論　文

What is the Role of Metalinguistic Knowledge in Second Language Acquisition[i]?
—A Review of Research—

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Abstract

The study reviews literature on the role of metalingusitc knowledge in second language acquisition. The paper begins with a brief statement of the LA movement in Western countries and foreign language education in Japan, concentrating on the unresolved question of LA, i.e. to what extent KAL (Knowledge about language) contributes to language learning and language education. Despite the fact that there has been much research on the role of metalinguistic knowledge overseas, there has not been any research on its role for Japanese learners. The study investigates the role of metalinguisitc knowledge in terms of implicit/explicit knowledge and declarative/procedualized knowledge, converging on three positions concerning the relationship between metalinguisitc knowledge and L2 proficiency. After reviewing major research into its role, the paper discusses questions about previous studies and lays emphasis on the cognitive framework proposed by Johnson (1996) and Bialystok (1994, 2001) as rationales for future study.

1 Introduction

Language Awareness (LA) has been variously interpreted, but it is defined as "a person's sensitivity to and conscious awareness of the nature of language and its role in human life" (Donmall, 1985, p.7) by the working party on LA of the National Congress on Languages in Education (NCLE). In other words, it is defined as knowledge about language (KAL), which is the fundamental concept of the LA movement. Advocates of KAL (e.g. Richmond, 1990) declare that language learners need to have knowledge about a language to be able to learn it more quickly and use it more proficiently. This declaration is relevant to Second Language Acquisition (SLA) discussions about the difference between explicit knowledge and implicit knowledge in language learning and the relative contribution of both to success in learning. This can be rephrased as the relationship between declarative knowledge and procedural knowledge in SLA. Also, it raises issues to what extent formal language learning (explicit knowledge, declarative knowledge) and informal language learning (implicit knowledge, procedural knowledge) can lead a learner to be successful. In this paper particular attention is placed on the role of metalinguisitc knowledge.

Researchers and practitioners active in the LA movement agree that solid evidence of the success of LA is rather scarce, and this is the main motivation for the present study. Another motive for this study is that present LA is western oriented and prevalent in western countries. LA itself is not so familiar to most scholars and teachers in Japan, although similar ideas exist (e.g. Morizumi, 1980; Ohtsu, 1989). Such ideas are generally included in language education (*gengo kyouiku*[ii] in Japanese), but there has not been any common definition of language education in Japan[iii]. In a sense, the lack of a common definition is a cause of the scarcity of research into KAL. Thus, it is significant to clarify the role of KAL in the case of Japanese learners of English in this study, concentrating on the role of metalinguisitc knowledge. In fact, at present there is a controversy over the role of KAL in English language teaching in Japan. Clarification of the role of KAL will contribute to the present debate over English language teaching.

Current interest in LA derives from three sources: a practical, pedagogical orientation of LA; a more psycholinguistic focus on consciousness-raising; and a critical, ideological perspective that looks at language and power, control and emancipation (van Lier, 2000). This study is related to both peda-

gogical and psycholinguistic aspects of LA.

Important terms in the study are defined: metalanguage, metalinguisitc knowledge, metalinguisitc ability, and metalinguisitc awareness. Metalanguage is defined as language used to analyse and describe a language, such as "parts of speech", "subject" and "object" (Richards Platt and Weber, 1985). It is composed of technical (e.g. 'the preposition to express actual recipient is sentences as ...'- Quirk, Greenbaum, Leech and Svartvik, 1985) and semi-technical (e.g. 'the subject typically tells us who does an action') terminology (Han and Ellis, 1998). In this study metalanguage is defined as semi-technical terminology often used in the classroom in Japan. It is sometimes called "grammatical terms" in language education. Though there are several definitions of "metalinguisitc" (e.g. Bialystok, 1994a, 2001; Cazden, 1974, Ohtsu, 1983, 1989; Renou, 2001), the definition of metalinguisitc in the present study depends on Bialystok (2001) because no researcher except Bialystok has made it explicit. Metalinguisitc knowledge "minimally needs to include the abstract structure of language that organizes sets of linguistic rules without being directly instantiated in any of them" (ibid, p.123). In other words, rules of a particular language such as how to form relative clauses or metalanguage, like present perfect and object are categorized as linguistic knowledge. Such knowledge of grammar may be part of metalinguisitc knowledge, but metalinguisitc knowledge is broader than a simple rule or grammatical term. Thus, it is defined as "the explicit representation of abstract aspects of linguistic structure that become accessible through knowledge of a particular language" (ibid, p.124). According to Bialystok (2001), metalinguisitc ability is logically characterized as "the capacity to use knowledge about language as opposed to the capacity to use language" (ibid, p.124), but it is still arguable to what extent the knowledge and the capacity are dependent. In this study metalinguisitc ability broadly describes both capacity to use knowledge about language and the capacity to use language. Metalinguisitc awareness is interpreted as "attention is actively focused on the domain of knowledge that describes the explicit properties of language" (ibid, p.127).

The above definition of metalinguisitc ability needs further refinement because it may be confused with grammatical sensitivity in language aptitude. Of the four components of language aptitude[iv] proposed by Carroll (1962), metalinguisitc ability seems to be related to grammatical sensitivity, which is defined as the capacity to identify grammatical functions of words or other linguistic structures in sentences. Skehan (1986) contends that grammatical sensitivity is relevant not only in achievement in foreign language learning, but also in first language learning abilities.

The paper is organized as follows. It will begin with a brief statement of the LA movement in Western countries and foreign language education in Japan, concentrating on the unresolved question of LA, i.e. to what extent KAL contributes to language learning and education. In other words, the study will investigate the role of metalinguisitc knowledge in language education. After reviewing major research into its role, the study will lay emphasis on the cognitive framework proposed by Johnson (1996) and Bialystok (1994, 2001) as rationales.

2 Background of the Study

The concept of LA is not rooted in the UK, but in several European countries[v] (Van Essen, 1997; van Lier, 2000). Even though the grammar translation method was dominant in teaching and learning languages up to the 1960s, applied linguists including Otto Jespersen, Harold Palmer, and Charles Fries (Howatt, 1984) were strongly opposed to prescriptive approaches to language teaching. LA proponents have always been strongly against a view of language learning that focuses on prescriptive instruction and is concerned primarily with correctness, and only secondarily with understanding, appreciation, and creative expression.

The most influential driving force of LA is found in the development of LA in the UK. Donmall-Hicks (1997) attributes the development of British LA to five factors: first, the work of some noted academics such as Carter, Doughty, Halliday, Hawkins, Perera, Sinclair, and Tinkel; second, the report of the Bullock Committee, A Language for Life (DES, 1975); third, the existence of the NCLE as a facilitating body; fourth, the existence of government funding for the NCLE; and finally, the willingness of teachers and academics to commit their time and energies. These factors were the shaping influences in the rise of the LA movement throughout the 70s and 80s; it was very much a grass-roots movement[vi].

However, SLA literature in the 70s and 80s has a different

attitude toward KAL; the early SLA literature on morpheme studies in those days repeatedly found that knowledge about a second language did not convert into a psycholinguistic system manifested in a procedural grammar (e.g. Krashen, 1982). This sowed the seeds of the eventual abandonment of grammar teaching and raised a fundamental question about LA. The question is to what extent KAL contributes to students' language proficiency and language learning. This is also an important question to solve for LA researchers. Among five domains in language awareness (affective, cognitive, social, power, and performance), it is the performance domain that lacks systematic research (James & Garette, 1992).

In Japan, it seems to be relatively easy to recognize how KAL has been treated because of the existence of the National Curriculum[vii]. However, throughout the history of syllabi of the Japanese National Curriculum for English[viii] (JNCE), there has not been any reference to the important role of KAL, i.e. the role of grammar in English as a foreign language, in particular the role of metalinguisitc knowledge. The present JNCE (the Ministry of Education, Culture, Sports, Science and Technology, 2001) stresses developing students' communicative competence, indicating the importance of the function of language and the situation where language is used. This is because curriculum specialists in foreign language in the Ministry of Education, Culture, Sports, Science and Technology (MECSST) are afraid that stressing the importance of grammatical knowledge will become a pretext for traditionally poor grammar teaching. In other words, there has been scarcely any controversy about the role of KAL in JNCE until today. The issue is whether or not KAL is responsible for students' language proficiency and language learning, and if so, to what extent?

In fact there was an antagonism between KAL and anti-KAL proponents in English language education as far as teachers are concerned. While curriculum specialists in English do not emphasize KAL, most Japanese teachers often complain about their students' lack of grammatical knowledge. In prestigious high schools where teachers make students succeed in entrance examinations of competitive universities, grammar teaching is still very popular despite the fact the MECSST stresses oral communication. Even some of my colleagues have complained about their students' decreasing

grammatical knowledge. Some foreign researchers working in Japan think that most Japanese English teachers including secondary school teachers have placed great emphasis on KAL more for cultural reasons than for reasons based on positive evidence that KAL leads to successful language learning. Though the importance of language in school education both as a mother tongue and as a foreign language has been recognised by some scholars and teachers in Japan (e.g. Kinoshita, 1981; Morizumi, 1980; Otsu, 1983, 1989), to my knowledge, no empirical research on the role of KAL in connection with proficiency and learning has been done until now. Therefore, though there has been much discussion about the role of KAL in second/foreign language education, the next chapter will focus on reviewing the role of KAL in language education, particularly the role of metalinguisitc knowledge in SLA.

3 Review of literature

As far as SLA is concerned, KAL can be broadly categorized as explicit knowledge or declarative knowledge according to cognitive and information theories. Also, it is concerned with knowledge of analysis, according to Bialystok (2001). In this chapter the previous studies on the roles of implicit/explicit knowledge and of declarative/procedural knowledge in relation to language proficiency and language learning will be reviewed, followed by questions about previous studies and the theoretical framework of further study.

3.1 Implicit/explicit knowledge

Considering the role of KAL in language education, in the first place, the relationship between implicit and explicit knowledge should be examined, for KAL is generally classified as explicit knowledge. It is true that there are some differences in the interpretation of explicit and implicit knowledge among researchers, but it is generally agreed that implicit/explicit learning refers to the processes of learning, whereas implicit/explicit knowledge means the end-products of learning, including knowledge that is innate and not learned at all (Schmidt, 1994). Though there has been much discussion about the distinction between explicit and implicit knowledge, Bialystok (1994b) distinguishes them as follows:

Explicit knowledge is different from implicit knowl-

edge. Explicit knowledge can be learned at any age. Explicit knowledge is represented individually for each language. And explicit knowledge is developed functionally in response to communicative needs. Implicit knowledge is the endowment out of which language grows. Much of what we know about language remains implicit, buried deep in the Language representation. But through analysis, some part of that evolves into what we call grammar and permits the accretion of knowledge for the details of each language we know (p.566-567).

However, a conceptualization of implicit knowledge and explicit knowledge as a dichotomy advocated by Ellis (1994) and Han and Ellis (1998) is problematic (Hu, 1999; Robinson 1994), for there is some evidence from cognitive research that knowledge varies along a continuum rather than falling into two absolute categories (Bialystok & Ryan. 1985; Bialystok & Sharwood Smith, 1985; Karmiloff-Smith, 1986). Also, the exclusive association of explicit knowledge with conscious processing proposed by Ellis (1994a, p.84), who contends "perhaps its defining characteristic is that it is available to the learner as a [sic] conscious representation" is problematic, owing to the fact that there is good reason to believe that consciousness of access and explicitness of knowledge are logically dependent (Hulstigin, 1990; McLaughlin, 1990a, Hu 1999). As Bialystok (1994) states, "the knowledge of representation must not be confused with access to that representation" (p.57).

Theories have been developed concerning the relationship between implicit and explicit knowledge and their roles in language proficiency (Bialystok, 1978; Cummins, 1978; Sharwood Smith, 1981; Skehan, 1986; R. Ellis 1997b); the problem is that different studies report on a different relationship between them. R. Ellis (2002a) refers to the relationship between them with three basic positions possible. While Krashen (1981) insists that explicit knowledge interferes with language acquisition, other studies (Gregg, 1984; McLaughlin, 1978; Sorace, 1985; Green and Hecht, 1992; Renou, 2001) suggest that there is an interface between explicit knowledge and implicit knowledge. R. Ellis (1997b, 2002b) and Han and R. Ellis (1998) maintain the weak interface model, in which explicit knowledge derived from formal instruction may convert into implicit knowledge, but only if learners have reached a level of development that enables them to accommodate the new linguistic material.

3.2 Form-focused instruction and declarative/procedural knowledge

The controversial issue of the relationship between implicit and explicit knowledge can be rephrased as the role of grammar in SLA. Particularly one recent issue in SLA is to examine to what extent form-focused instruction contributes to the acquisition of second language. This question also concerns the relationship between two kinds of knowledge in language education: declarative and procedural knowledge.

One of the common theories against explicit grammar teaching claims that learning grammatical items in the classroom never leads to acquisition (Krashen, 1981, 1982, 1993). Krashen has argued consistently that teaching grammar is not the central part of language acquisition. This was once a compelling view and became a reason for the focus on the meaning approach of language teaching. Immersion program is a kind of meaning focused instruction in that overall context of second language learning is communicative, experiential, and content-based. Research on French immersion classes that has continued more than two decades suggests that students are generally well able to understand what they hear and read. However, even at the intermediate and higher grade level they often produce language with non-targetlike morphology and syntax (Swain, 1998). This is further confirmed by the fact that when L2 learners' attention is concentrated mainly on meaning, without attention being paid to grammar, linguistic accuracy declines (Alderson & Steel, 1994; Renou, 2001). This motivates studies on form-focus instruction with the assumption that "focus on form may be necessary to push learners beyond communicatively effective language toward targetlike second language ability" (Doughty & Williams, 1998, p. 2).

Whereas focus on formS always entails isolation or extraction of linguistic features from context or from communicative activity, focus on form includes a focus on formal elements of language in the communicative activity (*ibid.*). There is by now plenty of verification to show that focus on form instruction has a supportive effect on SLA. Norris and Ortega (2000) in a meta-analysis of 49 studies of focus on

form instruction confirm the significance of that instruction, finding that explicit instruction is significantly more effective than implicit instruction and that effects of form focused instruction are durable. This is further validated by N. Ellis (2002), who claimed that "language acquisition can be speeded up by explicit instruction" (p.145) and "without any focus on form or consciousness raising..., formal accuracy is an unlikely result" (p.175). Also R. Ellis (2002b) examines the role of focus on form instruction in developing implicit knowledge by reviewing 11 studies that examined the effect of form focused instruction on learners' free production, finding that it can contribute to the acquisition of implicit knowledge. However, beyond the basic, tentative agreement on the role of focus on form instruction, there still remains uncertainty about its effectiveness in the classroom (DeKeyser, 1998).

Though the above statements generally support the role of KAL in language education, it is not still clear how KAL contributes to language learning. Recent development of cognitive studies can explain acquisition of skills. The mechanism of skill acquisition can be explained by the relationship between declarative and procedural knowledge. The literature on skill acquisition usually differentiates three stages: (1) declarative knowledge, (2) proceduralization of knowledge, and (3) automizing or fine-tuning procedural knowledge (Anderson, 1983; DeKeyser, 1998). Declarative knowledge is factual knowledge including grammatical knowledge, for instance, knowing that regular English verbs take an –ed in the past tense. Procedualized knowledge changes behaviour into a system for sending messages. It is composed of condition-action pairs that state what is to be done under certain situations or with certain data. Fully automatized procedural knowledge implies that one can use language fluently without making errors; for example, one uses regular past forms without having to think about it. What is important is that learners in this final stage of skill acquisition may lose the declarative knowledge of the rule, although this is not necessarily the case. This indicates that the learners who have fully automatized procedural knowledge do not always have enough knowledge of metalanguage and a high level of metalinguisitc knowledge. The important thing is that procedualization is achieved by engaging in the target behaviour, i.e. actually using a language in communication. Repeated behaviours of this kind permit the restructuring (McLaughlin, 1990) of

declarative knowledge in ways that make it easier to procedualize and allow the combination of co-occurring elements into larger chunks which reduce the working memory load (DeKeyer, 1998). As soon as this crucial stage in skill acquisition has been reached, strengthening, fine-tuning, and automatization of the newly acquired procedural knowledge are then a function of the amount of practice, which increases speed and reduces the error rate and the demand on cognitive resources (Schmidt, 1992). As far as language learning is concerned, however, Johnson (1996) stresses that the significance of keeping declarative knowledge that should not be procedualized. In other words, Johnson (1996) argues for the significance of KAL in foreign language education, which will be mentioned in the following section.

3.3 Research on the role of metalinguisitc knowledge

Considerable difficulty can be faced when strictly distinguishing between explicit and implicit knowledge and between declarative and procedural knowledge, but it is generally agreed that metalinguisitc knowledge is categorized as explicit (declarative) knowledge. Investigating relationships between metalinguisitc knowledge and L2 proficiency can illuminate the role of KAL in language education. Three representative studies shown in Table 1 are examined closely, for they refer to the role of metalinguisitc knowledge in relation to proficiency.

As far as the knowledge of metalanguage in the above studies is concerned, Alderson et al. (1997) assert that knowledge of metalanguage among British undergraduate students of French varies considerably. They also state that there are very few parts of speech with which lecturers can confidently assume their students will be thoroughly familiar, which coincides with Bloor (1986). They also show that first-year undergraduates have a low level of knowledge of metalanguage. Han and Ellis (1998) demonstrate that the knowledge of metalanguage does not have a significant role in language learning, although they did not directly investigate its role. Even though she did not examine particular functions of knowledge of metalanguage in the experiment, Renou (2001) refers to the importance of this knowledge, referring to Bloor (1986) as follows:

Learners who lack explicit grammar knowledge will

Table 1 Survey of studies of L2 explicit knowledge

Study	Subject	Research questions	Instruments
Alderson et al. (1997)	599 students in British universities	1. Foreign language students' metalinguisitc knowledge 2. the relationships between metalinguisitc knowledge, grammatical accuracy, and foreign language proficiency 3. use of metalanguage in university foreign language course 4. the role of formal metalinguisitc knowledge in language proficiency	Metalinguisitc Assessment Test, Gap-filling Test, Grammar Test, Language Proficiency Test, Reading Comprehension Test, Listening Test, Written Test, Words in Sentences Test (MLAT), Inductive Language Learning Test (Swahili) Biodata Cover Sheet
Han and Ellis (1998)	48 adult learners enrolled in a university intensive English programme, intermediate	1. To measure implicit and explicit L2 knowledge 2. the roles of implicit and explicit knowledge in language proficiency	Oral Production Test Grammaticality Judgement Test Interview TOEFL Secondary Level English Proficiency Test
Renou (2001)	64 university advanced-level French learners	1. the relationship between L2 learners' MA and L2 proficiency 2. the relationships between MA, L2 proficiency and learning approaches	Grammatical judgement Test(oral) Grammatical judgement Test (written) French Proficiency Test Questionnaire

have difficulty understanding the structure of a language (e.g. sentences follow subject, verb, object order) and following discussions where linguistic terminology is used to render the grammar of the target language explicit (p.249).

Although there have been some studies on grammatical terminology in Japan (e.g. Jefferies, 1985; Katayama, 1990a, 1990b), little research has been done regarding the role of metalanguage in relation to proficiency. The role of metalanguage in acquisition-poor environment was investigated in Iida (2004).

Regarding the role of metalinguisitc knowledge, Alderson et al. (1997) investigated whether or not there is an interface between language proficiency, metalinguisitc knowledge, and language aptitude and found that the relationship between metalinguisitc knowledge and language proficiency is weak, and that they appear to constitute two separate factors of linguistic ability. Furthermore, they point out that there is no evidence to support the belief that students with higher levels of metalinguisitc knowledge perform better in French or that they improve their French proficiency at higher rates than other students during university study. They also maintain that the contribution of aptitude to metalinguisitc knowledge and language proficiency is ambiguous. Such weak interface between metalinguisitc knowledge and L2 proficiency is also

obtained in other studies such as Elder et al. (1996; 1997) and Seliger (1979), while Krashen (1981) takes the position of a non-interface model between metalinguisitc knowledge and L2 proficiency.

The second position concerning the role of metalinguisitc knowledge is maintained by Han and R. Ellis (1998), who claim that metalingual knowledge, i.e. knowledge of metalanguage, plays an insignificant role in general language proficiency, but that analysed explicit knowledge obtained from delayed grammaticality judgement tests is found to be significantly related to a proficiency test (the TOEFL). As mentioned before, Ellis adopts a weak interface model, contending that the main role of explicit knowledge is to facilitate the development of implicit knowledge by helping the learner notice formal features in the input and carry out the process of noticing-the-gap.

The third position is represented by Renou (2001), who states that metalinguisitc knowledgehas a high correlation with L2 proficiency as far as advanced learners are concerned. The study shows the significant relationship between two groups of advanced learners' (communicative and grammatical approaches to L2 learning) performance on two (oral and written) grammaticality judgement tests and on a test of L2 proficiency. The significant relationships between the oral judgement test, the written judgement test, and the overall score on the French Proficiency Test for the entire sample

supply proof that the higher a learner's metalinguisitc knowledge has become, the higher the score is likely to be on French Proficiency Test. These findings validate results from previous studies (Bialystok and Ryan, 1985; Gass, 1983; Masny, 1987; Thomas, 1988) which have evidenced the close interface between metalinguisitc ability and L2 proficiency.

3.4 Questions about previous research

The conflicting results and lack of research concerning Japanese learners of English in the former sections have left some questions about the preceding studies, in particular research design. In this section, four questions about the former studies are discussed.

First, it is important to reconsider not only the type of task that elicits participants' metalinguisitc knowledge but also grammatical items that should be examined in the task owing to the contention that research will continue to provide conflicting results until the tasks that tap metalinguisitc knowledge and L2 proficiency are clarified (Bialystok 1982, Bialystok and Ryan 1985, Renou, 2001). Based on Bialystok and Ryan (1985), Renou (*ibid*) claims that tasks used in the experiment design can be classified according to whether they require low or high levels of knowledge and control, as shown in Figure 1. It is assumed that success in task demands (e.g. conversation, literacy, or metalinguisitc tasks) is affected by the development of analysed knowledge and control, which will be explained in detail in the next section. Analyzed knowledge and control are each thought to develop along continuous and orthogonal dimensions to one another. Each axis in Figure 1 represents a continuum and marks increments in demands placed upon the processing components. The prototypical metalinguisitc task is the need to make a judgement about the grammatical acceptability and particularly those which require error correction and justification. According to Bialystok (2001), a grammaticality judgement task is metalinguisitc in that at least "as a test for syntactic awareness, the assumption is that errors can be detected only if attention is directed to the form of the sentence, and since usual processing of language takes greater account of meaning, the redirection to form constitutes an aspect of metalinguisitc functioning" (p. 139). While children are examined by a grammaticality judgment task required only if a sentence is correct or not, adults L2 learners are often required to cor-

rect and justify an error in a sentence. Such difference can be elucidated by the development of analyzed knowledge and control. In so far as a metalinguisitc task is concerned, while Renou (2001) asked subjects to correct and justify a broken rule, Alderson et al. (1997) required students not only to correct and justify an error, but also to use metalanguage when they explain a rule. In the future study both assessments of metalinguisitc knowledge need to examine which assessment is appropriate. What seems to be a problem is that there is not any agreement about what kind of grammatical items the judgment task should elicit or how many items are appropriate. For instance, Renou (2001) utilized 21 incorrect sentences that contained an error related to adjective, the direct or indirect object pronoun, and verb in the test (9 correct sentences), which were partly taken from Bialystok (1979). Whereas Han and Ellis (1998) employed 34 sentences (20 grammatical, 14 ungrammatical), focusing on only one grammatical item, i.e. verb complementation, Alderson et al. (1997) did not mention what kind of grammatical errors were presented or how many sentences were used. In the future research, I need to pay special attention to type of grammati-
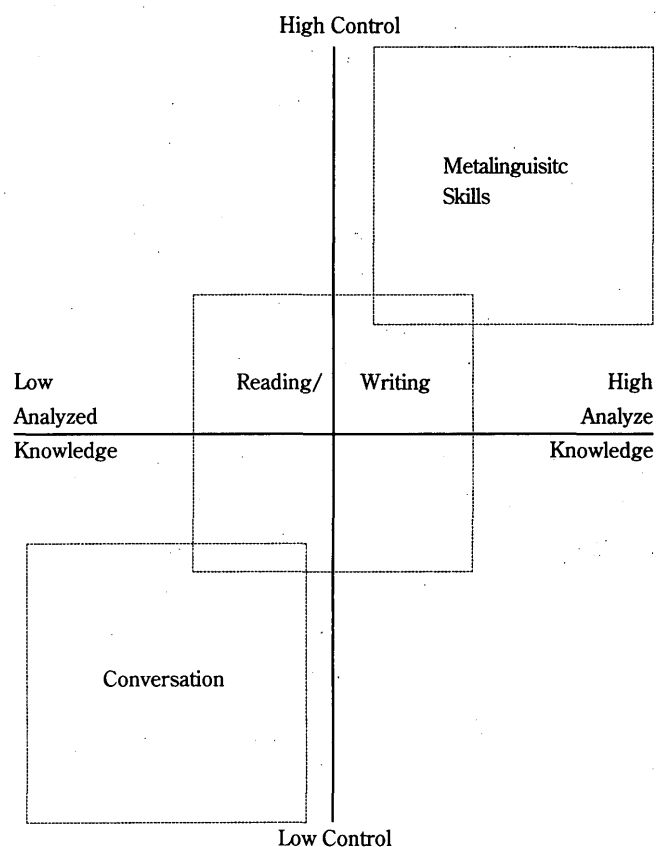

Figure 1. Cognitive framework underlying the development of language abilities
(Bialystok & Ryan, 1985)

cal items that should draw out and the number of questions.

A second question about the previous studies is the relationship between participants' L1 and L2 in the research design, which should be reconsidered in the future study. This is because participants in the former studies were not Japanese learners of English, although Han and Ellis (*ibid*) included some Japanese learners among heterogeneous participants. Most participants' first languages in the previous studies including Bialysok's research on bilingual children were European ones, which are similar in some ways and categorized as Indo-European languages. It is evident that the distance between European languages and Japanese, whose origin[x] has not been clarified yet, is much greater than that between European languages; for example, Japanese is a language that does not conceptualize plurals and articles. It also has a different tense and aspect system from the English language, such as past perfect and present perfect, which indicates that Japanese students need to understand notions of more distant grammatical concepts than other European learners. From my own experience of not only teaching junior and senior high students but also my own experience of learning English, I can say that most Japanese students find it very difficult to understand English grammar because they are not familiar with those grammatical notions. There are even some studies that indicate that Japanese learners of English find it more difficult to acquire European languages than European people who study other European languages (e.g. Ito, 1982). In any event, further study will need to clarify the role of metalinguisitc knowledge in the case of Japanese learners when studying a foreign language since, to my knowledge, there has not been any research about metalinguisitc knowledge in Japan.

The third question, related to the second one, is that the previous studies did not look well into variables in participants, in particular, participants' exposure to informal learning. Renou (2001) limited participants to university advanced-level French L2 learners, which needs more variety. Also choosing past learning approach as a variable by means of questionnaire, Renou (*ibid.*) divided them into communicative approach and grammar approach. Such variable might be possible, but it is not so much reliable because it depends on learner's own feeling. Instead of employing it, the future research design necessitates distinguishing formal learners

from naturalistic learners to shed light on the role of metalinguisitc knowledge in those learners. Despite the fact that Alderson et al. (1997) chose length of stay in the target language countries as a variable, the future study needs to put more emphasis on variables of naturalistic learners such as length of stay in the target language country, age of arrival in the target language country in particular before or after the Critical Period, and the amount of exposure to formal/informal language learning. However, the amount of exposure of formal/informal language learning will be not selected as a variable, for it is problematic to gauge exact amount of learning. Naturalistic learners who possess those variables are so called returnees[xi], *kikokushijo*, who were exposed to the target language environment. In Japan, the number of those students who have the experience of staying overseas, particularly in Anglophone countries for some years is increasing.

There have been few studies on those students' bilingual proficiency. This is because they are generally thought to be competent in both languages. Also the emergence of returnees is relatively new in Japan: in the beginning of the 1980s there were not so many students who had the experience of staying oversees. Nevertheless, an important study was carried out by Ono (1994), who investigated returnees' acquisition of both Japanese and English vocabulary, finding that their amount of Japanese and English vocabulary varies according to amount of exposure of both languages; particularly, reading books is crucial for facilitating vocabulary acquisition. Ono (*ibid.*) further argues that the establishment of the mother tongue before the Critical Period is also important, for if they did not lead a life without full exposure to both languages, most children would become kind of semi-lingual. He gave several cases of English Japanese semi-lingual children caused by parents who did not encourage their children to read books or to make them interested in reading. However, since he defines language proficiency as amount of vocabulary, there seems to be a necessity to clarify the relationship between grammatical knowledge and proficiency in the case of returnees.

The studies which examined returnees' grammatical knowledge are Inui (1985) and Oku (1996), who show that those learners lack grammatical knowledge of the target language, although they can communicate with native speakers of the target language fluently. Oku (*ibid.*) examined not only

returnees' attitudes toward learning English by means of questionnaire but also difficulties when they learn English by means of a grammar test. He found significant differences between returnees and instructed high school students in regards to English tense, particularly tense in the clauses with time adverbials, which is one weak point for returnees. In spite of the fact that he did not pursue the reason for this, Oku (*ibid.*) indicated that the attitudes and abilities of returnees in learning English, especially grammar, are different from those of instructed learners. Former research has not investigated the role of metalinguisitc knowledge in both instructed and naturalistic learners. Nor has it deliberated over length of stay and age of arrival. Thus, by comparing metalinguisitc knowledge of both learners and giving consideration on these variables, it is expected that the role of metalinguisitc knowledge in formal/informal language learning can be clarified. Also, such comparison can lead to more persuasive data to consider the role of KAL in formal language education. Moreover, it can elucidate adult bilingual learners' metalinguisitc knowledge about which there has not been much research yet.

Last question is that the future study needs to adopt a new issue based on previous studies. The preceding studies have identified different relationships between metalinguisitc knowledge and language proficiency by means of correlation and factor analysis, but have not explicated exactly to what extent metalinguisitc knowledge contributes to proficiency. The future research needs to investigate to what extent metalinguisitc knowledge is at work in language proficiency by means of statistical analysis. Thus, a hierarchical regression approach, a kind of linear regression need to be adopted in further study. No past research design on the role of metalinguisitc knowledge has espoused the statistical analysis.

3.5 The theoretical framework for the future study

First of all, among a very large number of recent SLA theories in connection with information-processing notion in cognitive approaches the most appropriate theoretical framework should be Bialystok's analysis/control theory. This is because, as mentioned before, it is Bialystok who clearly distinguishes metalinguisitc knowledge from linguistic knowledge as well as studies the part of metalinguisitc knowledge in relation to analysis/control theory. According to Bialystok

(1994a, 2001), analysis and control are two components used for explaining the acquisition and use of a second language. They are responsible for the structure of and access to mental representations. They develop with maturity and experience and lead to increased competence in cognition. As mentioned earlier, what is analysed is not the knowledge per se, but the representations of that knowledge (Bialystock, 1994a). Analysis is the process that rearranges loosely organised mental representations into explicit ones organized around formal structure. In other words, it is the process in which linguistic and conceptual representations become more explicit, more structured, and more accessible to inspection. Analysis proceeds on implicit unstructured representations and changes them into an increasingly explicit form. This process exposes basic categories of language and thought. It also results in knowledge about language, a set of representations that are more explicit than the unanalysed representations. As these ideas of language become more analysed, a learner understands more about language in general, about its structure and its possibilities, which results in an increasingly higher level of metalinguisitc knowledge than before.

The control component can be defined in terms of three functions for which it is responsible: (1) the selection of items of knowledge or information; (2) the co-ordination of these items; and (3) the extent to which selection and co-ordination can be carried out automatically. It is important to note that the two components are to an extent independent in that each is responsible for a different aspect of processing; yet neither one alone is sufficient for language processing. Thus analysis required for accuracy, and control is required for fluency (Bialystok, 1990, 1994). Also it is important to note that analysis and control theory have been verified in the experiments. For example, the construct validity for the two components has been evidenced by confirmation factor analysis (Ricciardelli, 1993). Cromdal (1999) indicates that high degree of bilinguality may also enhance the development of linguistic analysis and certain metalinguisitc skills, especially control of processing, are more readily applied in the participants' weaker language.

However, some researchers identified problems of this theory. Hu (1999) points out the following:

> (1) It is not sufficiently equipped as a developmental account.

(2) It has a problem of as an account of L2 acquisition.

(3) It is incomplete in that automaticy is notably missing.

The above problems are not interpreted as inadequacies of theory itself, but lack of explanation because of much research on bilingual children speaking Indo-European languages. The future study can at least help to account for L2 acquisition among three problems. To my knowledge, there has not been any study in the case of Japanese adult learners on the basis of this framework. There should be a study that examines Japanese learners of English who both consciously learned in the classroom and unconsciously acquired in the naturalistic environment.

There seem to be some ways to assess analysis and control, but actually it is difficult to do so. Analysis is usually measured by means of a grammaticality judgement test, but it is not reflected in deciding simply whether a sentence is grammatical or not. Analysis is needed in more demanding tasks, such as those that require correction and justification of correction (Bialystok, & Ryan 1985; Gass, 1983; Renou, 2001; Sorace, 1985). In contrast, control is needed more when tasks that require noticing some aspect of input, which may not be salient, usual, or expected, make high demands because they involve where to focus one's attention (Bialystok, 2001; Renou, 2001). It is also assumed that metalinguisitc knowledge could only be demonstrated by grammaticality judgement tasks that require correction and/or justification (Bialystok, 2001; Renou, 2001).

Another theoretical framework that should be based on is Johnson (1966, 2001). Emphasizing the importance of the information-processing notion in cognitive approaches, Johnson (1966) argues that there is a parallel "between L2 acquisition and the acquisition of non-linguistic behaviours (*ibid.* p. 3) and L2 development can be viewed within a general skill framework. He discusses two different approaches to language learning, the DECPRO (Declarative encoding – Procedural encoding) pathway and the PRODEC (Procedural encoding – Declarative encoding) pathway. The former is called learning pathway and the latter is acquisition pathway. According to Johnson (1996, 2001), both procedural and declarative knowledge are important for overall language skills and that having declarative knowledge is an effective first step to developing procedural knowledge. Alternatively,

he argues that the PRODEC pathway is also crucial in that initial procedualized learners, i.e. fossilized learners need to develop declarative knowledge to be more proficient learners. In both pathways, Johnson (1996) argues for the significance of keeping declarative knowledge that should not be procedualized. In other words, Johnson (1996) argues for the significance of KAL in foreign language education.

In Japan, most students learn English in the DECPRO pathway, where conscious grammar teaching is still very popular, particularly in high school classrooms, although the MECSST stresses developing students' communicative competence. In the future study, it is necessary to examine whether the DECPRO is the way instructed learners should progress and the PRODEC pathway is the way naturalistic learners should proceed because there has not been any research on it. Also there is a need to investigate into whether instructed and naturalistic learners procedualize KAL or not, and if so, to what extent.

4 Conclusions

So far the role of metalinguistic knowledge in language education has been discussed. At present there are three basic positions concerning the relationship between the relationship between metalinguistic knowledge and L2 proficiency. The review of language awareness movement in Britain and Japan and research on metalinguisitc knowledge in SLA indicate more research is needed on its role in language learning. In particular, empirical research on its explicit role is rather limited, although Sharwood Smith (1994:95-96) observed ten years ago, 'the development of explicit knowledge (metaknowledge) of a language has still not been extensively researched, either in and for itself or, indeed, in relation to the development of spontaneous, intuitive (L2) ability,' it is not sufficient even today, particularly in Japan. The goal of future study should explicate the role of metalinguisitc knowledge in language education. To achieve this goal, the research design needs to compare and contrast similarities and differences in the amount of metalinguisitc knowledge between students formally instructed in English language in Japan and those who have acquired English in a natural environment. Also it needs to examine to what extent both students' metalinguisitc knowledge contributes to their language

proficiency and language learning. By employing the research design, the future research will contribute to the present debate over the role of KAL in second language acquisition.

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Notes

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ii For example, the content and method of foreign language education in mother tongue in foreign language are discussed separately by Kurasawa (1967) and Miyata (1967) in the same book.

iii Yasunaga (1968) defines the goals of language education as developing students' logical recognition, thinking ability, and critical thinking, whereas Morizumi (1992) provides a different definition: developing students' communicative proficiency, deepening their recognition and thought about language, and forming their own mental and affective domains.

iv According to Carroll (1962), foreign language aptitude is defined as consisting of four components: grammatical sensitivity, inductive language learning ability, associative memory; and phonetic coding.

v Van Essen (1997) points out that early modern LA originated in Wilhelm won Humboldt's (1767-1835) belief that language is not so much a product (ergon) as a process (energeia) which manifests itself in the ever repetitive effort of the individual mind to suit the collective medium that language is to the expression of one's thoughts.

vi For more detailed British Language Awareness Movement, see Iida (2003)

vii In Japan, the National Curriculum is conventionally called Course of Study in English. Here instead of Course of Study, the National Curriculum is used.

viii In Japan, the New National Curriculum (2000) implemented in 2001 prescribed that English is a required foreign language for public junior high school students. Though English is not a required foreign language in high schools, all students learn English as a foreign language.

ix Although she used the term, metalinguistic awareness in her paper, the term, metalinguistic knowledge is used because the metalinguistic awareness is regarded as metalinguistic knowledge in this proposal according to the present definition. Renou's definition of metalinguistic awareness is "conscious knowledge of the formal aspects of the target language (e.g. grammar) (2001, 248), which is rather ambiguous.

x One theory about the origin of Japanese is that it belongs to Ural Alti languages, others are

xi MECSST defines returnees, *kikoku shijo* in Japanese as Japanese students staying overseas more than two years. Since this definition was made mostly for the students staying overseas who want to take an entrance examination in Japan.

References

Alderson, J.C. and Steel, D. 1994. Metalinguisitc knowledge, language aptitude and language proficiency. In D. Graddol and S. Thomas (eds.) *Language in a Changing Europe.* Clevedon: Multilingual Matters.

Alderson, J.C., Clapham, C., Steel, D. 1996. Metalinguistic knowledge, language aptitude and language proficiency. *Centre for Language in language working paper series 26.*

Alderson, J.C., Clapham, C., Steel, D. 1997. Metalinguistic knowledge, language aptitude and language proficiency. *Language Teaching Research* 1, 93-121.

Anderson, J. 1983. *The Architecture of Cognition.* Cambridge: Cambridge University Press.

Astley, H. and Hawkins, E. 1985. *Using Language.* Cambridge: Cambridge University Press.

Bialystok, E. 1978. A theoretical model of second language learning. *Language Learning* 28, 69-83.

Bialystok, E. 1979. Explicit and implicit judgement of L2 grammaticality. *Language Learning* 29, 81-103.

Bialystok, E. 1982. On the relationship between knowing and using linguistic forms. *Applied Linguistics*, 3, 181-206.

Bialystok, E. 1986. Factors in the growth of linguistic awareness. *Child Development*, 57, 498-510.

Bialystok, E. 1994a. Analysis and control in the development of second language proficiency. *Studies in Second language Acquisition*. 16, 157-168.

Bialystok, E. 1994b. Representation and ways of knowing: These issues in second language acquisition. In N.C. Ellis (ed.) *Implicit and Explicit Learning of Languages*. London: Academic Press.

Bialystok, E. 2001. *Bilingualism in Development,Language, Literacy & Cognition*. Cambridge: Cambridge U.P.

Bialystok, E. and Ryan, E.B. 1985. Toward a definition of metalinguistic skill. *Merrill-Palmer Quarterly* 31, 229-251.

Bialystok & Sharwood Smith, 1985. Interlanguage is not a state of mind: An evaluation of the construct for second-language acquisition. *Applied Linguistics*, 6, 101-117.

Bloor, T. 1986. University students' knowledge about language: some aspects of language awareness prior to instruction on university courses. *CLIE Working Paper No.8*, BAAL /LAGB Committee for Linguistics in Education.

Bloor, T. 1987. Variation and prescriptivism in English. *CLIE Working Paper No.9*, BAAL /LAGB Committee for Linguistics in Education.

Carroll, J.B. 1962. The prediction of success in intensive foreign language training. In Glaser, R. (ed.) *Training Research and Education*. Pittsburgh: University of Pittsburgh Press.

Carter, R. 1990. *Knowledge about Language and the Curriculum: the LINC reader*. London: Hodder & Stoughton.

Cazden, C.B. 1974. Play with language and MA: One dimension of language experience. *Urban Review*, 7, 28-39.

Cromdal, J. 1999. Childhood bilingualism and metalinguistic skills: analysis and control in young Sweedish-English bilinguals. *Applied Psycholinguistics*, 20, 1-20.

Cummings, J. 1978. Metalinguistic development of children in bilingual education programs: data from Irish and Canadian Ukranian-English programs. In M. Paradis (ed.) *Aspects of Bilingualism*. Columbia: Hornbeam Press.

Cummings, J. 1981. *Bilingualism and Minority Language Children*. Ontario: Ontario Institute for Studies in Education.

DeKeyser, R.M. 1998. Beyond focus on form. In Doughty, C. and Williams, J (eds.) *Focus on Form in Classroom Second Language Acquisition*. Cambridge: Cambridge University Press.

Department of Education and Science.(DES) 1975. *A Language for Life (The Bullock Report)*, London: Her Majesty's Stationery Office.

Department of Education and Science/Welsh Office. (DES/WO) 1990. *A survey of Language Awareness and Foreign Language Taster Courses*. London: HMSO.

Donmall, B.G. (ed.) 1985. *Language Awareness*. London: CILT.

Donmall-Hicks, B.G. 1997 The history of language awareness in UK. *In Encyclopaedia of Language and Education Vol. 6*. (ed.) Van Lier, L. & Corson, D. Netherlands: Kluwer Academic Publishers.

Doughty, C. and Williams, J 1998 (eds.) *Focus on Form in Classroom Second Language Acquisition*. Cambridge: Cambridge University Press.

Downing, J. 1979. *Reading and Reasoning*. New York: Spriner-Verlag.

Elder, C., Davis, A., J., Hajek, D., Manwaring, D. and Warren, J. 1996. Is grammar good for you? The relationship between metalinguistic knowledge and success in studying a language at university. *Melbourne Papers in Testing*, 5, 35-55.

Elder, C., Warren, J. Manwaring, D. and Davvies, A. 1999. Metalinguistic knowledge: how important is it in studying a language at university? *Australian Review of Applied Linguistics*, 22, 81-95.

Ellis, N. 1995. Consciousness in second language acquisition: a review of field studies and laboratory experiments. *Language Awareness* 4, 123-146.

Ellis, N. 2002. Frequency effects in language processing: a review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition*. 24, 143-188.

Ellis, R. 1991. Grammatical judgements and second language acquisition. *Studies in Second Language Acquisition*. 13, 161-186.

Ellis, R. 1994a. Implicit/explicit knowledge and language pedagogy. *TESOL Quarterly*, 28, 166-172.

Ellis, R. 1994b. *The Study of Second Language Acquisition* Oxford: Oxford University Press.

Ellis, R. 1997a. Explicit knowledge and second language pedagogy. In Lier, L.V. and Corson, D. *Encyclopedia of Language and Education, Vol.6, Knowledge about Language*. London: Kluwer academic publishers.

Ellis, R. 1997b. *SLA Research and Language Teaching*. Oxford: Oxford University Press.

Ellis, R. 2002a. Representing and measuring L2 explicit knowledge. Paper presented at the conference entitled 'explicit knowledge in second language acquisition' at St Mary's College in London.

Ellis, R. 2002b. Does form-focused instruction affect the acquisition of implicit knowledge?: a review of research. *Studies in Second Language Acquisition*. 22, 223-236.

Field, K. (ed.) 2000. *Issues in Modern Foreign Languages Teaching*. London: RoutledgeFalmer.

Gass, S. 1983. The development of L2 intuitions. *TESOL Quarterly* 17, 273-291.

Gass, S. 1994. The reliability of second language grammaticality judgement. In E. Tarone et al. (eds.) *Research Methodology in Second Language Acquisition*. Hillsdale: Lawrence Erbaum.

Genesee, F. 1987. *Learning through Two Languages*. New York: Newbury House.

Gregg, K. 1984. Krashen's monitor and Occan's razor. *Applied Linguistics* 5, 19-100.

Green, P. and Hecht, K. 1992. Implicit and explicit grammar: an empirical study. *Applied Linguistics* 13, 2, 168-184.

Han, Y. and R. Ellis. 1998. Implicit knowledge, explicit knowledge and general language proficiency. *Language Teaching Research* 2, 1, 1-23.

Hawkins, E. W. 1984. *Awareness of Language: an Introduction*. Cambridge: Cambridge UP.

Hawkins, E.W. 1992. Awarness of language/Knowledge about language in the curriculum in England and Wales: a historical note on twenty years of curricular debate, *Language Awareness*. 1,1, 5-17.

Hawkins, E.W. 1999. Foreign language study and language awareness, *Language Awareness*. 8, 3&4, 124-142.

Howatt, A.P.R. 1984. *A History of English Language Teaching*. Oxford: Oxford U.P.

Hu, G.1999. *Explicit Metalinguistic Knowledge at Work: The*

Case of Spontaneous Written Production by Formal Adult Chinese Learners of English*. Unpublished doctoral dissertation, Nanyang Technological University, Singapore.

Hu, G. 2002. Psychological constraints on the utility of metalinguistic knowledge in second language production. *Studies in Second Language Acquisition*. 24, 347-386.

Hughey, J.B. 1983. *Teaching ESL Composition: Principles and Techniques*. Rowley: Newbury House Publishers.

Hulstigin, 1990. J.H. A comparison between the information-processing and the analysis/control approaches to language learning. *Applied Linguistics*, 11, 30-45.

Hykes, D.T. 1980. *The Development of Metalinguistic Abilities*. New York: Spring-Verlag

Iida, T. 2003. A study of language awareness movement in the UK. *Annual Report of Doshisha Women's College*.

Iida, T. 2004. The role of metalinguistic knowledge in foreign language education. The paper presented at 7th International Conference of Language Awareness at University of Llida in Spain.

Inui, T. 1985. Language education of returnees in high school. [koutougakko niokeru kikokushijo no genjo to kadai] Center for education for returnees in Tokyo Gakugei University.

Ito, T. 1982. A strategy for English sentence. [eibun rikai no houryaku] Paper presented at 46th annual conference of Japanese Psychological Association.

James, C, & Garet, P. (eds) 1991. *Language Awareness in the Classroom*. London: Longman.

Jacobson, R. 1960. Closing statement: Linguistics and poetics. In T. A. Sebeok (ed.) *Style in Language*. MIT Press.

Jefferies, S. 1985. English grammatical terminology as an obstacle to second languae learning. *Modern Language Journal*, 69, 385-390.

Johnson, K. 1996. *Language Teaching & Skill Learning*. Cambridge: Blackwell P.C.

Johnson, K. 2001. *An Introduction to Foreign Language Learning and Teaching*. London: Longman.

Jones, B. 1984. *How Language Works*. Cambridge: Cambridge University Press.

Karmiloff-Smith, 1986. From meta-processes to conscious access: Evidence from children's metalinguistic and repair data. *Cognition*, 23, 95-147.

Katayama, N. 1990a. Grammatical terminology as a means of

communication [communication shudan toshiteno bunpouyougo]. *Journal of Tokyo Gakugei University*, 41, 167-180.

Katayama, N. 1990b. A study on grammatical terminology. [bunpouyougo shiyounikansuru ichikousatu] *Eigogakukou* 21, 25-58.

Kellerman, E. 1986. An eye for eye: crosslinguistic constraints on the development of the L2 lexicon. In E. Kellerman and M. Sharwood Smith (eds.) *Crosslinguistic Interference in Second Language Acquisition*. Oxford: Pergamon.

Kinoshita, K. 1981. *Composition Skills for Science Students* [rikakei no sakubun gijyutus] Tokyo: Chuoukouronsha.

Koike, I. (ed.) 2003. *Kenkyusha Dictionary of Applied Linguistics*. Tokyo: Kenkyusha.

Krashen, S.D. 1981. *Second Language Acquisition and Second Language Learning*. Oxford: Pergamon.

Krashen, S.D. 1982. *Principles and Practice in Second Language Acquisition*. New York: Pergamon.

Krashen, S.D. 1993. The effect of formal grammar teaching: still peripheral. *TESOL Quarterly*, 409-411.

Kurasawa, E. 1970. The content and method of language education from the perspective of mother tongue education [gengokyoiku no naiyo to hoho -bogokyouiku no tachibakara] In Noji, J. Kakita, N. and Matsumoto, H. (eds.) *The Content and Method of Language Education* [Gengokyouiku no naiyo to hoho]. Tokyo: Bunkahyoron shuppan.

Lancaster, L. and Talyor, R. 1992. Critical approaches to language, learning, and pedagogy: a case study. In Fairclough, N. (ed.) *Critical Language Awareness*. London: Longman.

Leow, R. 1996. Grammaticality judgement tasks and second language development. In J.Alatis et al. (eds.) *Georgetown University Roundtable of Language and Linguistics, Language Acquisition and Language Variation: Current Trends and Future Perspectives*.

Lyster, R. and Ranta, L. 1998. Corrective feedback and learner uptake. *Studies in Second Language Acquisition*, 19, 37-66.

McLaughlin, B. 1978. The monitor model: some methodological considerations. *Language Learning*. 28, 309-332.

McLaughlin, 1990a. "Conscious" vs. "unconscious" learning. *TESOL Quarterly*, 24, 617-634.

McLaughlin, B. 1990b. Restructuring. *Applied Linguistics*, 11, 113-128.

Masny, D. 1987. The role of language and cognition in second language MA. In Lantolf, J.P. & Labarca, A. (eds) *Research in Second Language Learning: Focus on the Classroom*. Norwood, NJ: Ablex.

Ministry of Education, Culture, Sports, Science and Technology (MECSST), 2001. *National Curriculum (Foreign Language)*. Tokyo: Kairyudo

Mitchell, R. and Hooper, J. 1991. Teachers' views about language. In James, C. and Garrett, P. (eds.) *Language Awareness in the Classroom*. London: Longman

Miyata, H. The content and method of language education from the perspective of mother foreign language education [gengokyoiku no naiyo to hoho -bogokyouiku no tachibakara] In Noji, J. Kakita, N. and Matsumoto, H. (eds.) *The Content and Method of Language Education* [Gengokyouiku no naiyo to hoho]. Tokyo: Bunkahyoron shuppan.

Morizumi, M. 1980. *English Language Education and Japanese*. [eigokyouiku to nihongo] Tokyo: Chukyoshuppan

Morizumi, M. 1992. What is language education? [kotobano kyouiku towa nanika] *Sanseido English Teaching*, 13, 2-4.

Morizumi, M. 1995. "What does the changes in National Curriculum mean?" [gakushushidouyouryou no hensen ga imisurukoto] *The English Teachers' Magazine*, 44, 8, 16-18. Tokyo: Taishukan shoten.

Muranoi, H., Chiba, M, Hatanaka, K. 2001. *Practical Teaching English* [jisennteki eigoka kyouikuho] Tokyo: Seibido.

Nogi, J. Kakita, N. and Matsumoto, H. (eds.) 1970. *The Content and Method of Language Lducation*. [gengokyouiku no naiyo to hoho] Tokyo: Bunkahyoron shuppan.

Norris, J.M. and Ortega, L. 2000. Effectiveness of L2 instruction: a research synthesis and quantitative meta-analysis. *Language Learning*, 50, 417-528.

Ohtsu, Y. 1983. Gengoshinrigaku to Eigokyouiku [Psycholinguistics and English language education] *The English Teachers' Magazine*, 31,7, 28-31.

Ohtsu, Y. 1989. The development of metalinguistic ability and language education.[metagengonouryoku no hattatsu to gengokyouiku] *Language* [Gengo] 18, 10, 26-34.

Oku, S. 1994. A study on returnees' linguistic competence. [kikokushijo no genngonoryoku nikansuru kisochosa] *STEP Bulletin* 6, 126-134.

Paulson, L., Radnor, H., Turner-Bisset, R. 1996. From Policy

to Practice: Language Education, English Teaching and Curriculum Reform in Secondary Schools in England. *Language and Education.* 10, 1, 33-46.

Quirk, R., Greenbaum, S., Leech, G. and Svartvik, J. *A Comprehensive Grammar of English Language.* London: Longman.

Renou, J. 2001. An examination of the relationship between metalinguistic awareness and second language proficiency of adult learners of French. *Language Awareness* 10 (4), 248-267.

Ricciardelli, L.A. 1993. Two components of metalinguistic awareness: control of linguistic processing and analysis of linguistic knowledge. *Applied Psycholinguistics*, 14, 349-367.

Richards, J., Platt, J. and Weber, H. 1985. *Longman Dictionary of Applied Linguistics.* London: Longman.

Richmond, J. 1990. What do we mean by knowledge about language? (ed.) Carter, R. *Knowledge about Language and Curriculum.* London: Hodder & Stoughton.

Robinson, P. 1994. Implicit knowledge, second language learning, and syllabus construction. *TESOL Quartely*, 28, 161-166.

Schmidt, R. 1992. Psychological mechanisms underlying second language fluency. *Studies in Second Language Acquisition* 14, 357-385.

Schmidt, R. 1994. Deconstructing consciousness in search of useful definitions for applied linguistics. *AILA Review* 11, 11-26.

Selinger, H.W. 1979. On the nature and function of language rules in language teaching. *TESOL Quarterly* 13, 359-369.

Sharwood Smith, M. 1981. Consciousness-raising and the Second Language Learner. *Applied Linguistics* 2, 159-168.

Sharwood Smith, M. 1994. *Second Language Learning: Theoretical Foundations.* London: Longman.

Sigleton, D. 1992. Education towards language awareness in Ireland. *Language Awareness.* 1, 1, 47-57.

Skehán, P. 1986. The role of foreign language aptitude in a model of school learning. *Language Testing* 3, 188-221.

Sorace, A. 1985. Metalinguistic knowledge and use of the language acquisition in acquisition-poor environments. *Applied Linguistics* 6, 239-254.

Swain, M. 1998. Focus on form through conscious reflection. In Doughty, C. and Williams, J (eds.) *Focus on Form in Classroom Second Language Acquisition.* Cambridge: Cambridge University Press.

Swain, M. and Lapkin, S. 1995. Problems in output and the cognitive processes they generate: a step towards second language learning. *Applied Linguistics* 16, 371-391.

The Ministry of Education, Culture, Sports, Science and Technology (MECSST) (2000) *English National Curriculum* [gakushu shidou youryou (eigoka)]

Thomas, J. 1988. The role played by metalinguistic awareness played by second and third language learning. *Journal of Multilingual and Multicultural Development*, 9, 235-246.

Van Essen 1997. Language awareness and knowledge about language: an overview in *Encyclopaedia of Language and Education Vol. 6.* (ed.) Van Lier, L. & Corson, D. Netherlands: Kluwer Academic Publishers.

Van Lier, L. 2000. Language awareness. (ed.) Carter, R. *Cambridge Guide to Teaching English to Speakers of Other Languages.* Cambridge: Cambridge University Press.

Wada, M. 1997. *Studies on English Teaching in Japan.* [Nihon niokeru eigokyouiku no kenkyu] Tokyo: Kirihara shoten.

Walmsley, J. 1984. The uselessness of formal grammar. *CLIE Working Paper* No.4, 1-8.

White, L., Maylath, B., Adames, A., Couzujin, M. 2000. *Language Awareness-a History and Implementations.* Amsterdam: Amsterdam U.P.

Yasunaga, T. 1968. *Essay of Language Education* [gengo kyoiku shiron]

Ying, H.G. 1996. Multiple constraints on processing ambiguous sentences: Evidence from adult L2 learners. *Language Learning*, 46, 681-711.