky (1974, p73) made a distinction between global errors and local errors; the former involving the “overall structure of a sentence”, and the latter affecting “a particular constituent.” On a global level, Corder (1973, p233) outlined four categories of errors as “omission of an element, addition of an unnecessary or incorrect element, selection of an incorrect element or misordering of elements.” Later, Dulay, Burt and Krashen (1982, p50) proposed the four categories of “omission, addition, misformation, and misordering”, while Brown (2000, p122) suggested that errors can be classified as “addition, omission, substitution or ordering”. Although slight differences exist in emphasis between these approaches, the apparent common thread uniting them is that through attempting to classify errors in some way, an overall insight might be gained into their nature.

Richards (1971) informed us that some errors are universal, or ‘intralingual’, in the sense that all learner groups generally tend to demonstrate instances of similar types of errors (e.g. past tense); whereas others are unique to those sharing the same L1 and are thus ‘interlingual’. Taylor (1975) described such instances of learners attempting to monopolise their L1 as a learning resource as ‘transfer errors’. Ellis (1997, p19) commented that learners in this situation “are seen to be actively involved in shaping the ‘grammars’ they are learning”. This relates back to the issues of transfer initially raised by CAH, and once again seems to reconfirm the integral commonality in acknowledging the complex relationship between L1 and L2.

While EA has certainly made considerable contributions to the development of SLA theory, with Buteau (1970, p144), for example, declaring it as not only “fruitful”, but also as “necessary” in determining pedagogical decisions, it has nevertheless not been without criticism.

Learner production may sometimes rely on memorised chunks of lexical items or “prefabricated patterns” (Hasyim, 2002, p46), and could, as a result, misrepresent a learner’s true level of L2 ability. Apart from errors only constituting a relatively small portion of learner production (Kesselly, 2008, p223), it is also seemingly difficult to establish with confidence the precise classification within which a particular error should fall (Crystal,

1979). Furthermore, it has also been pointed out that EA does not account for instances where learners might attempt to actively avoid using certain grammatical structures. For example, it has been found that Japanese learners often avoid using relative clauses. This might be because such structures are more demanding to produce since no such grammatical equivalent exists in Japanese (Schacter, 1974, p210).

The classification of errors, which provides the essential basis for EA, would appear to be a merely descriptive model. Although aspects of it dovetail neatly with CAH, and, in so doing, add to each other mutually complementary dimensions, EA seems to lack a central dynamism. Perhaps a more phenomenological model might help to further inform the picture.

Other aspects concerning errors will be returned to in Section 2.4, *Issues related to errors*.

### **2.2.3 Interlanguage theory**

Following on from the developments of both CAH and EA, Interlanguage theory subsequently appeared. In many respects, this differs from the traditional behaviourist approach that influenced CAH, as it incorporates a more cognitive component, and, as a result, does not assume that learning is merely an acquired set of responses (Ellis, 1997). Rather, it views language learning as a more dynamic and flexible process with the capacity to adapt and change over time (*ibid.*).

While the origins of Interlanguage have largely been accredited to Selinker (1972), there are others who claimed to have previously identified its underpinning principles; namely Weinreich (e.g. 1953; 1963), who labelled it as 'interlingual interference', Corder (1967) as 'idiosyncratic dialect' and Nemser (1971) as 'approximate or deviant language'.

Corder (*ibid.*), for example, suggested that learner output contains an identifiable structure which can give clues as to how the target language is being organised within a 'built-in syllabus', and, from this, inferences can be made about successive learning. Thus, learner errors are not to be thought of as negative phenomena – as perhaps EA initially insinuated

– but rather as positive signs that a learner’s language system is in fact undergoing important development.

It was Selinker (1972, p214), however, who first coined the term ‘Interlanguage’. He described it as “a separate linguistic system based on observable output, which results from a learner’s attempted production of a target language norm.” Within this definition contains the assumption that Interlanguage is neither the target nor native language, but rather an intermediary expression of the interface between the two (Brown, 1994, p204). As a result, this often typically produces L1 transfer, overgeneralisations and simplification, all with the potential to become fixed – or ‘fossilised’ – at any point in time (Selinker, *ibid.*). While L1 transfer is also certainly acknowledged in Interlanguage theory, it is not viewed as ‘all or nothing’, as perhaps CAH originally purported (Powell, 1998). Additionally, whereas some characteristics may certainly be influenced by L1, and, in so doing, mirror aspects of CAH and EA, it may also be influenced by unique experiences with L2, thus making it an ever-evolving and dynamic system where information may be added, deleted or modified at any time (Selinker, *ibid.*).

It is also worth noting that over time the term ‘Interlanguage’ has come to assume slightly different permutations of definition. Ellis (1994, p710) summarised these as: (1) the series of interlocking systems which characterise acquisition; (2) the system that is observed at a single stage of development (‘an interlanguage’); and (3) particular L1/L2 combinations (e.g. L1 Japanese/L2 English). Enabling Interlanguage to be classified, Richards (1992, p186) also arranged it into the three categories of “borrowing patterns from the mother tongue; extending patterns from the target language; and expressing meanings using the words and grammar which are already known”.

As with both CAH and EA, Interlanguage theory has also faced criticism and has consequently attempted to adapt in order to accommodate new insights gained from further research, as well as from other related lines of reasoning.

Azevedo (1980, p63), for example, believed that while errors might provide an indication of a learner’s current state of Interlanguage, ‘non-errors’ are an equally important part of the

global picture since “correct constructions...might have contained the same errors”. While this somewhat complicates the matter in terms of output interpretation, it nevertheless perhaps adds weight to the underlying premise that a learner’s Interlanguage system is dynamic and is “by nature incomplete...and in a state of flux” (Adjemian, 1976, p297).

Other bodies of research have offered slightly different emphases yet perhaps complementary dimensions to Interlanguage theory. Tarone (1979, p181) believed that Interlanguage – just like L1 – can display systematic variability and is “a set of styles that are dependent on the *context* of use” [italics added]. Therefore, Interlanguage is “not a single system, but a set of styles that can be used in different social contexts” (*ibid.*). More recently, other researchers have attempted to emphasise the more developmental aspects of Interlanguage (e.g. Benson, 2002), not only by demonstrating its apparent flexibility, but also in testifying its general resilience as a theory of SLA. Such adaptability could, however, also be viewed upon as a double-edged sword, for with the advantages of broad dimension come also the limitations of lack of specificity.

In light of these developments, it is possible to acknowledge that Interlanguage theory, like CAH and EA, is not a definitive model of SLA. Considerable overlap appears to exist between the three models, and, for this reason, they should perhaps not be viewed in isolation or as mutually exclusive, but rather as each bringing their own unique stance and contribution to the complex issue of foreign language learning.

To conclude this historical section, it seems that fierce debate has surrounded the possible factors thought to influence SLA. This includes not only those factors that are emphasised within each model, but also the terminology and criteria of definition, whether it be from the notion of transfer (‘interference’ [e.g. Weinreich 1963], ‘cross-linguistic influence’, [Sharwood Smith & Kellerman, 1986]) to Interlanguage itself (as we have observed with ‘idiosyncratic dialect’ and so forth). While these are by no means synonymous, it would appear, however, that one thing is fairly certain: the relationship between L1 and L2 is an important one and not to be ignored.

### 2.3 The role of the mother tongue in foreign language learning

Since L1 and L2 do not exist in cognitive isolation, the question arises as to how and to what extent the mother tongue should be utilised in foreign language learning. This is indeed another area of controversy. Although there is some evidence to suggest that general use of L1 in a L2 teaching context has a certain degree of justification in some cases – particularly in lower level learners (e.g. Prodromou, 2002) – the need for a *specific referencing to L1* appears to be of more relevance here.

One of the first proponents of explicit reference to the mother tongue in the classroom for monolingual learner groups was Atkinson (1987; 1993), who claimed that particularly in accuracy-oriented tasks it is entirely reasonable to do so. More recently, Butzkamm (2003, p38) strongly argued that appropriately referring to the mother tongue is a necessary part of SLA. He quoted Hammerly (1991, p151) as saying that carefully doing so “can be twice as efficient (i.e. reach the same level of second language proficiency in half the time) without any loss of effectiveness as instruction that ignores the students’ native language.” In a similar vein, Ferrer (2011, p1) rather persuasively claimed that:

*Judicious and systematic use of cross-linguistic referencing may present the teacher with opportunities for equipping the learners with explicit knowledge of the target language systems. This in turn may help students to notice the gap between the state of their inner grammars and the target language and ultimately aid acquisition.*

This appears to reflect the sentiments of Interlanguage, while simultaneously suggesting that there could be a justifiable role for L1-referencing if done so with both caution and wise judgment. However, one point of concern is specifically upon which grounds such judgment ought to be made. It seems, therefore, a more concrete axis from which to base such decisions is necessary, and this may be influenced by a variety of more general factors.

One such factor might be affective variables. If input is difficult to comprehend, it is possible that learning will not only be impeded, but anxiety might also be induced, thus perpetuating a potential vicious circle. Owing to this, there are some who have claimed –

interestingly, particularly within a Japanese context – that L1 use in the classroom is not only acceptable, but also sometimes very necessary (e.g. Wechsler, 1997, Yamamoto-Wilson, 1997).

Another factor might be that of cultural identity. Brown (2000) stated that a learner's self-identity is inextricably linked to their native language. In connection with this, Schweers (1999) believed that relating to learners in their L1 could foster better relationships, particularly with regard to trust and respect, as it represents the role model of someone who has traversed a similar language-learning path.

There is also evidence to suggest that learner preferences are another important consideration. Atkinson (1987, p242) claimed that L1-referencing is a frequently *preferred learning strategy* for many learners. Furthermore, Harbord (1992, p352) informed us that "...if students are unfamiliar with a new approach, the teacher who cannot or will not give an explanation in the L1 may cause considerable student de-motivation". One concern that perhaps springs forth from this, however, is whether a teacher's knowledge of L1 could potentially have the reverse effect, and inadvertently intimidate learners through establishing of an imbalance of power (e.g. Benesch, 1999).

Finally, it is perhaps worth noting the stance of Mattioli (2004, p21), who concluded that responsible use of the mother tongue might enable classroom time to be saved which could otherwise be devoted to more fruitful learning activities.

This brings us back to the issue of what exactly constitutes 'judicious' use of L1 in the L2 classroom in order to make informed decisions about specific L1-referencing. From the factors outlined here, it is possible to establish that, while it remains a somewhat subjective concern, it nevertheless reiterates that ultimately it is at the discretion of the teacher to exercise professional caution and wise judgment based on assessing the needs and inclinations unique to their learners.

## 2.4 Issues related to errors

If L1 is to be specifically yet judiciously referenced in the foreign language-learning classroom, one such purpose might be to address any errors that have a tendency to arise in L2. First, however, it is necessary to define exactly what an 'error' is.

Dulay, Burt & Krashen (1982, p139) suggested that an error refers to "any deviation from a selected norm of performance, no matter what the characteristics or causes of the deviation might be". Lennon (1991, p182) offered that an error is "a linguistic form or combination of forms which, in the same context and under similar conditions of production would, in all likelihood, not be produced by the speakers' native speaker counterparts".

Corder (1967) importantly outlined that errors and mistakes are fundamentally different, and that a distinction needs to be drawn between them. Ellis (1997, p17) summarised this succinctly:

*Errors reflect gaps in a learner's knowledge; they occur because they do not know what is correct. Mistakes reflect occasional lapses in performance...*

Ellis (*ibid.*, p18) also suggested that such a distinction might be made possible by checking for consistency of performance. While this is not necessarily an easy task, categorisation may go some way in making errors more manageable. For example, they could be categorised according to grammar such as verb tenses, or how learners' utterances differ from the reconstructed L2 utterances such as omissions and misordering.

At this juncture, it is necessary to return once again to the intimate relationship between L1 and L2 in order to consolidate the present picture. We have seen how CAH, EA and Interlanguage all acknowledge the possibility of cross-linguistic influence in various guises with regard to errors; for example, with Corder (1967; 1971) and Taylor (1975) informing us about transfer errors, and also extensively throughout other areas of the literature (e.g. Oller & Richards, 1973; Schumann & Stenson, 1978; Norrish, 1983; and Hagège, 1999).

In conjunction with this notion, Zobl (1980, p469) claimed that certain characteristics of L2 can “set up structural predispositions for L1 transfer.” Thus, if a learner is insufficiently *aware* of this, it could to some extent account for one of the many possible reasons why apparent L1 transfer errors sometimes occur. Concurrent with this idea of awareness is a study by Lakkis and Malak (2000), which also investigated the influence of L1 on L2. They concluded that where there exists “no equivalent in one of the languages, instructors should point out these differences to their students” (p26). It is perhaps this very notion of awareness-raising with regard to errors that also seems paramount, and will therefore be addressed in the next section.

Another important issue to consider in connection with errors is that, according to Interlanguage, L1 transfer and overgeneralisations both have the potential to become fixed – or ‘fossilised’ – at any point (Selinker, 1972). Thus, in spite of progress in L2 learning, particular areas may also display repeated occurrence of the same error. This has implications because even if a learner has knowledge about the reasons for possible L1 transfer errors, there is a possibility that such fossilisation could prevent a deeper conscious awareness of it from being developed. Therefore, how to ‘defossilise’ such errors is another important point for consideration.

## **2.5 Awareness-raising and the subsequent noticing of errors**

A key component in addressing the possible issue of defossilisation may also lie in awareness-raising. The next logical step, therefore, is to evaluate how this might be most effectively employed.

A significant study in this field came recently from Rahimi (2009). It was found that rather than relying on corrective feedback alone for written errors, explicit reference to the learners’ mother tongue showed significant differences in reducing errors in various grammatical categories between control and experimental groups. Furthermore, the success ratio of error reduction in each of these categories was “highly sensitive to cross-linguistic differences” (p219). In another study by Spada & Lightbrown (1999, p20), it was

concluded that explicit instruction through the use of contrastive metalinguistic information is necessary to “move beyond fossilised Interlanguage patterns”.

Although from these studies explicit cross-linguistic referencing appears to be an extremely valuable asset, the need for learners to independently identify errors for themselves could also be deemed of importance. A crucial factor here is how this might be best facilitated.

Schmidt (1986) claimed the heart of the matter lies in whether *conscious attention* has been applied by the learner or not. Consequently, this process of consciously attending to linguistic features in the input would appear to be of salience, and, in particular, the role of independently *noticing* the potential gap between L1 and L2 might need to be emphasised.

Mackey (2006) conducted a study which not only highlighted the necessity of explicit feedback, but also of instructed ‘noticing’ of particular L2 forms that due to L1 transfer might be problematic areas for Japanese learners. Using a variety of methods for measuring such noticing, the results indicated that there was a correlation between feedback and the subsequent noticing of errors, and concluded that “selective attention mediates the L2 acquisition process” (p405). Similarly, Egi (2010, p1) found that learners who were able to notice their own errors also had a greater awareness of “Interlanguage-L2 mismatch.” Further echoing this influence of Interlanguage was James (1996, p138), who suggested that language awareness should ‘fill the space’ between L1 & L2.

The issues dealt with thus far in terms of cross-linguistic considerations and awareness-raising are concisely summarised by Swan (1997, p156), along with their pedagogical implications:

*Clearly, the more aware learners are of the similarities and differences between their mother tongue and the target language, the easier they will find it to adopt effective learning and production strategies. Informed teaching can help students to formulate realistic hypotheses about the nature and limits of cross-linguistic correspondences, and to become more attentive to important categories in the second language which have no mother tongue counterpart.*

From this, it seems the encouragement of awareness-raising may play a significant role in the subsequent noticing of errors, and thereby exert an impact on pedagogical decisions in its wake.

## **2.6 Common errors for Japanese learners**

Having identified these factors, it is now necessary to hone specific details which are of most relevance for Japanese learners. From this fulcrum, language items that are both justifiable and tangible can then be selected.

Although there are numerable areas of concern with regard to common errors for Japanese learners, much of the literature points heavily towards two major areas:

- (1) Articles
- (2) Countability

### **2.6.1 Articles**

Whereas English requires the use of both definite and indefinite articles, Japanese has no reliance on such a system, and, as a result, could perhaps influence L2 production. Park (1998), for example, found that students whose L1 has an article system earned higher scores than those whose languages did not, such as Japanese. Many researchers (e.g. Nagata, 2006; Izumi et al, 2003; Kawai et al, 1984) have pointed out that L2 production commonly reflects this linguistic difference with their omission, as well as giving rise to other problems such as superfluous or erroneous usage. Others have been more direct in their claim that such article errors are likely to be caused from L1 transfer (e.g. Master, 1998) or other Interlanguage issues (e.g. Mizuno, 1998). Similarly, Faghih (1997) directly attributed definite article usage problems to transfer errors, as did Koizumi (1998) with his observations and analyses of Japanese learners' written output.

Whether or not attributable to transfer, more recent studies have also claimed to identify a correlation between languages which do not have an article system such as Japanese and

their frequent omission in English L2 production – even if the way in which they manifest depends upon more intricate variables such as modified or non-modified nominal and adjectival phrases (e.g. Goad & White, 2004; Trenkik, 2007; Pongpaiboj, 2007).

Thus, it appears that the notion of correct article usage is a highly complex issue. In light of this, it would be wiser to select one particular aspect relating to this. Since article omission is often problematic but more easily quantifiable, this was used as the basis of focus for the present study. Examples of such errors might include '*I have brother*' or '*Where is post office?*'

### **2.6.2 Countability**

Unlike English, a distinction is not generally drawn in Japanese between the concept of countable and uncountable nouns. This may in turn become an issue in L2 production if, for example, it is unacknowledged (e.g. '*I like carrot*') or misapplied (e.g. '*I like corns*'). Iwasaki *et al* (2010, p192) stated that "A major obstacle for Japanese speakers...is misdetection of...countability". Additionally, Kobayashi (2009), informed us that "For Japanese learners of English, the concept of countable and uncountable nouns is difficult because it has no equivalent in Japanese" (p73), and that "Japanese learners of English tend to have a fixed notion that specific nouns, especially abstract nouns are uncountable" (p81).

Interestingly, this issue of countability may also be interconnected with article usage. Yoon (1993) considered how native and non-native perceptions of noun countability might differ, and how, in turn, this might affect the accuracy of non-definite article usage for Japanese learners. In particular, it was found that uncountable noun perception negatively influenced the use of indefinite articles. In another study, Butler (2002) applied a metalinguistic analysis of how Japanese learners might make choices for their use of articles, and concluded that the notions of 'definiteness' and 'indefiniteness' not only affect article usage, but also noun countability. This was also originally reported in an early key study by Allan (1980), which investigated noun countability preferences in English, and concluded it to be an issue of immense complexity, further compounded by contextual factors.

Owing to the fact that noun countability is indeed a vast and often confusing area, it would again be deemed necessary for the sake of research manageability that only one aspect of this issue ought to be selected. Since plural omission of countable nouns is both more easily identifiable and quantifiable, this was decided as the second area of focus for the present study. Examples might include the aforementioned '*I like carrot*' or '*Do you have any brother or sister?*'

## **2.7 Concluding remarks: Identifying a research gap**

Having traced the historical route of the way in which the inter-relationship between L1 and L2 has been approached by mapping its line of evolution, it is now possible to acknowledge that this relationship is significant enough to warrant attention in the classroom. As we have seen, one such way of doing so is by employing judicial L1-referencing to typically recurrent problem areas in L2 as a form of awareness-raising and investigating its effects.

Whereas previous research has by no means ignored this, the precise ways in which awareness has been raised has not only been relatively unclear, but also – and in particular – any specific pedagogical methods that could be applied as a result seem to be lacking.

This appears to necessitate the tailoring of needs to accommodate specific learner groups with particular error patterns. As indicated in the literature, Japanese learners typically appear to encounter production errors with regard to articles and plural endings. The overall purpose of this present study, therefore, is to address how this may best be approached in an attempt to develop suitable pedagogical applications.

### **3 SETTING OF THE STUDY & RESEARCH QUESTIONS**

#### **3.1 Introduction**

This chapter begins by examining the prevailing landscape and climate of English-learning in Japan. After documenting a general overview of this, the current study is cemented through presenting the research questions.

#### **3.2 Context: Focusing through a Japanese lens**

Until recently, compulsory English education in Japan started from the first grade of junior high school (JHS) at the age of twelve, and continued up until the third grade of high school (HS) at the age of eighteen, numbering a total of six years. Since April 2011, however, the Japanese Ministry of Education has legislated its increase through the implementation of mandatory English instruction in all elementary schools (ES) across the country (Mobukagakusho, 2011). Apart from formal schooling, supplementary evening tuition is often part of the educational picture, with cram school – or 'juku' – also playing a significant role. Precise figures for cram school attendance are uncertain, but are estimated within the last decade to be around 37% for ES, 76% for JHS, and between 37% and 45% for public and private HS respectively (Ishikida, 2005).

Yet in spite of several years of study, according to Reesor (2003), a common prevailing attitude in Japan is that English is not only a difficult language to master, but also one that is ineffectively taught in formal education. This, as a result, he claims, has rendered Japan a nation largely unsuccessful in its attempts to produce proficient English users. Rather alarmingly, there is also research to suggest that Japan's recent overall capacity to learn English is declining further still (e.g. Mulvey, 2001).

A vast plethora of reasons has been proposed as to why this may be. Some researchers have focused on localised factors supposedly unique to Japan, ranging from the isolation

of being an island country (Koike & Tanaka, 1995) to a tendency towards inhibition and fear of making mistakes (Hughes, 1999). Others have preferred to give credence to the notion of 'language distance', or degree of similarity that exists between two languages. English and Japanese – as opposed to, say, German or French – are arguably dissimilar on a number of different levels, which might be enough to cause a certain degree of difficulty for some learners (e.g. Corder, 1979; Chiswick & Miller, 2004).

It would perhaps be of more value, however, to provide a brief overview of factors concerning the Japanese educational system. There have been controversial claims that instruction from Japanese teachers of English is generally both inadequate and inappropriate (e.g. Clark, 1998). While it is of course both impossible and indeed hazardous to make such generalisations, many point out that, from a historical perspective, a lack of direct communication with native-speaking counterparts initially forced English to become a predominantly academic subject (e.g. Scholefield, 1997). At worst, this traditionally meant placing emphasis on reading and, at best, on writing (*ibid.*). This consequently provided the basis for the 'Grammar-Translation' model, which still appears to have a resonant effect even on today's curriculum, typically at the expense of communicative activities (Helgesen, 1991). Accordingly, this is believed to exert an "exclusive emphasis of reception rather than transmission" (Shuji, 1999, p6), which naturally has several pedagogical implications should this claim be even remotely accurate.

Throwing further oil into the fire is the commonly-held view that the Japanese education system not only fails to encourage learner autonomy (e.g. Barfield & Nix, 2003; Reimann & O'Dowd, 2006), but also neglects critical thinking skills (e.g. Hinds, 1987; Kubota, 1999). Walking on such treacherous territory has, however, invariably ignited flared reactions, and a large body of research now exists to provide fervent counter-claims (e.g. Ramanathan & Kaplan, 1996; Atkinson, 1997; Stapleton, 2002; Long, 2003).

Although the debate surrounding English-learning in Japan continues to rage with seemingly inexhaustible perspectives, the degree to which any of the factors outlined here truly play a significant role remains inconclusive. However, taken collectively, they appear to suggest that a complementary viewpoint could at least be considered worthwhile, as

well as refreshing. It is therefore hoped that this research will, in turn, be able to offer something of benefit to the general foreign language-learning community in Japan.

Finally, it is essential to note that while this discussion may help a broad contextual picture of Japan to be painted, the crux of the matter would not seem to rest upon identifying cause and effect of its foreign language-learning background, for this in itself is a not only an essentially flawed argument, but also something that is considerably beyond the scope of this research. Thus, rather than focusing on what in the past has failed to be achieved, it would be better to look more towards the future for what *can* be achieved. In so doing, proactive ways of forging new and viable inroads for pedagogical development may be sought. Arguably, this applies not only to Japan, but equally to all other learner groups involved with English-learning in any kind of capacity.

### **3.3 Formulating the research questions**

In light of this current context, and as already outlined in detail in the Literature Review, one such way of addressing the needs of Japanese learners is through emphasising cross-linguistic factors, and how this might accord with the significance of errors.

Whether recurrent patterns of L2 output errors can be attributed to L1 influence or not remains uncertain, but it seems of great relevance to investigate the ways in which they might be best approached, especially as this seems a largely unacknowledged arena in the present educational foreign language-learning environment in Japan.

Since it has not been established whether simple teacher correction of learner errors is efficacious in significantly reducing their future recurrence (eg. Vyatkina, 2010; Yingliang, 2008), as has already been noted, a more pertinent strategy might be that of awareness-raising. This may both promote further learner independence, as well as encourage language processing to occur at a deeper level (e.g. Bolitho *et al*, 2003).

Given the possibility of L1 influencing the types of errors that are produced, one such method of awareness-raising is to highlight the similarities – and especially – the differences between L1 and L2. A feasible framework provided by comparing and contrasting the two languages with specific L1-referencing would thereby be established.

Errors can manifest in both oral and written performance. However, in order to enable a greater degree of research manageability, it is proposed that written errors warrant a more realistic medium to work with.

Finally, specific language items need to be focused upon. These can be adopted in the form of the two aforementioned omission issues regarding both articles and plural endings of countable nouns.

### **3.3.1 Research questions**

The main research question can now be posed:

*What are the effects of explicit cross-linguistic comparisons and contrasts between learners' L1 (Japanese) and L2 (English) on subsequent L2 written performance?*

This question essentially entails investigating whether explicit cross-linguistic comparisons and contrasts between learners' L1 (Japanese) and L2 (English) have a significant effect upon L2 written performance. This can be achieved through specific L1-referencing of the similarities and differences between L2 of the selected language items regarding article and plural ending omissions.

In turn, this gives rise to a further component; namely, whether such cross-linguistic awareness-raising affects both the subsequent independent *noticing* and *frequency* of written errors associated with these items.

Thus, the sub-question is:

*What are the effects of such cross-linguistic awareness-raising on the subsequent noticing and frequency of written errors?*

## 4 RESEARCH METHODOLOGY

### 4.1 Introduction

As outlined, the present study principally aimed to investigate the effects of cross-linguistic comparisons and contrasts between Japanese (L1) and English (L2) on subsequent L2 written performance through the specific L1-referencing of articles and plural endings. This entailed investigating what effects such awareness-raising might have on both the noticing and frequency of subsequent errors associated with these two selected language items. To these ends, a mixed-methods approach was fostered and tailored for Japanese learners, which enabled a quasi-experimental design to be implemented of predominantly quantitative, but also qualitative methods, within the framework of the post-positivist paradigm.

This chapter presents a detailed overview and critical account of the research design, along with the underlying principles and methodology upon which it is based. Other essential issues will also be addressed; namely, the participants involved, the data collection methods, procedures and analysis techniques that were employed, as well as taking into account the issues of validity, reliability and ethical concerns.

### 4.2 Research paradigm

According to the Oxford English Dictionary, the term *paradigm* can be traced back to Greek origin, and is currently defined as “a pattern or model, an exemplar”. Kuhn (1962, pviii) was one of the first to use the term in a theoretical sense, defining it as “...scientific achievements that, for a time, provide model problems and solutions for a community of researchers”. Many other definitions have since arisen in its wake. Haggett (1983, p21), for example, believed that a paradigm is “...a kind of supermodel. It provides intuitive and inductive rules about the kinds of phenomena scientists should investigate and the best

methods of investigation”. A concise definition also came from Guba (1990, p17), who stated simply that a paradigm is “a basic set of beliefs that guides action”.

From briefly examining this evolution of definitions, it is possible to see how the active involvement of the researcher has gradually come to assume increased prominence, and how this can contribute to the overall shaping of an investigation. This is thought to operate on a number of different levels. Starting with the way in which truth and reality is understood by the researcher (i.e. ontology) and filtering through to what can be known about them (i.e. epistemology), later provides the basis for how such knowledge might be acquired (i.e. methodology) and the means by which this might be best gained (i.e. methods), which is finally distilled as how such data can be collected (i.e. sources) (Guba & Lincoln, 1994; Hay, 2002). More recently, a further dimension addressing the researcher’s values has been added, known as axiology (Lincoln & Guba, 2000). This enables all of these guiding factors to provide an interpretative framework for governing the underpinning principles of the research process (*ibid.*).

Thus, the beliefs and values of this researcher have been vital in moulding the shape of this investigation, and are specifically reflected in the post-positivist approach that has been adopted.

Contrastively speaking, the positivist view attempts to explain and predict phenomena by assuming verification based on scientific empiricism and logic as a means to discover unequivocal truth and law-like generalisations (Kim, 2003). Post-positivism, however, instead relies on a rather different set of principles. Although in a sense these two approaches share the common goal of attempting to discover cause-and-effect relationships and how these may serve as a basis to predict future behavior (Walker & Evers, 1988; Guba & Lincoln, 1994), post-positivism rejects the idea of verification and prefers to adopt the more meta-theoretical stance of warranted conjecture and falsification (Crotty, 1998). As a result, unfalsified findings can only be claimed to be provisionally true (*ibid.*). Additionally, post-positivism is characterised by its attempt to look at multiple perspectives rather than a single reality, which applies equally in its approach towards data analysis (Creswell, 2007).

While positivism has traditionally been regarded as the 'gold standard' of modern scientific disciplines (Denzin & Lincoln, 2000), more and more researchers – particularly within the social sciences – are now turning towards post-positivism for its flexibility, as well as its endeavour to maintain strict rigour of practice. Thus, the essence of this present study can be summarised by Plack (2005, p227), who stated:

*Post-positivist researchers begin with a priori research hypotheses and through an experimental or a quasi-experimental design (which may include both quantitative and qualitative research methods) the a priori hypothesis would either be supported or rejected (falsified).*

In this particular study, the *a priori* research hypothesis stemming directly from the research questions was that awareness-raising of cross-linguistic comparisons and contrasts through specific L1-referencing would have a positive effect on L2 written performance. Specifically, it was hypothesised that such awareness-raising would help encourage the subsequent noticing of L2 errors relating to articles and plural endings, as well as reduce their frequency, thereby improving the written accuracy of these language items. Should this be falsified, the post-positivist view allows the hypothesis to be modified and retested, thus enabling it to be tentative from the outset. Therefore, to accommodate both a full depth of investigation of the research questions, as well as to allow this scope of flexibility, a mixed-methods approach was employed.

#### **4.3 Methodology: Mixed-methods approach**

A mixed-methods approach essentially incorporates both quantitative and qualitative methodologies. It attempts to buffer not only their extremes and respective weaknesses, but also helps a wider perspective of the overall research picture to be gained, and, in so doing, attempt to maximise its validity (Creswell, 2003; Creswell & Plano Clark, 2007; Dörnyei, 2007).

The blending of these two methodologies lent itself towards the adherence of the Sequential Explanatory Design (Creswell & Plano Clark, 2007) within a quasi-experimental

framework, which meant dividing the research into two sequential phases. The first encompassed the quantitative gathering of written L2 data, and was supplemented with qualitative data of both observations and in-class audio recordings, which sought to interpret real-time learner processing. The second relied solely on qualitative data through focus group interviews, which were conducted pre-, mid- and post-intervention as a means of both clarifying and shedding further light on unexpected aspects of the quantitative data. It was this triangulation of data that was hoped to add weight to the validity of the study (Greene *et al*, 1989).

Although this approach exploited the advantages of appointing both methodologies, it should be noted, however, that the emphasis lay far more heavily on the quantitative data. The reason for this can be attributed to the research questions that were posed, as seeking to establish the noticing and frequency of written errors by nature required their *amount* to be recorded, as opposed to *nature* in which they occurred.

#### **4.4 Participants and sampling**

All sixty-nine participants had an average seven-year background of formal English study<sup>1</sup>. The participants of the main first phase of research consisted of a total of four mixed-gender classes of Japanese second-year university students with a mean age of twenty years.

While non-probability convenience sampling was necessitated due to accessibility and time restraints (Dörnyei, 2007), learners from two separate universities in Osaka were independently invited to participate in the study. Utilising two universities aimed to gain a broader cross-section of participants, and thus a more representative sample (e.g. Kruksal & Mosteller, 1979). Participants in University 1 were majoring in International Studies, while those in University 2 in both Sociology and Business Studies. The decision to select participants who did not major in languages was made in order to avoid students who may

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<sup>1</sup> This comprised three years of JHS, three years of HS and one year of university.

have already been sensitive to language-related issues. This decision also aimed to increase the validity of the study (Smart *et al*, 2000; Raudenbush, 2005).

The participants from University 1 were of an intermediate level, met twice a week and all used an intermediate general English coursebook. The participants from University 2 were upper beginner, met once a week and used a similar intermediate coursebook.

One class from each university collectively formed the control group, which consisted of thirty-four participants, while the remaining two formed the experimental group and consisted of thirty-five participants. The control and experimental groups provided the basis for the first phase of quantitative data collection. The second, qualitative phase of focus group interviews involved a much smaller sample size, consisting of three participants from each of the two classes comprising the experimental group, thus making a total of six. An attempt was made to obtain a mixed range of abilities from each class in the experimental group, with representatives of upper, middle and lower level learners being invited to participate (Berg, 2003; Finch & Lewis, 2003). All participation, however, was accepted voluntarily with the option of withdrawing at any time.

All of the information presented in this section is summarised in Figure 4.1.

## RESEARCH QUESTIONS

*What are the effects of explicit cross-linguistic comparisons and contrasts between learners' L1 (Japanese) and L2 (English) on subsequent L2 written performance?*

*What are the effects of such cross-linguistic awareness-raising on the subsequent noticing and frequency of written errors?*

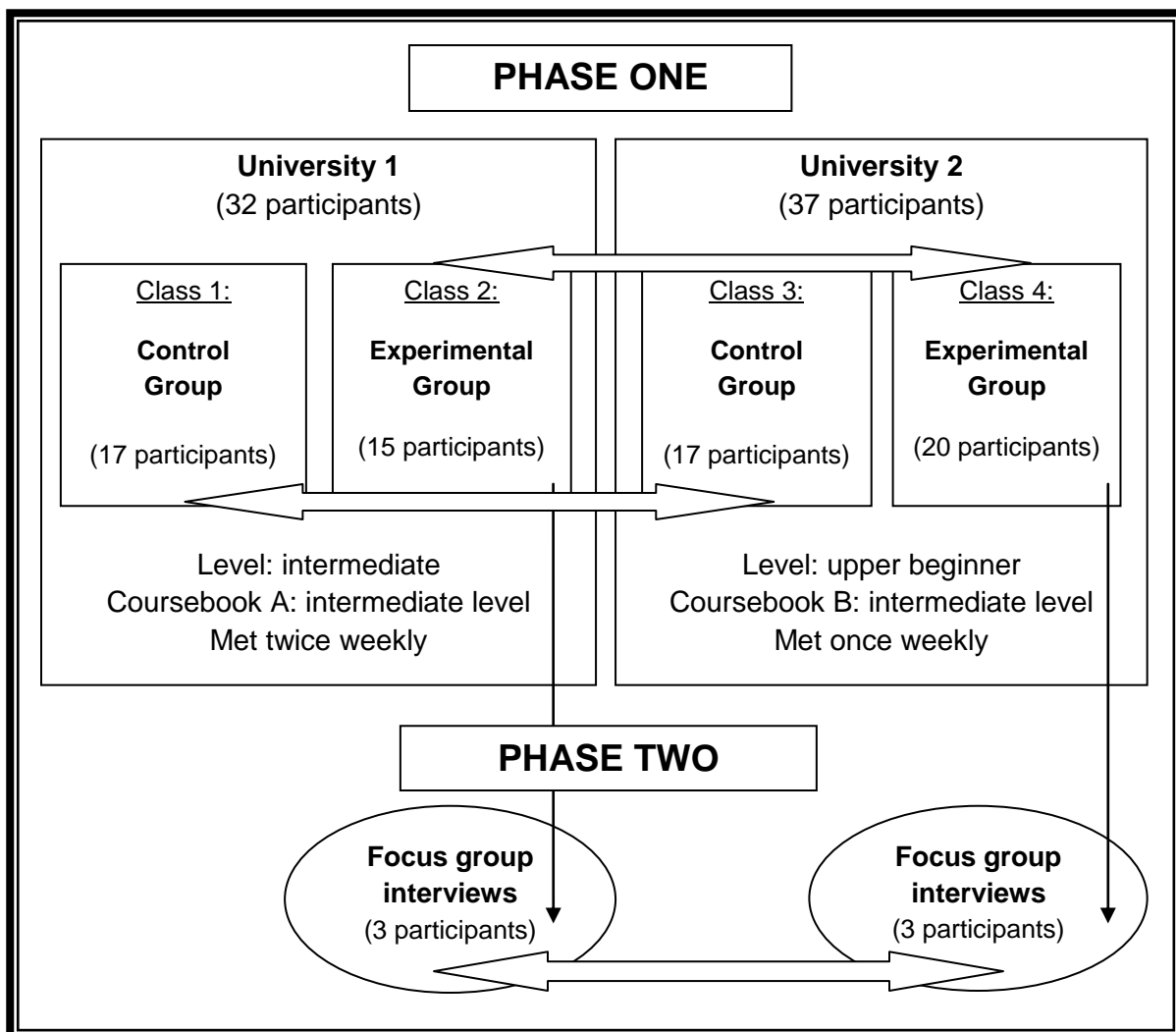


Figure 4.1: Visual summary of research design

## 4.5 Data collection techniques and procedures

### 4.5.1 Principle base of measurement: Diagnostic tests

The study required certain factors to be operationalised in order for them to be objectively measured (Brown, 2008), and thus to answer the research questions. Most notably, there was a need to first establish a base measurement for the level of cross-linguistic awareness across all groups. To meet this end, a diagnostic test was designed which invited learners to do two things:

- (1) To identify and correct erroneous sentences regarding the selected language items of article and plural omissions
- (2) To write a short paragraph (of around four sentences) about a prescribed photograph that typically required the use of the selected language items

The purpose of the error *identification* through correction section was to test *noticing*; while conversely, the writing section was to test *production*, and consequently how this was connected to the *frequency of written errors* that arose. These factors relate directly to the second research question. Before this could be implemented, however, a pilot had to be administered on a similar yet unrelated class.

During the pilot's design, several factors were taken into account. First, with regard to the error identification section (i.e. 'noticing'), it was decided that isolated sentences alone were inappropriate, and that instead a continuous discourse would be more favourable since a semantic framework would provide the basis for better global comprehension (van Dijk, 1985; Kaplan & Grabe, 2002). Additionally, so as to avoid participants deducing the purpose of the diagnostic test, miscellaneous sentences were incorporated into its constituent ten. These included not only errors associated with articles and plural endings, but also arbitrary 'red herrings', which were intentionally unrelated to the selected items. Correct sentences were also incorporated. Furthermore, a fixed amount of sentence types (i.e. affirmative, negatory and question) was also assimilated and arranged randomly in a further attempt to reduce the likelihood of the test's purpose from being deduced (Freund, 1993; Grinstead & Snell, 1997). These criteria are summarised in Figure 4.2.

Grammatical item	Sentence type		
Correct	<i>affirmative</i>	<i>negatory</i>	---
Article errors	<i>affirmative</i>	<i>negatory</i>	<i>question</i>
Plural ending errors	<i>affirmative</i>	<i>negatory</i>	<i>question</i>
'Red herring' errors	<i>affirmative</i>	---	<i>question</i>

TOTAL: 10 sentences

**Figure 4.2: Criteria for the error identification and correction section in the diagnostic test before randomisation**

Secondly, as a counter-measure against possible bias from fatigue or practice effects (Kamil, 1984; Heiman, 2002), the order in which these two sections were presented was also randomised. Thus, half of the learners completed the error-correction (i.e. identification) section first, while the other half completed the writing (i.e. production) section first. In order to gain a snapshot into learner decisions and how this may be related to intuition, the participants were also requested to write in ink and not to correct any of their initial responses (Topolinski & Strack, 2009). Finally, standardised instructions were applied across all four classes, with each section of the test being prescribed a time limit of four minutes, which was timed with a stopwatch.

The results of the pilot indicated that although there appeared to be no apparent problem with the identification section, the photograph that was provided in the production section could have perhaps influenced the way in which the language items were put into practice. Specifically, the pilot photograph depicted several items on a desk, which necessitated the use of 'There is' and 'There are'. It is possible that such phrases elicit chunks of memorised language (in this instance, 'There is a...' and 'There are some ... s'), and consequently failed to test the learners' true ability to produce articles and plural endings in comparison to other settings (Azevedo, 1980). In light of this, the photographs utilised in the real diagnostic tests were more strictly screened.

Having established a solid theoretical foundation from which to work in conjunction with running the pilot, the diagnostic test was subsequently ready to be administered in earnest.

Consequently, three different sets of diagnostic tests were designed and implemented at three different intervals; namely, before, during and after the investigation period of both the control and experimental groups in order to gauge whether or not the intervention had produced a significant effect. All three of these diagnostic tests may be found in Appendix A.

#### **4.5.2 Procedure: Intervention through awareness-raising techniques**

The independent variable was the intervention itself, which involved exposure of the experimental group to tailor-designed awareness-raising techniques of L1 and L2 comparisons and contrasts for a period of four weeks. These will now be explained in detail.

##### 4.5.2.1 Error correction and translation quizzes

After the experimental groups had been debriefed, two principle awareness-raising techniques were introduced. These were labelled as 'quizzes' so as to avoid distress (Jacobs & Chase, 1992). The first was similar to the diagnostic test in that it involved error correction of the two language items with regard to a variety sentence types embedded within a thematic discourse. However, this was limited to only six sentences, and included neither 'red herrings' nor sentences that did not require correction.

The second technique was L1-L2 translation of Japanese sentences into English. This was designed to specifically necessitate the use of articles and plural endings, again interwoven into a thematic discourse. As with the error corrections, they aimed to elicit the use of the language items in specific ways so as to achieve an equal balance between them all. Specifically, template patterns for both techniques were devised on the basis of having three sentences that required articles (both *a* and *the*) and three for plural endings. All of these error correction and translation quizzes may be found in Appendix B.

Before these techniques were fully implemented, however, another pilot was conducted on a second unrelated class to test whether or not they were 'user-friendly', as well as to establish how smoothly they could be incorporated into the lessons. The results yielded no

indication for the need to make any significant alterations, thus enabling the experimental phase to commence.

#### 4.5.2.2 Learner reflection and teacher explanation through specific L1-referencing

For the duration of the four-week investigation period, these techniques were employed at the start of each lesson without the imposition of a time limit. After their completion, learners were asked to discuss their responses with a partner, and, in particular, to explain and justify the reasons for their choices. The researcher then suggested and clarified suitable responses to the class as a whole, pointing out the similarities and differences between L1 and L2 in the ways these sentences are expressed in both languages, and, in particular, using L1 as a specific reference point. A section of the blackboard was designated to this, with both of the language items encircled so that they could be easily referenced again during subsequent segments of the lesson. During such instances, their correct usage was *explained* according to the context in which they arose, and was transmitted in both English and Japanese. The learners' opinions of this bi-lingual explanatory approach were explored during the focus group interviews, and helped forge the direction of development for how the awareness-raising techniques were incorporated.

Owing to the limitations of the number of times each class met during the investigation period, there was a difference between the ways in which both types of quizzes were implemented. Since the classes in University 1 met bi-weekly, comparatively more time permitted each quiz to be conducted on an alternate-lesson basis. However, University 2 classes met only once a week, resulting in both quizzes having to be employed consecutively every lesson. This was perhaps more advantageous for learners in University 1, as it allowed a 'little and often' approach to be established as opposed to a potential 'overload' in University 2 (Krashen, 1985). Additionally, four 'cycles' of both awareness-raising techniques were possible at University 1, whereas schedule restrictions in University 2 allowed for only three.

#### 4.5.2.3 Further learner reflection through writing tasks

Apart from the error correction and translation quizzes, a further means of raising awareness of articles and plural endings came in the form of writing tasks. These will now be explained.

Writing tasks were assigned as part of the course requirements, and included two types:

- (1) Written reports (completed during classtime) concerning content from the previous lesson. These served as a review activity that required learners to: (a) recall vocabulary items; (b) utilise them in generating questions; and (c) exchange questions with a partner which, in turn, were then to be answered
- (2) Written mini-essays (completed for homework) concerning topics from the coursebook

These activities were completed with all classes on an alternate-lesson basis, numbering in ten of each for the span of the semester for University 1 and four of each for University 2. At the start of every lesson, learners were invited to evaluate a randomly assigned partner's writing for each respective activity through the use of a structured feedback sheet containing specific criteria. During the investigation period, however, the experimental group was encouraged to identify both correct and erroneous use of articles and plural endings, and note them in a relevant section designated to accuracy. The aim of this was to help further reflection to be gained on these language items, and thus lead to greater language awareness (Bolitho *et al*, 2002). The teacher monitored this carefully in order to help ensure its successful running, as well as to clarify any concerns from the learners. These tasks may be found in Appendix C.

Finally, all learners were required to keep vocabulary and grammar notebooks. The experimental group was encouraged to make annotated notes of personal instances of sentences that contained articles and plurals judged to be of particular interest or benefit.

The timetables of these events are represented in Figure 4.3.

<b>Intervention class number</b>	<b>Date</b>	<b>Awareness-raising technique</b>		<b>Focus group interviews</b>
	6/13	<b>Diagnostic Test 1</b>	Peer homework check 7	
<b>1</b>	6/16	Error identification quiz 1	Class report 7	Interview 1
<b>2</b>	6/20	Translation quiz 1	Peer homework check 8 & Peer notebook check 3	
<b>3</b>	6/23	Error identification & Translation quizzes 2	Class report 8	
<b>4</b>	6/27	<b>Diagnostic Test 2</b>	Peer homework check 9	
<b>5</b>	6/30	Error identification quiz 3	Class report 9	Interview 2
<b>6</b>	7/4	Translation quiz 3	Peer homework check 10	
<b>7</b>	7/7	Error identification quiz 4	Class report 10	
<b>8</b>	7/11	Translation quiz 4	Peer notebook check 4	
	7/14	<b>Diagnostic Test 3</b>	---	Interview 3

*Experimental group timetable: University 1*

<b>Intervention class number</b>	<b>Date</b>	<b>Awareness-raising technique</b>		<b>Focus group interviews</b>
	6/14	<b>Diagnostic Test 1</b>	---	
<b>1</b>	6/21	Error identification & Translation quizzes 1	Class report 3	Interview 1
<b>2</b>	6/28	Error identification & Translation quizzes 2	Peer homework check 3	
<b>3</b>	7/5	<b>Diagnostic Test 2</b>	Class report 4	Interview 2
<b>4</b>	7/12	Error identification & Translation quizzes 3	Peer homework check 4	
	7/19	<b>Diagnostic Test 3</b>	---	Interview 3

*Experimental group timetable: University 2*

**Figure 4.3: Timetables of events during the investigation period**

### **4.5.3 Further means of investigating language awareness**

As already outlined, the primary function of the data collection was to measure the noticing and frequency of errors, which in turn necessitated an emphasis of quantitative techniques. However, it was also important for an insight to be gained into other aspects of the study, and for this reason qualitative data was also collected.

#### 4.5.3.1 Phase 1 qualitative data: In-class audio recordings and observations

The qualitative data in Phase 1 came from two sources. The first was in the form of in-class audio recordings of learner interactions whilst working on an assigned task. In particular, the learners were asked to work together and ‘think aloud’ when deducing if, how and why an article or plural ending should be utilised. It was hoped that as a result of this, additional information could be gleaned from the possible thinking processes that lie behind grammatical choices (Ericsson, 2002). However, it should be noted that the learners expressed a vocal dislike towards this kind of data collection technique, and in compliance with their wishes was kept to a minimal level. One possible reason for this dislike is that ‘think alouds’ might be uncommon in Japanese educational culture (Matsumoto, 1996).

The second source was from observations made by the researcher. Such observations fell under a wide umbrella, such as particularly interesting cases of the language items, learner interactions regarding the item usage, prevailing class attitudes, and casual feedback regarding the intervention itself. Anything deemed to be of significance was recorded in a reflective journal, not only for the experimental group, but also when anything appropriate arose for the control group.

#### 4.5.3.2 Phase 2 qualitative data: Semi-structured focus group interviews

Berthoff stated that (1987, p92) “We do not need new information; we need to think about the information we have”. Thus, the second phase of the study involved semi-structured interviews, which were conducted in an attempt to add a complementary dimension to the primary quantitative data, and could perhaps be thought of as ‘conversations with a purpose’ (Burgess, 1984). Focus groups were favoured over individual interviews as they

generally paint a broader picture from allowing a greater spectrum of angles to be represented (Zhu & Flaits, 2005).

The interviews were semi-structured in that a pre-determined set of questions was devised. However, sufficient flexibility was granted to enable the interviewees to lead their responses in a direction that they wished to pursue (Wilkinson, 2004). As indicated in Figure 4.3, there were three sets of interviews that spanned the investigation period for both universities. As the investigation period progressed, they evolved from being more to less-structured through their increased use of open-ended questions.

A skeleton outline of basic criteria was devised for the questions, and thus enabled a set of specific aims to be fulfilled. These can be broadly summarised in the following four categories:

- (1) Opinions regarding language awareness
- (2) Opinions regarding the current research process
- (3) Reflections regarding language awareness
- (4) Reflections regarding the current research process

Gathering this information firstly helped to determine whether or not the learners from their side regarded the relationship between L1 and L2 to be important, and, if so, how it may be best addressed (i.e. 'opinions'). Secondly, it helped the learners reflect on their own encounters with articles and plural endings, and how this might be connected with their own level of language awareness with regard to L2 error identification and production (i.e. 'reflections').

Prior to each interview, time was spent reviewing observations from previous class interactions and interview responses in order to carefully prepare the proceeding set of questions. In particular, an effort was made to avoid any possible bias through leading questions (Briggs, 1986; Kvale, 1996).

Two other factors with the potential to influence validity and reliability were also taken into account. The first was that, wherever possible, an attempt was made to retain the same three members for each focus group interview. This was successfully achieved for University 2. However, owing to unforeseen circumstances in University 1, two of the three members changed after the first interview. This did, however, remain consistent for the final two interviews. The second was that all six focus group members had extremely busy schedules and wished to keep the interviews as short as possible in order to honour their commitments. This time restriction is another factor for consideration when assessing the validity and reliability of the focus groups, and will be returned to later in Section 4.7, *Validity & reliability*.

Finally, by way of request from the learners, the majority of all interviews were conducted in Japanese. The reason for this was partially to save time, but mainly to avoid any difficulty in expressing complex ideas in L2 which could lead to possible confusion (Taggart & Martinez, 2003). All questions were asked clearly and directly, with clarification provided if required. All group members were given equal opportunity to speak, and an effort was made to create a supportive atmosphere through verbal and non-verbal encouragement, as well as impartial reactions to all responses (Kidd & Marshall, 2000).

## **4.6 Data analysis**

### **4.6.1 Quantitative data analysis: Diagnostic tests**

As already indicated, the diagnostic tests consisted of two components; namely, (1) the *identification* of errors, which was verified by their successful correction (and related to noticing), and (2) *production* through writing a short passage about a photograph (and related to the frequency of errors). Both of these sections required the exact amount of articles and plural endings to be calculated, and since they both involved different processes, they were calculated in slightly different ways. These will now be explained.

The identification section was relatively simple, as it contained a concrete number of correct and incorrect sentences. Among the total of ten, three sentences contained errors

associated with article omission and three with plural endings. If one of these was identified through being successfully corrected (thereby demonstrating an apparent understanding of its appropriate usage), a score of one point was assigned. Thus, a maximum score of three points was possible for articles (i.e. 3/3), and three for plural endings (i.e. 3/3). All participant scores were then converted into percentages and collated according to their group. These were analysed to establish whether or not there was a significant difference between the control and experimental groups using the programme 'Statistical Package for the Social Sciences' (SPSS).

The production section was somewhat more complicated owing to the fact there was not a finite amount of correct or incorrect responses to be determined. The first criterion was that a full sentence was required in order to qualify for analysis. Consequently, single words, incomplete sentences or list-like constructions were automatically disqualified. If a fully-complete paragraph was produced, the number of *possible* correct instances for articles and plural endings was calculated and used as a base measurement against the number of *actual* correct instances in which it was used. This can be illustrated with the following example:

*She is in supermarket. She likes apple, banana, orange and peach. Today she's going to buy pineapple and eat it with a friend.*

This paragraph necessitates the use of three possible articles (i.e. a supermarket; a pineapple; and a friend), yet has only been implemented correctly once (i.e. a friend). Therefore, its score would be measured as one correct instance out of a possible three for articles (i.e. 1/3). Similarly, four plurals are required for the general countable nouns quoted here (i.e. She like apples, bananas, oranges and peaches), but since none of these have been correctly implemented the score would be zero out of four (i.e. 0/4). As with the first section, the scores were converted into percentages, collated and analysed using SPSS.

One other noteworthy point is that only those who completed all three diagnostic tests in their entirety were qualified to count as being a participant in the study.

#### **4.6.2 Qualitative data analysis**

Although qualitative data was collected in both Phases 1 and 2, the majority of this was derived from the focus group interviews. The small amount of remaining qualitative data garnered from in-class audio recordings and observations served the purpose of embellishing this.

After all interviews had been completed, they were replayed and listened to carefully several times. Sections deemed to be of particular relevance were then selectively translated and transcribed (Robson, 2002). In an attempt to objectify the data, recurrent patterns were numerically coded according to the four previously-outlined interview aims (Miles & Huberman, 1994; Tashakkori & Teddlie, 1998; Dörnyei, 2007). Just as those responses that related directly to the research questions were important in that they did indeed tend to cluster around an emergent theme, so were those which were seemingly more divergent, and, as a result, were also taken into account (Richards, 2005). In a similar vein, the in-class audio recordings and observations noted in the reflective journal underwent a similar process of analysis. Ample excerpts of these are provided in the Discussion chapter.

#### **4.7 Validity & reliability**

The importance of validity and reliability should never be underestimated (Brown, 2007). While it is unrealistic to assume that both could ever be achieved perfectly, attempts can certainly be made to maximise their realisation through a rigorous research design (Neuman, 2007). In such regard, one established way of doing this is to gain triangulation by integrating both quantitative and qualitative approaches (Creswell, 2003; Olsen, 2004). As outlined, this was striven for by supplementing the primary quantitative data from the diagnostic tests with qualitative data from the focus group interviews, and, to a lesser extent, with in-class audio recordings and observations. Furthermore, the study attempted to investigate cross-linguistic awareness by addressing both the identification *and* production of salient language items for Japanese learners. While some specific aspects

of validity and reliability have already been addressed, a more detailed account will now be presented in an attempt to galvanise them.

#### **4.7.1 Internal validity**

Internal validity addresses “the extent to which one has really observed what one has set out to observe” (Nunan, 2010, p232). In other words, it seeks to establish whether the independent variable has in fact exerted an effect or not (Mackey & Gass, 2005). Accordingly, there is an essential need to eliminate as many factors as possible to which the results could otherwise be attributed (Dörnyei, 2007). The design of the study therefore aimed to acknowledge this to a maximal degree. The independent variable of cross-linguistic awareness-raising adopted a variety of methods to ensure it was sufficiently thorough; namely, through the combination of error correction and translation quizzes, along with learner reflection, teacher explanation, writing tasks that stressed cross-linguistic awareness and peer evaluation. One potential drawback of this, however, is the difficulty in isolating specifically which of these factors is the most efficacious in raising such awareness, and also in what proportion. In light of this, it would perhaps be wiser to instead view these methods as one collective body of amalgamated techniques.

Another factor to consider is the influence of maturation. The passage of time could have influenced the control group’s overall ability to both recognise and produce articles and plural endings. The control group was also exposed to the diagnostic tests on three occasions within a short period of time, which may have also produced practice effects (Heiman, 2002). However, since the investigation period lasted only four weeks, any such improvement was likely to have been only minimal (Robson, 2002).

Finally, participant characteristics are another important issue to address. The main factor in countering such a potential threat was to employ homogenous learners. All of the participants were of a similar age and educational background, and unlikely to have been formally exposed to explicit cross-linguistic awareness-raising in the past.

However, one very significant limiting factor is that the participants in University 1 met twice a week, whereas those in University 2 met only once a week, thus producing a

marked disparity in the amounts of exposure to the treatment. Additionally, the differences in ability between the two universities may be another confounding variable. These issues will be returned to in the Discussion chapter.

#### **4.7.2 External validity**

Stanley & Clark (1966, p5) stated that “External validity asks the question of generalizability: To what populations, settings, treatment variables and measurement variables can this effect be generalized?” A threat related to this in the present study is the utilisation of non-random sampling. Since this is not representative, restrictions can be placed on how far the findings may be generalised (Mackey & Gass, 2005). However, one compensatory advantage in this regard is that the study incorporated adequate sample sizes since it is desirable to include a minimum of thirty participants in each group (Creswell, 2003).

Issues of reliability relate not only to the quantitative aspect of the study, but also to the qualitative, and, in particular, to the focus group interviews. Several considerations are implicated, partly relating to sample size, but predominantly to the interview process. With regard to the former, perhaps a larger participant number would have been more optimal (Krueger & Casey, 2000). However, owing to the prevailing conditions, this was impractical. In terms of the interview process itself, the extent to which a researcher’s personal characteristics influence its running also need to be taken into consideration (Zweig, 1948). As previously outlined, every attempt was made to attenuate potential bias by not only creating criteria and carefully preparing the questions, but also by conducting the interviews in the learners’ L1. Another factor in relation to interviews is the desire for participants to ‘please’ the researcher due to a perceived difference in power (Mitchell & Jolley, 2001). A concerted effort was therefore made to encourage participants feel at ease through the use of pre-interview small talk and to pose the questions in both a non-authoritative and non-confrontational manner (Smith & Osborn, 2003). Small gifts were also presented after the final sessions as tokens of appreciation. However, other potential problems were also seen to emerge. As already mentioned, some focus group members were unable to commit fully to all three sessions in University 1, as well as time being limited at both universities in which to conduct the interviews. Consequently, there was

insufficient time to explore simulated recall in detail, which, in turn, could have presented an incomplete picture. Furthermore, the amount of in-class audio recordings was also limited.

#### **4.7.3 Reliability**

Reliability accounts for “the extent to which our measurement instrument and procedures produce consistent results in a given population in different circumstances” (Dörnyei, 2007, p50). In this instance, the ‘measurement instrument’ was the set of three diagnostic tests and the ‘procedures’ were the cross-linguistic awareness-raising techniques. Although piloting both of these tools certainly contributed in helping their rigour to be enhanced, there are, however, some other issues that need to be raised.

With regard to the diagnostic test, and, as already mentioned, some instances of articles and plural endings may be easier to utilise than others (Azevedo, 1980) – as was observed in the pilot. This indicates that perhaps a greater amount of time was required for a fuller investigation to take place during the planning stages. As for the awareness-raising quizzes, an attempt was made to incorporate a gradual increase in difficulty, particularly with the translations, since they required more production-based processing (see Appendix B). However, the main problem associated with this is the difficulty in obtaining objective measurements. Similarly, in relating back to the diagnostic tests it was certainly far from simple to ascertain whether the same degree of difficulty had been maintained across all three tests.

The strict criteria for diagnostic test-scoring did, however, enable consistent measurements to be drawn, and in this respect can provide good inter-rater reliability due to it being easily replicable. Furthermore, the production section did not impose finite ‘right or wrong’ responses (although this aspect was addressed in the identification section), and as a result of being more open-ended enabled the participants to be more critically engaged.

#### **4.8 Role of the researcher**

The researcher had multiple roles. Not only those of a researcher, which was primary, but also those of a teacher of some of the participating classes, in addition to those of an interviewer. Although these teaching and researching roles would have been ideally kept separate, every effort was made to counteract any possible bias that may have arisen as a result. Attempts to reduce such bias have already been outlined in Section 4.7.2, *External validity*.

#### **4.9 Ethical issues**

The study made strong efforts to maintain a strict code of ethical conduct. This was achieved by following a series of steps. First, written consent was obtained from both institutions concerned. Next, all participants in the experimental groups were informed about the nature and purpose of the study, and given a consent form in Japanese to sign according to the criteria set by the British Educational Research Association (BERA) and Oxford Brookes University (see Appendix D). (It should be noted that participants in the control groups were not required to sign consent forms since no intervention was involved.) Finally, the opportunity to withdraw from the study at any time was also overtly explained, along with the fact that all data would be held in strict confidence and that any information alluding to participants' identities would not be revealed within the written content of the study.

#### **4.10 Summary**

The present study set out to explore (1) the effects of explicit cross-linguistic awareness-raising between Japanese (L1) and English (L2) on subsequent L2 written performance through the specific L1-referencing of articles and plural endings, and (2) how this might be connected to both the noticing and frequency of errors in L2 writing. To achieve these goals, a mixed-methods quasi-experimental design of sixty-nine participants from two

Japanese universities was implemented, in which an experimental group was exposed to a cross-linguistic awareness-raising treatment and compared with a counterpart control group. This process consisted of two distinct phases which first mainly quantitatively attempted to measure the effects of the intervention through statistical analysis, and secondly qualitatively attempted to supplement the primary data through content analysis of focus group interviews. Various measures were also taken in order to maximise the validity and reliability of the study.

## **5 RESULTS**

### **An overview of the quantitative findings**

#### **5.1 Introduction**

In order to answer the main research question of what the effects of explicit cross-linguistic awareness-raising are on subsequent L2 written performance through the specific L1-referencing of articles and plural endings, the sub-question of how this might be connected to the subsequent noticing and frequency of errors needed to be posed. Identification related directly to the 'noticing' aspect of errors, while production to the 'frequency'. In turn, this yielded four distinct categories that formed the bases of the dependent variables; namely, (1) the identification of articles; (2) the production of articles; (3) the identification of plurals; and (4) the production of plurals. Thus, the results are arranged in this specific order. The purpose of this chapter is to report the quantitative findings, while the following Discussion chapter will interpret them in conjunction with the qualitative data. First, however, a very brief overview of the means by which the data were analysed will be outlined.

#### **5.2 The means of analysis**

It was decided that the most suitable means of analysis would be a three-way repeated measures analysis of variance (ANOVA). This was selected due to its power in being able to simultaneously analyse the separate and combined effects of the predictor variables of gender, university and group, along with whether an individual's performance had changed over the course of the three diagnostic tests. Thus, the within-subjects factors were the three diagnostic tests, while the between-subjects factors were gender (i.e. female or male), university (i.e. University 1 or University 2) and group (i.e. control or experimental). These within- and between-subjects factors were analysed concurrently for each of the four dependent variables using ANOVA on SPSS. These quantitative results will now be presented.

### 5.3 Identification of articles

The within-subjects results revealed that there was a significant effect of the interaction between test and group ( $F=97.58$ ,  $p<0.001$ ). This implies that the performance over the three diagnostic tests differed between the control and experimental groups. Similarly, there was also a significant main effect of test ( $F=84.42$ ,  $p<0.001$ ), indicating that performance over the three diagnostic tests was different.

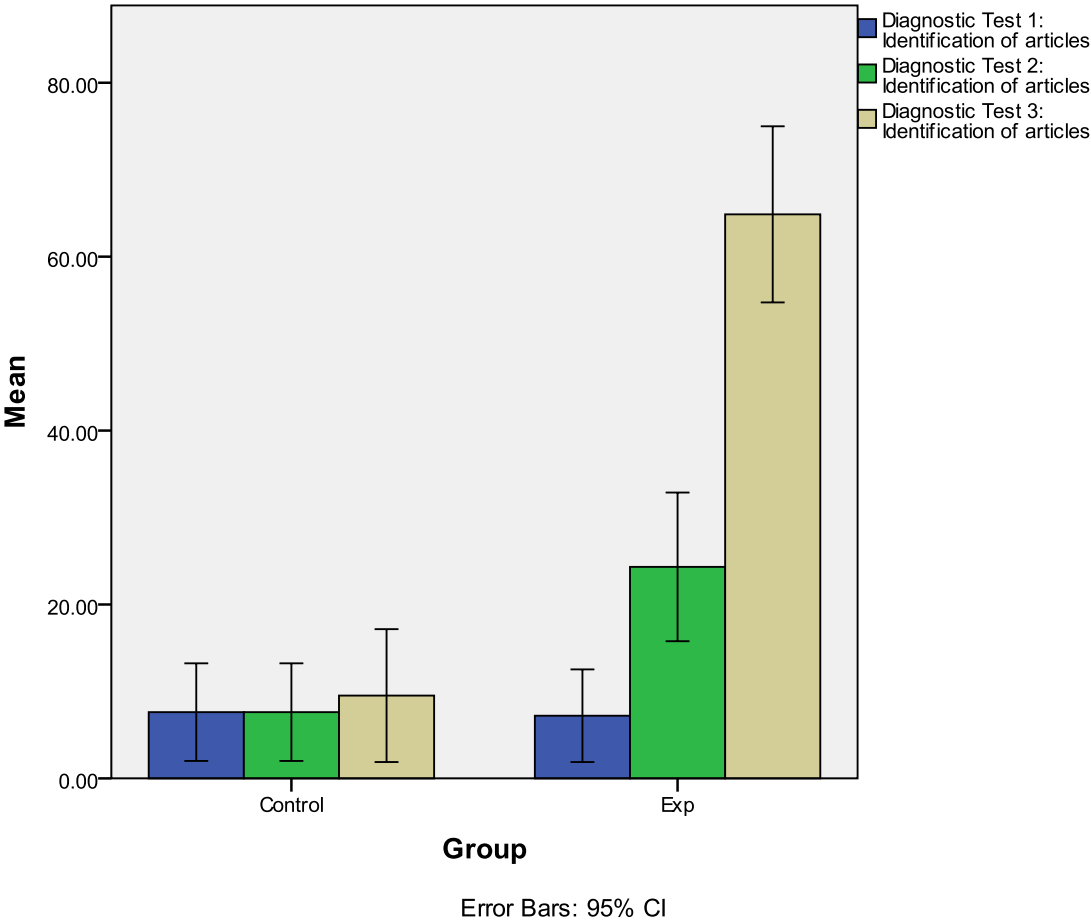
The between-subjects results showed that there was a significant main effect of group ( $F=39.45$ ,  $p<0.001$ ), indicating that the performance of the control group differed from that of the experimental group. A significant main effect of university was also discovered ( $F=5.34$ ,  $p=0.024$ ), which denotes a difference in performance between the two universities.

Post hoc analyses were also conducted using a Student-Newman-Keuls (SNK) test. The purpose of this was to provide a firm statistical basis from which to confirm or refute any assertions made in regard to whether the participants performed better in one test or another. Such analyses have the power to ascertain exactly the source of where any differences might happen to lie, as well as to correct the additional risk of Type I errors when performing multiple tests on the same data (Hinton, 2004, p352).

The post hoc results indicated that for the control group there was no significant difference in performance between all three diagnostic tests, as they all fell within one subset. The mean scores (given as a percentage) for the correct identification of articles in each of these diagnostic tests were very similar, producing values of 7.62%, 7.62% and 9.52% respectively.

For the experimental group, however, there was a significant difference between the performance across all three diagnostic tests, as they all fell within three separate subsets. The respective mean score for each of these was 7.21%, 24.32% and 64.87%.

This set of findings appears to be exactly in alignment with the first *a priori* research hypothesis regarding identification of articles, which predicted that awareness-raising of cross-linguistic comparisons and contrasts through specific L1-referencing of articles would help encourage the subsequent noticing of corresponding L2 errors. This is demonstrated by the fact that the control and experimental groups started with a comparably low level of article awareness, with the intervention producing an exponential increase for the experimental group. This trend is represented in Figure 5.1. The difference in performance between the two universities will be addressed in the next chapter.



**Figure 5.1: Mean percentage of the correct identification of articles between the control and experimental groups**

#### 5.4 Production of articles

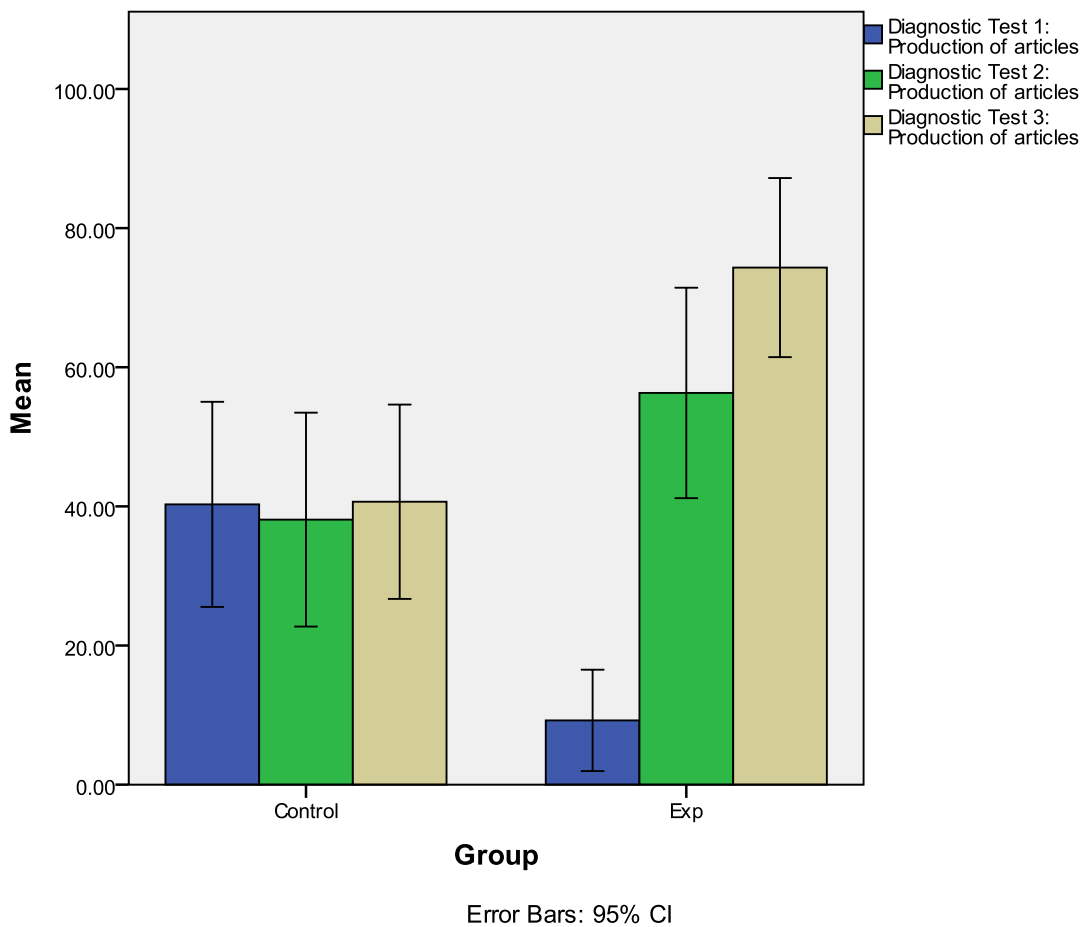
The within-subject results revealed that there was a significant effect of the interaction between test and group ( $F=37.33$ ,  $p<0.001$ ), which indicates differing performances between the control and experimental groups across all three diagnostic tests. A significant main effect of test was also detected ( $F=47.79$ ,  $p<0.001$ ), suggesting that performance was also different across all three diagnostic tests.

In terms of the between-subjects results, no significant effect of group was found ( $F=1.503$ ,  $p=0.225$ ). This indicates that the performance between the control and experimental groups was not significantly different. Conversely, however, a significant main effect of university was detected ( $F=11.48$ ,  $p<0.001$ ), which implies that a difference in performance existed between the two universities.

The post hoc results indicated that for the control group, there were no significant differences between the mean scores over the three diagnostic tests, as they all fell within one subset and had very similar values of 38.1%, 40.29% and 40.67% respectively.

However, a significant difference was found to exist between the three diagnostic tests for the experimental group as all of the mean scores fell within three separate subsets. These scores were 9.23%, 56.31% and 74.32% respectively.

This set of findings does not support the second hypothesis regarding the production of articles, which posited that awareness-raising of cross-linguistic comparisons and contrasts through specific L1-referencing of articles would help reduce the subsequent frequency of corresponding L2 errors, since the between-subjects results were not significantly different. However, although this was not statistically substantiated, it is nevertheless possible to acknowledge that an overall improvement in accuracy did occur for the production of plurals across the three tests, as was indicated in the post hoc test, and is represented in Figure 5.2. Possible reasons for this pattern of results will be explored in detail in the next chapter.



**Figure 5.2: Mean percentage of the correct production of articles between the control and experimental groups**

### 5.5 Identification of plurals

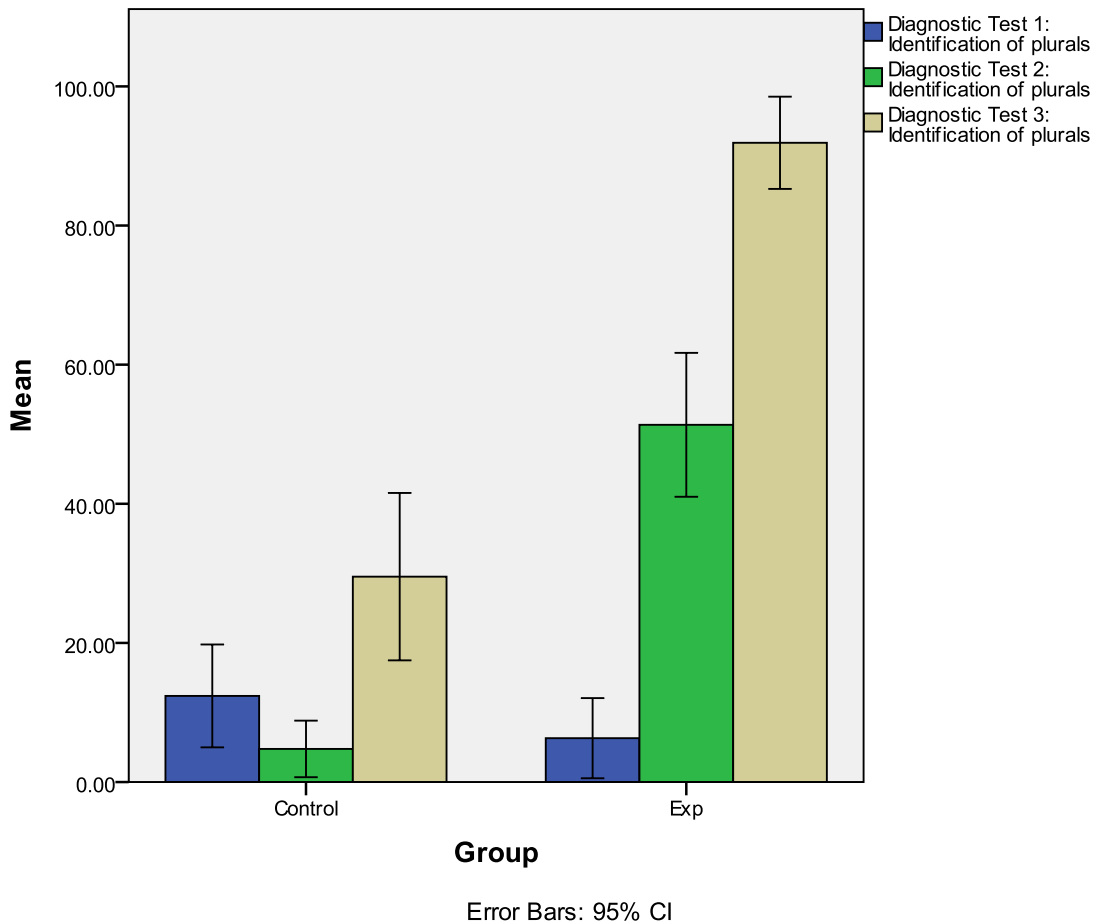
The results for the identification of plurals were similar to that of the identification of articles. The within-subjects results showed that there was a significant effect of test and group interaction ( $F=70.04$ ,  $p<0.001$ ), suggesting that the performance over the three diagnostic tests differed between the control and experimental groups. There was also a significant main effect of test ( $F=162.32$ ,  $p=0.001$ ), which implies that performance differed over the three diagnostic tests.

With regard to the between-subjects results, significant effects of both group ( $F=89.33$ ,  $p<0.001$ ) and university ( $F=5.48$ ,  $p<0.022$ ) were also discovered, indicating that the performance between the control and experimental groups differed, as did the performance between the two universities.

The post hoc results for the control group revealed that there was no significant difference between the first and second diagnostic tests, but there was between the third, as it fell within a separate subset. The respective mean scores for the correct identification of plurals in each of the three diagnostic tests was 4.76%, 12.38% and 29.52%.

As for the experimental group, a significant difference was found between the performance in all three diagnostic tests, as they fell within three separate subsets, with the respective mean scores for correct responses being 6.31%, 51.35% and 91.89%.

As with the identification of articles, this set of findings also appears to support the third hypothesis that awareness-raising of cross-linguistic comparisons and contrasts through specific L1-referencing of plurals would help encourage the subsequent noticing of corresponding L2 errors. Although there was a fluctuation in performance between the diagnostic tests in the control group, the fact that the control and experimental groups differed significantly from each other allowed the null hypothesis to be rejected. These results are represented in Figure 5.3.



**Figure 5.3: Mean percentage of the correct identification of plurals between the control and experimental groups**

## 5.6 Production of plurals

The within-subject results showed that the interaction between test and group was significant ( $F=37.1$ ,  $p<0.001$ ), indicating that the performance between the control and experimental groups was different over the three diagnostic tests. There was also a significant main effect of test ( $F=19.73$ ,  $p<0.001$ ), which suggests that performance over the three diagnostic tests was different.

With regard to the between-subject results, there was a significant main effect of group ( $F=44.58$ ,  $p<0.001$ ), meaning that the performance of the control and experimental groups differed from each other. Finally, a significant main effect of university was also detected ( $F=15.64$ ,  $p<0.001$ ), which indicates a difference in performance between the two universities.

The post hoc results for the control group were somewhat equivocal. The respective mean scores of correct responses for the three diagnostic tests were 10.71%, 17.61% and 3.67%, yet the first diagnostic test overlapped within two subsets. While the performance in the second diagnostic test was greater than that of the third, there was no detectable difference between the performance in the first and third tests nor between the second and first. On the basis of this overlap, however, it is arguable that there is little difference between the three performances. These results are shown in Table 5.1.

Student-Newman-Keuls<sup>a,b</sup>

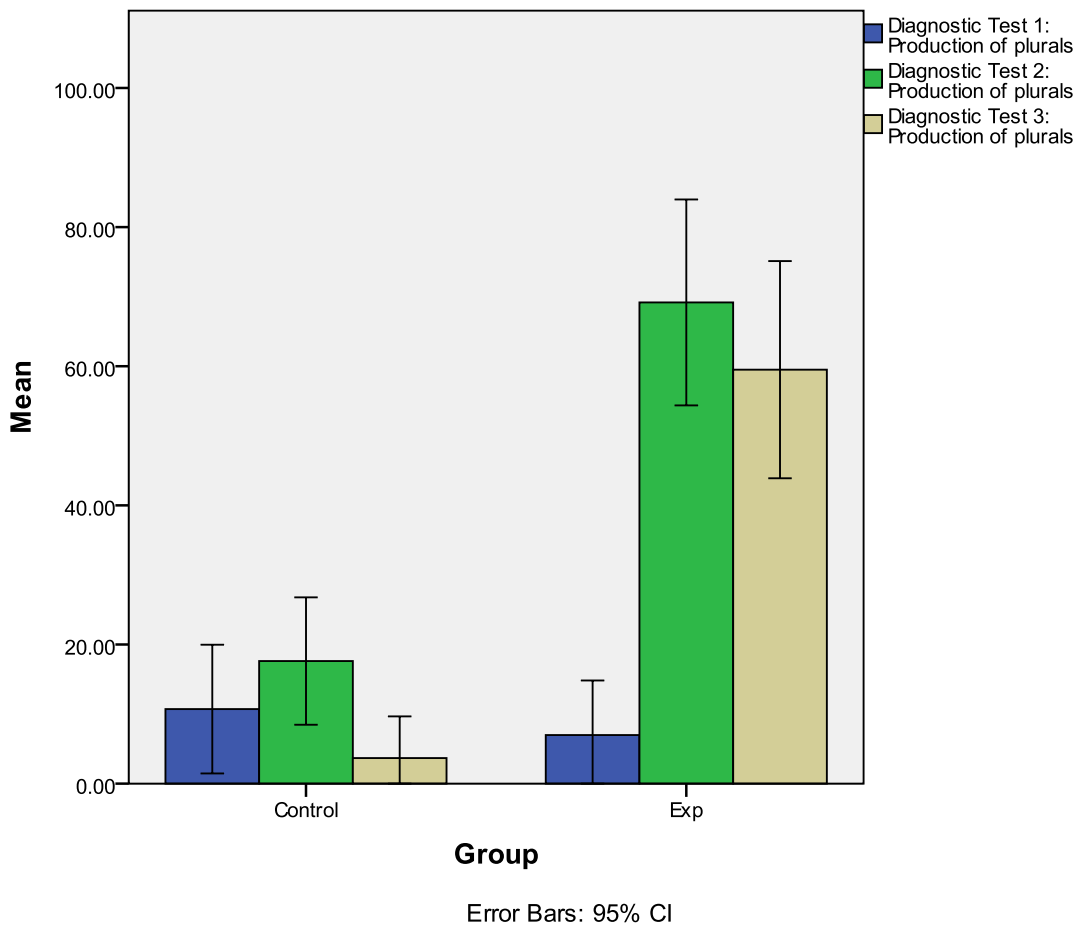
Test	N	Subset	
		1	2
3	35	3.6735	
1	35	10.7143	10.7143
2	35		17.6189
Sig.		.203	.212

**Table 5.1: Results of the post hoc test for the production of plurals control group**

In terms of the experimental group, the mean scores for the second and third diagnostic tests were 69.17% and 59.5% respectively, and were indistinguishable from each other in terms of significance, as they fell within the same subset. However, the first diagnostic test, which displayed a mean score of 6.98%, was significantly different from the other diagnostic tests since it fell within a separate subset.

Although a non-exponential increase in performance was observed in the experimental group, this set of findings does in fact appear to support the fourth hypothesis that

awareness-raising of cross-linguistic comparisons and contrasts through specific L1-referencing of plurals would help encourage the subsequent noticing of corresponding L2 errors since there is an overall significant difference in performance between the control and experimental groups. These findings can be observed in Figure 5.5. Possible reasons for this observed trend of results will be explored in depth in the next chapter.



**Figure 5.4: Mean percentage of the correct production of plurals between the control and experimental groups**

## 5.7 Summary

The study sought to explore the effects of explicit cross-linguistic awareness-raising through specific L1-referencing (Japanese) on L2 written performance (English). Generally, it was found to that L2 written performance improved as a result.

Specifically, the study examined performance in relation to articles and plural endings (which are thought to be problematic areas for Japanese learners), and how these items might be related to the subsequent noticing and frequency of associated errors.

With regard to articles, a significant improvement was found in their identification, but not in their production. This suggests that while such awareness-raising assisted with the noticing of related written errors, it was not sufficient enough to bring about a significant reduced frequency of corresponding produced errors.

In terms of plural endings, a significant improvement was found in both identification and production. This indicates that having awareness raised in this area not only increased the noticing of corresponding errors, but also reduced the frequency of such errors, thereby improving written L2 accuracy.

An interpretation of the pattern of results to have emerged will now be presented in the following chapter.

## **6 DISCUSSION**

### **An interpretation of the quantitative findings in conjunction with the qualitative data**

#### **6.1 Introduction**

While the quantitative data provided a core for the main body of results, the qualitative data effectively served as a set of limbs to help fully mobilise it.

It was found that the qualitative data generally yielded results similar to that of the quantitative data, thereby supporting the prediction that explicit cross-linguistic awareness-raising through specific L1-referencing would improve L2 written performance in terms of an increase in the noticing and decrease in frequency of L2 errors relating to articles and plurals.

However, the emergent pattern of results throughout each of the four dependent variables is yet to be fully explored. This will now be addressed and interpreted in conjunction with carefully selected aspects of the qualitative data to support, embellish and illuminate the statistical findings.

Finally, in tandem with the overall results, other relevant aspects of the research field will be taken into consideration in order for conclusions to be drawn in the final chapter.

#### **6.2 Identification of articles**

##### **6.2.1 Indications of increased article awareness**

As outlined, it was found that the experimental group improved exponentially in their ability to identify, or 'notice', article omission errors as their awareness of articles increased over time. This was something that was mirrored in the focus group interviews.

During the pre-intervention interviews, participants were asked to select from a choice of eight options those grammar items which were deemed to be of importance during the L2 writing process. Only one out of the six participants initially stated that an awareness of articles was necessary, whereas this increased to four in the post-intervention interviews. Likewise, this indication of increased article awareness was reflected in other post-intervention responses:

*Maybe I've become more aware of these things (i.e. articles) now. [Participant 2, University 2]*

*Concentrating on them (i.e. articles) completely over the last four weeks...I haven't had a choice but to become more aware of them! [Participant 3, University 1]*

During a mid-intervention interview, one participant also noted how the awareness-raising techniques themselves had been beneficial:

*None of the classes I'd taken up until now had a special way of helping me to become aware of how important it is to use articles. I find the quizzes that we're doing at the start of every lesson really helpful. [Participant 2, University 1]*

Interestingly, when asked if there were perhaps any alternative or more effective ways to raise awareness of the selected language items, none of the participants were able to offer any concrete suggestions. While on the one hand this might be indicative of the error correction and translation quizzes being suitable means of awareness-raising for this particular group of learners, it is not to say that other methods would have been ineffective. Indeed, the degree to which these two awareness-raising techniques were appropriate in relation to this study will be explored in greater depth in Section 6.7.1, *Which method of cross-linguistic awareness-raising is the most effective?*

### **6.2.2 The significant effect of university**

A significant difference was found to exist between the two universities, not only for the identification of articles, but also for the other three dependent variables. This naturally gives rise to the question as to why this might be.

There are perhaps several possibilities for this. The first is that the overall English ability in University 1 was generally of a higher level. Partially, this could be attributed to its participants specialising in International Studies, which placed a strong emphasis on foreign language learning (as opposed to those in University 2 whose respective subjects did not), and partially because of the way in which the classes were organised in terms of ability at both universities. Specifically, those in University 1 were streamed in accordance to their TOEIC<sup>2</sup> scores. While there is some contention as to how valid such test scores may be in representing communicative ability from the assessment of receptive skills only (e.g. Herriman, 2004), those in University 2 were placed in English classes merely on the basis of which subject they specialised in.

Secondly, there appeared to be a discrepancy between the motivation levels of each university. This was recorded in the researcher's reflective journal. For University 1, it was noted that:

*Both of these classes seem so unmotivated. Tuesday, May 24<sup>th</sup>, 2011*

Conversely, in University 2:

*Everyone seems extremely attentive and keen to learn. Monday, 23<sup>rd</sup> May, 2011*

*It's really interesting to see that some of the students have voluntarily written detailed memos in their notebooks about what they've learnt from the awareness-raising quizzes. Monday, 11<sup>th</sup> July 2011*

However, perhaps one of the main contributing factors for the observed differences in performance between the two universities is the fact that the classes in University 2 met only once a week, whereas those in University 1 met twice. This effectively means that those in University 1 were exposed to precisely double the amount of treatment to that of University 2. As already mentioned in the Methodology chapter, this may have implications for the validity of the results, and should definitely be revised if ever the study were to be replicated. This issue will now be explored further.

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<sup>2</sup> TOEIC is an acronym for Test Of English for International Communication

## 6.3 Production of articles

### 6.3.1 Exploring the non-significance of results

The most pertinent question to emerge in relation to this set of findings is why, in spite of there being a significant difference in the identification of articles between the control and experimental groups, there was not in production.

One possible explanation is that the limited treatment period in University 2 was insufficiently long enough to exert any deep changes in ability regarding article production. This was certainly echoed in the post-intervention interviews, as both universities appeared to present rather different perspectives on the matter. When participants from University 2 (who had only received four awareness-raising sessions in contrast to eight in University 1) were asked to reflect on their pre- and post-intervention written performances, their responses tended to lack confidence:

*Participant 1: I think it was definitely good to focus on those two items (i.e. articles and plurals), but I'm not sure if they've sunk in yet.*

*Participant 2: Yes, I feel the same. I just don't think we had enough to get into it properly. I think it might've been better if we'd had more time.*

This is a stark contrast from University 1, whose participants in the post-intervention interviews had rather different feelings:

*The most important thing for me was doing a little bit every lesson over a period of a few weeks. It's so important to keep repeating it in order to get it right.*  
[Participant 2]

*I've really got a feeling that as a result of these quizzes the number of errors I make now has gone down now if I compare it with before.* [Participant 1]

*I can't speak for everyone, but I can certainly say in my case that I've made progress with this long-standing problem of how to use articles correctly.*  
[Participant 3]

It is interesting to consider whether a different set of results would have been produced had University 1 received a similar amount of exposure to the awareness-raising

techniques. A lack of time also prevented follow-up tests from being conducted in order to establish whether any such changes in article production were stable or not. Previous studies have pointed towards the fact that, although awareness-raising of particular grammar items may indeed prove to be of benefit in enhancing production-based accuracy, no assurance can be given as to how long-lasting its effects may be (e.g. Sugiharto, 2006). Any future replications of this study should therefore attempt to take this into account.

### 6.3.2 The complexity of articles

One thing to appear clear is that articles seemed to be an extremely relevant issue for the learners in this study:

*Participant 2: I get myself in a muddle as to whether I should use 'a' or 'the'.*

*Participant 1: Yes, me too! I don't understand how to use them properly.*

[University 1, pre-intervention interview]

*Whenever we're asked to check our classmates' work, I never know whether they should be using 'a' or 'the'.* [Participant 1, University 1, mid-intervention interview]

*Even if the teacher explains a general rule about how to use 'a' and 'the', I still find it hard to distinguish which one to use. Articles are much harder than plural endings. Just when I think I've got it, I find out I haven't. It can be quite surprising! It makes me realise just how important it is to understand how to use articles properly.* [Participant 3, University 1, mid-intervention interview]

*I really have no idea about how 'a' and 'the' work!* [Participant 1, University 2, mid-intervention interview]

Difficulties concerning articles were also reflected in the in-class audio recordings. An example of this is illustrated in Appendix E, in which the problem of differentiating between definite and indefinite articles was demonstrated during a paired activity. This 'think aloud' technique could be useful in enabling insights to be gained into the intricate workings of how such processing might occur, as well as how the role of the teacher could be instrumental in orchestrating such clarification.

The observed difficulties outlined here would suggest that it is not only the omission of articles that is problematic, but also *how to distinguish between them correctly*. This could

be attributed to the English article system not consisting of “one-to-one form and meaning relationships” (Butler, 2002, p452), as well as to the fact that article distinction is generally considered a deeply complex issue (Anderson, 1984). Robinson (1967), for example, lists some forty-four rules of how they are to be implemented. Even those learners who have studied English for a considerable length of time still typically experience difficulty in discriminating how to use articles properly (e.g. Kharma, 1981; Yamada & Matsuura, 1982).

While unravelling the complexity of articles to a fully justifiable degree is beyond the scope of this discussion, there are other bodies of research suggesting that the role of awareness-raising might also be implicated in facilitating the successful resolution of these difficulties (e.g. Rutherford & Smith, 1988; Norris, 1992). Thus, it seems apparent that any related future research lying within this territory would certainly prove beneficial, especially when cross-linguistic comparisons and contrasts such as the Japanese particle system are taken into account. Possible avenues for future research will be returned to in the next chapter in Section 7.4, *Implications for possible future research*.

### **6.3.3 Concluding remarks regarding the production of articles**

In spite of the issues surrounding the non-significance of the results and the complexity of articles, one point in particular would still appear very relevant: the *overall trend* displayed in the experimental group was in congruence with the expected direction of results. The control group’s performance remained unaltered over the course of the investigation period, while the experimental group’s improved. These changes were also noted by the participants of the experimental group:

*Ever since we’ve started doing these quizzes, I’ve begun to care more about how I use articles – even if it’s just a simple sentence.* [Participant 3, University 1, mid-intervention interview]

*Up until now, I’d never really paid attention to ‘a’ and ‘the’ – I never knew which one to use. For the first time, though, I really feel like I’m slowly learning how to do it.* [Participant 1, University 1, mid-intervention interview]

*I've started to understand more about how to use articles properly. Before, I just used to make them up as I went along!* [Participant 2, University 1, post-intervention interview]

*It's great we had the opportunity to take part in this research and try this new style of learning. I think it's probably helped me in some way.* [Participant 3, University 2, post-intervention]

In addition, perhaps one of the most striking features in this set of results is the fact that the experimental group started off with a much lower apparent level of production ability than the control group (9.23% as opposed to 38.1%), and then proceeded to supercede the control group in their subsequent performances. This disparity between the two groups from the outset further reinforces the need for equal exposure time to the treatment. Given the time restrictions of the study, the failure to accomplish this is, again, certainly a key factor to take into consideration for related future research.

## **6.4 Identification of plurals**

### **6.4.1 The possible role of katakana import words**

Perhaps the most curious finding in this section is why the control group scored significantly higher in the third diagnostic test compared to the first and second. In an attempt to answer this question, the plural components of all three diagnostic tests first need to be identified and examined in terms of which kinds of countable nouns were incorporated.

One of the marked features of the first and second diagnostic tests is that some of the countable nouns that were placed for inclusion have been incorporated into the Japanese katakana<sup>3</sup> lexicon of foreign import words. According to Kodansha's Japanese-English and Collins Gem English-Japanese dictionaries, these particular nouns could be used in katakana as an alternative to corresponding Japanese-derived equivalents *within the given context* in which they appeared. This is indicated in Table 5.1.

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<sup>3</sup> *Katakana* refers to one of the three syllabic scripts of Japanese, and is most frequently used for the transcription of foreign import words except for Chinese (Tohsaku, 1993, p29).

Diagnostic Test 1	Diagnostic Test 2	Diagnostic Test 3
<i>noodle*</i>	<i>CD**</i>	<i>animal</i>
<i>type</i>	<i>band*</i>	<i>cat</i>
<i>restaurant*</i>	<i>musician*</i>	<i>dog</i>

\* = commonly used in favour of a corresponding Japanese-derived equivalent within the given context

\*\* = used exclusively as an import word with no corresponding Japanese-derived equivalent

**Table 6.1: Countable nouns incorporated in the diagnostic tests for the identification of plurals**

Previous research has suggested that katakana English words often help Japanese learners to acquire English vocabulary (e.g. Brown & Williams, 1985; Daulton, 1998). Nation (1990, p35) stated that such cognates can help lighten the “learning burden”, and this could be useful in assisting the rapid acquisition of related English basewords (Yoshida, 1978). Conversely, others have regarded katakana English to be a hindrance, not only due to its obvious lack of phonological similarities (e.g. Kay, 1995; Tsujimura, 1996), but also – and in particular – because of the semantic changes such words frequently undergo, which, in turn, create the potential for being inappropriately applied within certain contexts (e.g. Sheperd, 1995; Yamazaki, 1997).

However, what seems to be more important with regard to this set of findings is the degree to which the learners were able to accommodate L2 syntax into those items which contain both a lexical and contextual overlap between L1 and L2. Since most nouns in Japanese do not require a distinction to be drawn between countable and uncountable nouns, it would seem logical to apply the same basis of rule to loanwords, even when they require plural endings in the original language from which they are derived. Thus, to say “*He likes*

*listening to CD* – which is a sentence used in the second diagnostic test – would be entirely natural in Japanese. While it is difficult to assume with any degree of certainty that L1 transfer is implicated here, it is, however, a possibility that if any such an influence were to exist, it might be ‘stronger’ in cases that entail katakana English words instead of a Japanese-derived equivalent. In other words, contextually-compatible imported English nouns may be more resistant to syntactic change compared to those which possess corresponding Japanese equivalents only.

From the pattern of results to have emerged, this would indeed appear to be evident. The control group’s lowest performance scores were observed in the second diagnostic test, which in turn contained the highest amount of katakana English words. This could also explain why the performance in the third diagnostic test was significantly better, as it contained no such katakana words that could be applied appropriately within the given context.

Furthermore, this could also account for why the scores across the three diagnostic tests for articles were virtually identical (7.62%, 7.62% and 9.52%). Since the use of articles in Japanese is not required, it would seem logical to suggest that a classification of countable nouns based on whether or not they stem from contextually compatible katakana import words would exert more of an influence on the production of plurals than articles.

Thus, the possible role of sub-classification of countable nouns based on whether they originate from contextually-appropriate katakana words or not is perhaps a key point of consideration for the future development of related research. This will be returned to in Section 7.4 in the next chapter, *Implications for possible future research*.

#### **6.4.2 Further possible explanations for the findings**

Another possibility for the higher scores in the third diagnostic test is that its sentences were generally shorter and less complex than those used in the first and second. An example of this is “*There were many type of sushi on the menu*” in the first compared with “*I usually like cat*” in the third. The former sentence might require more processing, as it contains a larger amount of grammatical and lexical features than that of the latter. Indeed,

the role of lexical density has often been linked to greater cognitive effort being required in order for effective linguistic processing to occur (Halliday, 1985; O'Loughlin, 1995; Schmitt & McCarthy, 1997).

A final explanation for the differences in scores is the influence of maturation effects. Perhaps there is a possibility that the control group gained sufficient practice in the first and second tests to improve their performance in the third. While it has already been acknowledged this is likely to be only minimal within the space of four weeks (Robson, 2002), it might, however, be possible when there is repeated use of a given lexical structure (Feustel, Shiffrin, & Salasoo, 1983; Jacoby & Dallas, 1981). For example, in the third test, every instance of countable noun was used conjointly with the verb *like*, which, if erroneous, could be easier to identify with practice compared to if a variety of structures had been employed.

#### **6.4.3 Reliability issues**

In light of all the possible explanations outlined in this set of findings, the reliability of the identification aspect of the diagnostic tests could perhaps be thrown into question. As a result, a number of considerations ought to be taken into account in the event of the research being replicated in the future. Perhaps the most significant of these would lie in the screening of which countable nouns should be employed, and would specifically entail utilising only those which have not been incorporated into common katakana usage within their relative contexts. Additionally, sentences of a similar lexical density should be constructed, along with a variety of verbs with which they appear, whether collocated or otherwise.

#### **6.4.4 Concluding remarks regarding the identification of plurals**

In spite of these limitations, the general findings would again seem to support the original hypothesis, which stated that awareness-raising of cross-linguistic comparisons and contrasts through specific L1-referencing of plurals would help encourage the subsequent noticing of corresponding L2 errors. The statistical analysis not only supported this, but was further reflected in the qualitative data. As with articles, four out of the six participants judged plurals to be an important factor to take into account when writing in English during

the post-intervention interviews compared with only one during the pre-intervention interviews. Post-intervention interview responses also reinforced this:

*I've definitely become more aware of how important plurals are.* [Participant 1, University 1]

*I'm really glad I took part in this research. I think I've got a better idea of what's going on with these plural things now.* [Participant 2, University 2]

An end-of-semester questionnaire regarding syllabus content also elicited similar feedback:

*Forgetting to use plural endings is a typically recurring issue for me. Having it explained every lesson was really helpful. I think that when I write in English from now on I'll be much less likely to forget using them.* [Anonymous respondent]

Comments such as these indicate that the intervention was indeed effective in helping to raise awareness of the importance of plural endings.

## **6.5 Production of plurals**

### **6.5.1 The further possible role of katakana import words**

The significant difference found to exist between the control and experimental groups suggests that the intervention had helped to increase the amount of correct instances of plural production. In spite of this, however, the fact that the post hoc results indicated a poorer performance for both groups in the third diagnostic test invariably begs the question as to why this would be the case.

In order to answer this question, it is again necessary to return to the diagnostic tests themselves and examine the content of the production sections. The pictures selected for the three tests (used for the basis of composing the descriptive paragraphs) necessitated the production of plurals for *fruit*, *animals* and *furniture* respectively. As with the identification issues mentioned in the previous section, it is possible that the role of katakana import words may also in some way be implicated in the production of plurals.

It is interesting to note that katakana English words are frequently characterised by a ‘semantic narrowing’, which means that their usage becomes comparatively more contextually-bound than the original English (Honna, 1995; Ishikawa & Rubrecht, 2008). In this instance, English words associated with *fruit* and *animals* are occasionally used in Japanese, but they generally tend not to refer directly to the corresponding nominal objects themselves. Rather, they take on more restricted meanings such as flavour in the case of fruit (e.g. *strawberry milkshake*; *apple pie*<sup>4</sup>) or cartoon characters for animals (e.g. *Mickey Mouse*; *Spider-Man*<sup>5</sup>). The case of *furniture*, however, is quite different. Most direct nominal reference to items of furniture in Japanese utilise English loanwords, such as *bed*, *sofa* and *lamp*; all of which were depicted in the photograph in the third diagnostic test. Therefore, if any degree of L1 transfer were to exist, it is a possibility that these words – as was postulated in the case of identification of plurals – could have a ‘stronger’ degree of influence compared with words which have no katakana equivalent. While this is still very much a tentative suggestion, such words that have dual usage in both L1 and L2 may require a greater degree of cross-linguistic awareness-raising in order to bridge such a cleft. Again, this is another fascinating avenue to explore in related future research.

In spite of these implications, it is still possible to acknowledge an overall shift in pattern of production skills, not only from the quantitative data, but also from the qualitative data:

*I kind of think I'm getting the hang of it more. Especially with plurals, I've realised there are some easy rules, like when the previous word is 'many', and stuff like that.*  
[Participant 3, University 2, mid-intervention interview]

*I find it really useful to compare Japanese and English because it helps me to understand that you need plural endings in English. If I hadn't taken part in this research project, I'd probably still be unaware of how important the differences are between the two languages, and I wouldn't know how to use plurals properly.*  
[Participant 1, University 1, mid-intervention interview]

*I've really got a feeling that as a result of these quizzes, the number of errors I make now with plural endings has gone down if I compare it with before.*  
[Participant 2, University 1, post-intervention interview]

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<sup>4</sup> Used in Japanese as ストロベリー・ミルクセーキ and アップルパイ

<sup>5</sup> Used in Japanese as ミッキーマウス and スパイダーマン

## 6.6 Further discussion questions

### 6.6.1 Which method of cross-linguistic awareness-raising is the most effective?

The question of whether the methods employed in this study were appropriate means of awareness-raising has already been addressed. It has also been established that the techniques used (i.e. error correction and translation quizzes, along with learner reflection, teacher explanation, writing tasks that stressed cross-linguistic awareness and peer evaluation) would be better regarded as a single body rather than an assembly of separate parts. In spite of this, however, the qualitative data may provide partial clues as to which technique in particular might have proved the most effective in raising cross-linguistic awareness.

Several interview responses focused on the quizzes and indicated that, although error correction is cognitively less demanding, translation is a more efficacious means of understanding the specific points of comparison and contrast between L1 and L2 in relation to the selected language items:

*I find it much more powerful to translate because you need a more active involvement. Finding mistakes is so much easier because it's passive.* [Participant 3, University 1, mid-intervention interview]

Participant 2: *I prefer error identification...just because it's easier!*

Participant 1: *Translation is better, though, because I've got a reference point to start from.*

Participant 3: *Yes, I agree. I think so too.*

[Univeristy 2, mid-intervention interview]

*I thought translating was a really useful way to find out more about the differences between Japanese and English. So, yes, definitely that (part of the study) was good.* [Participant 3, University 2, post-intervention interview]

The question also arose as to whether explicit cross-linguistic referencing should be given in L1 or L2. It seemed that L1 was preferable:

*Those kinds of explanations are better in Japanese because you always know you're remembering it in the correct way. I might sometimes misunderstand things if it's in English.* [Participant 2, University 1, mid-intervention interview]

Participant 2: *I prefer the explanations to be in Japanese, definitely. Because it's so much easier to understand it all.*

Participant 1: *Me too. Japanese is better because it's a more productive way to point out the differences between the two languages if we start with our own.*

[University 2, mid-intervention interview]

While both translation and use of L1 in the L2 classroom are fairly controversial pedagogical issues (e.g. Dagut, 1986; Harbord, 1992), it would, however, seem reasonable to provide such explanations in L1, at least until the learners have achieved a degree of L2 competency that allows for a complete comprehension of the intended meaning (Kavaliauskienė, 2009; Cook, 2001).

### **6.6.2 Focusing on errors: Is it appropriate?**

Another important issue is whether or not it is appropriate to focus on errors as a means of awareness-raising since it may be a possible cause of offense to some learners. What emerged from the interview data was the fact that although having errors pointed out might typically feel uncomfortable, it did nevertheless seem to be a necessary part of the learning process:

Participant 3: *I don't like it looking at where I've gone wrong. But at the same time I know I definitely shouldn't ignore it.*

Participant 1: *It's not particularly pleasant, but I understand that we shouldn't neglect our errors, either.*

Participant 2: *I think it's OK (to focus on errors) because I think it's important to never give up trying to improve our English. Just try, and then try again!*

[University 1, pre-intervention]

*I suppose (focusing on errors) is just one those things that can't be avoided. It's better to know where you're going wrong, though. Then I feel like I've learnt something new. Before I had absolutely no idea of how to use articles properly, and so this is a really good way of getting to know more about them. It's great!*

[Participant 1, University 1, mid-intervention]

Participant 2: *When I see my errors, I often think 'Oh, OK, I get it now!'*

Participant 3: *I think it's important to look at my errors because they'll help me get it right next time.*

Participant 1: *I'm really not very good at English, so even though I don't particularly like it (i.e. errors being pointed out), I understand that it's something necessary.*

[University 2, pre-intervention]

On the basis of these data, it is arguable that the pointing out of errors is justifiable as long as it is done with skill and tact so as to avoid demotivation and instill confidence (Agudo, 2001).

## **6.7 Overall concluding remarks**

Having examined both the quantitative and qualitative findings, it would appear that the explicit cross-linguistic awareness-raising techniques utilised in this study generally had a positive effect on the subsequent noticing and frequency of errors relating to articles and plural endings, thereby improving L2 written accuracy.

Although questions raised with regard to the study's validity, as well as to the direction of obtained results should be borne in mind to improve the rigor of further research endeavours, the findings can be used to as a firm basis to provide concrete pedagogical applications, not only for Japanese learners, but also for other monolingual groups involved in foreign language learning.

Finally, unique patterns found within the data set can provide the seed bases for further research questions to germinate. All of these issues will be collectively encompassed in the following and final chapter.

## 7 CONCLUSION

### 7.1 Summary of findings

This present study set out to examine the effects of explicit cross-linguistic comparisons and contrasts between learners' L1 (Japanese) and L2 (English) on subsequent L2 written performance. To meet this end, an investigation involving sixty-nine Japanese university students across two different institutions was carried out to establish the effects of such cross-linguistic awareness-raising on the subsequent noticing and frequency of written L2 errors. These errors were based on articles and plural endings – two language items thought to be problematic for Japanese learners. The basis of measurement was the degree of success and accuracy in error identification and written production tasks respectively. The general *a priori* hypothesis predicted that performance in these tasks would improve as a result of such awareness-raising.

The results indicated that, for the most part, this hypothesis was supported. The quantitative data revealed a significant improvement in the identification of articles, as well as in both the identification and production of plurals, but not for the production of articles.

This latter finding could perhaps be accounted for by the fact that besides articles appearing to be a highly complex issue, not all participants in the study had equal exposure to the awareness-raising treatment due to scheduling differences between the two institutions. This, in turn, could explain the significant difference in overall performance that was also detected between both universities.

However, the overall trend of the qualitative data suggested that such awareness-raising was beneficial in helping to improve written accuracy in relation to the two selected language items of articles and plurals. The specific techniques employed to raise awareness of the similarities and differences between L1 and L2 were generally found to be effective, particularly L1 translation exercises.

One point of interest was that fluctuations were discovered in the ability to both successfully identify and produce plural endings. This could have in some way been related to the way in which countable nouns were utilised or necessitated during the error identification and written production tasks. The role of whether English import words in Japanese were either appropriate for use or bound to the contexts in which they appeared may have been implicated.

## **7.2 Limitations of the study**

In spite of the collective body of cross-linguistic awareness-raising techniques used in this study appearing to generally have a beneficial effect on L2 written accuracy, a number of limitations restrict the findings from being applicable to other settings.

Firstly, non-probability sampling placed restraints on the study's external validity due to its lack of representativeness (Dörnyei, 2007; Mackey & Gass, 2005). Furthermore, limited participants in the focus group interviews also prevented a broader spectrum of opinions from being obtained, thereby rendering it non-generalisable to wider populations (Sarantakos, 2005).

Secondly, the marked differences between the two universities from the outset in terms of the amount of exposure to the treatment, as well as in ability, could have acted as a major confounding variable.

Thirdly, the non-screening of which types of countable nouns that were either placed for inclusion or elicited in the identification and production tasks also throws aspects of the testing method's reliability into question.

Finally, the lack of any follow-up investigations prevents the establishment of knowing whether any demonstrated positive effects of cross-linguistic awareness-raising were stable and long-lasting.

### **7.3 Pedagogical implications**

The present study is of pedagogical importance as it was driven by a justified need to address those language items deemed to be most problematic for Japanese learners. In so doing, it provides great potential in assisting such learners to become more aware of the importance of articles and plural endings, and thereby offers a concrete method with which to improve L2 written accuracy.

The collective body of awareness-raising techniques that has been outlined is highly practical in that it not only equips teachers with an instant arsenal of tools which are employable in variety of foreign language-learning contexts, but also in that they can be adapted to suit other areas of cross-linguistic concern. One such example pertinent for Japanese learners might be that of relative clauses (Schacter, 1974). Indeed, this rings equally true for any other language item judged to be worthy of attention according to the particular needs of a given group of learners at any one time.

These techniques are also flexible in that they can be employed in varying amounts over different points and lengths of time. Furthermore, they are not only restricted to Japanese learners, but are also equally applicable to other L1 learner groups in which cross-linguistic influences are thought to play a possible role in L2 learning. Short quizzes such as those used in this study are particularly recommended as class warm-up activities since they are more likely to produce a cross-linguistic awareness that permeates the remainder of a lesson.

Finally, the outcomes of the study grant teachers the confidence to not shy away from a learner group's mother tongue. While it should certainly not be the sole focus of a syllabus, judicious and skillful implementation of L1-referencing where deemed appropriate may enable learners to gain a new set of skills and perspectives that facilitate effective L2 acquisition, particularly with regard to written accuracy.

#### **7.4 Implications for possible future research**

Unexpected patterns to have emerged in the findings provide two possible advances for future research enquiries.

The first is how the differentiation between definite and indefinite articles may be best assisted through the use of cross-linguistic awareness-raising. While extensive research already exists on the complex issue of article discrimination (e.g. Kharma, 1981; Yamada & Matsuura, 1982; Heubner, 1985; Parrish, 1987; Thomas, 1989; Zdorenko, & Paradis, 2008), the role of specific L1-referencing may perhaps be of particular relevance in helping Japanese learners to gain clarity on the matter. As mentioned in the Discussion chapter, this could focus on the role of comparing and contrasting the Japanese particle system with the English article system, and testing its subsequent effects on L2 written accuracy.

The second – and indeed fascinating – avenue for exploration within a Japanese context is whether imported katakana English words are implicated in the degree of difficulty with which corresponding L2 syntactic modification is accommodated. This would entail investigating whether appropriately-applied or contextually-bound countable nouns originally derived from English are more resistant to syntactic change than Japanese-derived equivalents. If such a correlation were to exist, a subsequent investigation of how this might be best addressed could be carried out through the specific cross-linguistic awareness-raising techniques already developed in the present study, or even through other methods deemed justifiable upon further review of the literature and piloting.

It seems that for every research question to be posed, a new one arises in its wake. It is exactly this unfurling process of discovery which makes foreign language learning such an engaging journey – one filled with intrigue and wonder for both the reflective teacher-researcher and learner alike.

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## APPENDICES

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## APPENDIX A: Diagnostic tests

### A1: Diagnostic Test 1: Identification

#### QUIZ 1

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Write in PEN. Do NOT correct your answers.

Correct (O) or NOT correct (X)? If NOT correct, please write the correction.

<i>Example:</i>	My sister is a university student.	<u>O</u> →
	She study English.	<u>X</u> → <i>studies</i>

#### Saturday Night

1. Every Saturday night, I usually meet my friends. \_\_\_\_\_ →
2. We usually go to restaurant and eat dinner together. \_\_\_\_\_ →
3. I don't like noodle, but I like sushi. \_\_\_\_\_ →
4. Last week, we go to a new sushi restaurant. \_\_\_\_\_ →
5. It wasn't very convenient because it was far from station. \_\_\_\_\_ →
6. At first we couldn't find it, but finally we did. \_\_\_\_\_ →
7. What was best thing about the restaurant? \_\_\_\_\_ →
8. There were many type of sushi on the menu. \_\_\_\_\_ →
9. What sushi is you like? \_\_\_\_\_ →
10. Do you know any good sushi restaurant? \_\_\_\_\_ →

**A2: Diagnostic Test 1: Production**

**QUIZ 1**

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Write in PEN. Do NOT correct your answers.

Look at this picture.



Answer the following questions.

Where is this woman? What kind of fruit do you think she usually likes (at least 3 types)?

What is she going to buy today? Write a short paragraph of around 4 sentences.

### A3: Diagnostic Test 2: Identification

## QUIZ 2

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Write in PEN. Do NOT correct your answers.

Correct (O) or NOT correct (X)? If NOT correct, please write the correction.

<i>Example:</i>	My sister is a university student.	<u>O</u> →
	She study English.	<u>X</u> → <i>studies</i>

### Music

1. My friend name is John. \_\_\_\_\_ →
2. He likes listening to CD. \_\_\_\_\_ →
3. Last week he bought interesting CD. \_\_\_\_\_ →
4. Do you know where band is from? \_\_\_\_\_ →
5. It is from the USA. \_\_\_\_\_ →
6. He doesn't usually like American band. \_\_\_\_\_ →
7. Which kind of music do he likes? \_\_\_\_\_ →
8. Best kind of music for him is not American, but British. \_\_\_\_\_ →
9. He thinks British music is not as heavy. \_\_\_\_\_ →
10. Do you know any good musician? \_\_\_\_\_ →

**A4: Diagnostic Test 2: Production**

**QUIZ 2**

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Write in PEN. Do NOT correct your answers.

Look at this picture.



Answer the following questions.

Where is this woman? What kind of animals do you think she usually likes (at least 3 types)?

Which animal is she going to see next? Write a short paragraph of around 4 sentences.

## A5: Diagnostic Test 3: Identification

### QUIZ 3

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Write in PEN. Do NOT correct your answers.

Correct (O) or NOT correct (X)? If NOT correct, please write the correction.

<i>Example:</i>	My sister is a university student.	<u>O</u> →
	She study English.	<u>X</u> → <u>studies</u>

#### Choosing A Pet

1. Yesterday, I am very busy. \_\_\_\_\_ →
2. I didn't have much free time. \_\_\_\_\_ →
3. But, I decided to go to pet shop. \_\_\_\_\_ →
4. I saw many pets in it. \_\_\_\_\_ →
5. Do you like animal? \_\_\_\_\_ →
6. I usually like cat. \_\_\_\_\_ →
7. Best colour is not white, but black. \_\_\_\_\_ →
8. What colour cats be you like? \_\_\_\_\_ →
9. I don't really like dog, though. \_\_\_\_\_ →
10. Would you like to have new pet? \_\_\_\_\_ →

**A6: Diagnostic Test 3: Production**

**QUIZ 3**

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Write in PEN. Do NOT correct your answers.

Look at this picture.



Answer the following questions:

What kind of shop is this woman in?

What kind of furniture do you think usually likes (at least 3 types)?

What is she going to buy next? Write a short paragraph of around 4 sentences.

## APPENDIX B: Error correction & translation quizzes

### B1: Error Correction Quiz 1

## QUIZ

Find the error and write the correct sentences.

*Example:* He has two cat. → cats

### My free time

1. I have many hobby. →
2. I like watching movie. →
3. Last week I saw new movie. →
4. Cinema near my house is best in this town. →
5. I like watching movie there. →
6. Do you want to watch movie with me there next week? →

## B2: Error Correction Quiz 2

### QUIZ

Find the error and write the correct sentences.

*Example:* He has two cat. → *cats*

#### Susan's Hobby

1. Susan likes taking photo. →
2. Camera that she bought is very expensive. →
3. She bought it in shop near her house. →
4. What kind of picture does she take? →
5. For example, bird, flower and mountain. →
6. In the future, she might become famous photographer. →

### B3: Error Correction Quiz 3

## QUIZ

Find the errors and write the corrections.

*Example:* He has two cat. → cats

#### John's Job

1. John works in cafe. →
2. He is waiter. →
3. Every day he has to serve many customer. →
4. What kind of order does he take? →
5. For example, sandwich and drink. →
6. Cafe where he works is always very busy. →

## B4: Error Correction Quiz 4

### QUIZ

Find the errors and write the corrections.

*Example:* He has two cat. → *cats*

#### Mrs. Smith' Hobbies

1. Mrs. Smith enjoys collecting stamp. →
2. She has big collection. →
3. Collection is quite valuable. →
4. She also collects coin. →
5. Most unusual coin is from Egypt. →
6. Are you interested in collecting stamp or coin? →

## B5: Translation Quiz 1

### QUIZ

Translate into English.

Example: 私は英語を勉強しています。→ *I'm studying English.*

結婚式に着て行く服

1. 赤いジャケットが大好きです。→
2. 黒いジャケットが好きではありません。→
3. でも、来週は結婚式に行きます。→
4. だから、黒いジャケットを着なければなりません。→
5. 服屋さん買いに行きます。→
6. この街には服屋さんがたくさんありますか? →

## B6: Translation Quiz 2

### QUIZ

Translate into English.

*Example:* 私は英語を勉強しています。 → *I'm studying English.*

#### 買い物

1. 毎日、スーパーに行きます。 →
2. 一番近いスーパーは駅の隣です。 →
3. いつも野菜を買います。 →
4. 今日は人参と豆を買います。 →
5. でも、今日はスーパーが閉まっています。 →
6. どこでこれらの物を買いたいでしょうか? →

## B7: Translation Quiz 3

### QUIZ

Translate into English.

*Example:* 私は英語を勉強しています。 → *I'm studying English.*

夏

1. 天気が暑いです。 →
2. だから、帽子を被っています。 →
3. でも、帽子が嫌いです。 →
4. 涼しい所が好きです。
5. 海で泳ぎましょうか？ →
6. でも、この近くにはきれいなビーチが沢山ありません。 →

## B8: Translation Quiz 4

### QUIZ

Translate into English.

*Example:* 私は英語を勉強しています。→ *I'm studying English.*

#### 自転車の問題

1. 先月にピーターさんは新しい自転車を買いました。→
2. でも、先週にチェーンが壊れました。→
3. ピーターさんは自転車や車を修理することが苦手です。→
4. だから、自転車を修理屋さんに持っていきました。→
5. その店がいつも早く自転車を修理します。→
6. あなたは自転車を修理することが上手ですか? →

**APPENDIX C: Samples of class writing tasks**

**C1: Class report**

Your name:	St. no:	Date:
Last lesson's <b>topic</b> :		Report no:

**PART A**

Last lesson's **goals**:

\_\_\_\_\_/1

**Vocabulary**

*	*	
*	*	
*	*	
*	*	

\_\_\_\_\_/8

**Questions**

1. ....

2. ....

3. .... \_\_\_\_\_/6

Total: \_\_\_\_/15

**PART B**

Partner's name:	St. no:
-----------------	---------

1.

2.

3.

Comments & advice for your partner:  
*[especially check articles & plural endings]*











Total: \_\_\_\_/10

Part A: \_\_\_\_/15 + Part B: \_\_\_\_/10 = TOTAL: \_\_\_\_/25 → x 4 = \_\_\_\_%

## C2: Homework checksheet (peer evaluation)

Name:	Student number:	Date:
-------	-----------------	-------

Partner's name: \_\_\_\_\_

Category	Comments & Advice	Score
Full name? <input type="checkbox"/> Yes <input type="checkbox"/> No  Title? <input type="checkbox"/> Yes <input type="checkbox"/> No		---
Long?    1—2—3—4—5		
Content & ideas?    1—2—3—4—5		
Structure? (start, middle, end)    1—2—3—4—5		
Grammar?    1—2—3—4—5	<i>[especially check articles &amp; plural endings]</i>	
Spelling?    1—2—3—4—5		

Total (max 25): \_\_\_\_\_  
**X 4 = FINAL SCORE:** \_\_\_\_\_%

## APPENDIX D: Ethics documents

### D1: Approval form



#### WESTMINSTER INSTITUTE OF EDUCATION

#### MA in Education: Research Proposals

#### Application for ethics approval for a research project involving human participants

Before completing this form, please refer to the ethics section of the Education Research VLE. You can also wish to look at the BERA guidelines at <http://www.bera.ac.uk/files/guidelines/ethica1.pdf> and the University code of practice on ethical standards for research involving human participants at [http://www.brookes.ac.uk/res/policy/ethics\\_codeofpractice.pdf](http://www.brookes.ac.uk/res/policy/ethics_codeofpractice.pdf)

Please submit this form with your ER assignment, keep a copy for your supervisor to sign and include this in your dissertation. If you have any queries, please contact the Institute's Research Ethics Officer, Maggie Wilson, [mvwilson@brookes.ac.uk](mailto:mvwilson@brookes.ac.uk)

---

**1. Name of Researcher:** Matthew Wycliffe Lucas

**2. Researcher's e-mail address:** mw\_lucas@hotmail.com

**3. Name of Supervisor:** TBC

**4. Supervisor's e-mail address:** TBC

**5. Working Project Title:** *Crossing the Frontier: An Investigation Into the Effects of Explicit Cross-Linguistic Awareness-Raising on the Subsequent L2 Written Performance of Japanese Learners*

**6. Summary of proposed research (including a brief account of research methods):** An experimental group will be explicitly exposed to L1 & L2 cross-linguistic referencing and awareness-raising techniques, and compared with a control group who receive no such treatment in an attempt to investigate whether this has an effect on subsequent L2 written performance.

**7. Participants involved in the research (including number, source and method of recruitment):** A total of 80 Japanese second-year university students will participate: 40 in the experimental group and 40 in the control group. They will be recruited from pre-existing classes assigned to the researcher by the institutions concerned.

**8. Main research methods:** Quasi-experimental: quantitative methods to gather data on a) cross-linguistic awareness and b) error noticing and error frequency; with additional qualitative data from: the researcher's observations; questionnaires with the learners; interviews with volunteer learners; and possible video recordings.

**9. Does your proposed research include any of the following:**

- Deception of participants? *no*
- Financial inducements? *no*
- Possible psychological stress? *no*
- Access to confidential information? *no*
- Dependency relationships? *no*
- Involvement of vulnerable participants *no*

**10. Potential benefits of the proposed research:** Monolingual L1 learner groups may benefit if cross-linguistic awareness-raising is deemed to be of pedagogical relevance for a) increasing the noticing of common error patterns and b) reducing the frequency of such errors.

**11. Potential risks involved in the proposed research:** None foreseen.

**12. Support to be given to participants (as appropriate):** Consultation with the researcher if necessary.

**13. Plan for obtaining informed consent.** Please ensure that you give a copy of your participant information sheet and consent form to your supervisor. (Consent forms are not needed for questionnaires.)

**14. Steps to be taken to ensure confidentiality of data:** All data will be kept confidential by the researcher.

**15. Steps to be taken to ensure anonymity of data:** No participant names will be revealed to anyone other than to the researcher.

**16. Steps to be taken to ensure secure storage of data:** All data will be stored confidentially by the researcher.

**17. I have read and understood the University's Code of Practice on research involving human participants** (<http://www.brookes.ac.uk/res/ethics/>):

Signed: *M W Lucas*                      Researcher: Matthew Lucas    Date: 1<sup>st</sup> May 2011

Signed: ..... Supervisor                      Date: .....

Signed: ..... IREO                      Date: .....

## D2: Participant consent form (Japanese version)

### 調査承諾書

#### 調査者

マット ルーカス

(桃山学院大学 大阪府 日本 / オクスフォードブルックス大学・イギリス)

#### 調査目的

日本人英語学習者の文章作成における正確さを向上させる、最も効果的な手段を研究するため。

#### 調査手順

- 1) 生徒への日本語と英語における類似点および差異の認識度調査。
- 2) 日本語と英語における類似点および差異の認識の引き上げ。
- 3) 2011年6月と7月に4週間にわたり検証を実施し、文章作成におけるその後の効果を測定する。

#### 調査手段

- 1) 宿題と授業におけるレポート。
- 2) 授業の録画もしくは録音。(録画・録音を依頼する場合は事前に依頼します。)
- 3) 生徒へのインタビュー。(自ら志願する者のみ)。

#### この調査によるあなたへの利益

あなたの英語力を向上させる可能性があります。

#### この調査によるあなたへの損害

予想される損害はありません。

#### 機密保持に関して

すべての記録は厳重に取り扱われ、外部に開示されることはありません。

#### この調査への参加

調査への参加は志願によるもので、強制ではありません。

#### 連絡先

この研究に関する質問があれば、授業時間内に質問するか、次のEメールアドレスにメールを送って下さい。email: [mattlucas@andrew.ac.jp](mailto:mattlucas@andrew.ac.jp)

#### この調査に対する承諾

この調査に参加することを承諾します。

署名 \_\_\_\_\_

日付 \_\_\_\_\_

調査にご協力ありがとうございます。

**D3: Participant consent form (English translation)**  
**RESEARCH CONSENT FORM**

**Researcher**

Matt Lucas (Momoyama University, Osaka, Japan / Westminster Institute of Education at Oxford Brookes University, UK)

**Research purpose**

To investigate the most effective ways of helping Japanese learners of English to improve their writing accuracy.

**Procedure**

1) Check students' current level awareness of the similarities and differences between Japanese & English; 2) Raise more awareness of this; 3) Measure its subsequent effect on written work over 4 weeks in June and July 2011.

**Measurement**

1) Homework & Class Reports; 2) Some lessons may be video or tape recorded. However, in such cases all students will be informed of this; 3) Some students can also volunteer to be interviewed.

**Benefits**

You may be able to improve your English.

**Risks**

There are no foreseeable risks.

**Confidentiality**

All records will be kept strictly confidential.

**Participation**

Your participation is voluntary and may withdraw at any time.

**Contact**

If you have any questions about this study, you can ask any time during class or by email: mattlucas@andrew.ac.jp

**Consent**

I agree to take part in the study.

Signed \_\_\_\_\_ Date \_\_\_\_\_

*Thank you very much for your help.*

## APPENDIX E: In-class audio recording of a paired 'think aloud' task

Task: Write questions for a game of 'snakes and ladders' using topics from the coursebook

[P1 = Participant 1; P2 = Participant 2; T = Teacher]

T (explanation of task): Maybe we want to ask something from this chapter about clothes to make questions for the game, such as 'Do you prefer wearing colourful or plain shirts? This means we have to add an 's' because we're talking about shirts in a general sense. It might also be useful to compare Japanese and English while you're doing this, because in Japanese we don't usually need to use plurals when we talk about general countable things. Also, don't forget to use 'a' or 'the'. It's easy to forget them because we don't need those in Japanese, either. Try to ignore the tape-recorder – don't worry about making mistakes. (T goes to monitor other groups)

P1: When we use 'clothes', we should also check whether to use 'is' or 'are'.

P2: How about 'T-shirt'?

P1: I want 'a' T-shirt? 'The' T-shirt? Which?

P2: I've got no idea! (both laugh) Oh wait, we need to make questions, not sentences. This is wrong!

P1: OK, next question. What do you want to do? Be?

P2: What do you want to do next year? Are you going to? Will?

P1: What's your favourite food? Do you need 'the'? Is it 'foods'? Do you need an 's'?

P2: I think you need it.

P1: How about 'sport'? 'Sports'?

P2: Hmm...let's go to the next chapter. It's called 'How Do I Get There?'

P1: (In Japanese first, then in English) How do I get to the bookstore? 'The' bookstore?

P2: I'm not sure.

T (returns): OK, why is it 'the' bookstore?

P1: It's one of many (possible bookstores), but...

P2: I only want to go to *that* bookstore and not any of the others.

P1: So that means it's only one (of one).

T: Great! And how about that question...is it 'food' or 'foods'?

P2: Foods.

T: But can you count it?

P1: Yes. Because there are many types...

T: But as an overall category?

P2: Ah, OK, 'food'.

T: Yes!