The Learning Styles of Japanese Students

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In this paper Reid's (1987) study of perceptual learning style preferences was replicated using a large sample of Japanese undergraduate EFL students in Japan and New Zealand. A detailed review of recent work on learning styles is followed by a discussion of the particular learning styles of Japanese students. The results of 405 questionnaires given to Japanese undergraduates are then analyzed. The results show that Japanese students do not favor any major learning style, but instead reveal preferences for a cluster of minor learning modalities: tactile, kinesthetic, and auditory. However, Japanese students show some tendency to change these styles when taught by NS teachers. The implications for teachers of Japanese EFL students include: (a) becoming conversant with their students' learning styles; (b) thinking in terms of matching teaching and learning styles; and (c) selecting appropriate classroom activities to cater to each style.

日本人学生の学習スタイル

本稿はニュージーランドと日本での日本人英語学習者（大学生）多数の実例を示して、Reid(1987)の知覚学習様式が優先するという研究を追試した。学習方法に関する最近の研究を子細に再考した後、日本人学習者の特異な学習形式について述べた。次に、日本人大学生が答えた405のアンケート結果が分析された。それによると、日本人大学生は主要学習様式を好まず、むしろ、触覚、動作、聴覚などの副次的学習様式の集合されたものを好むことを明らかにした。しかしながら、ネイティブスピーカーが教師だった場合は、日本人学習者はこの学習スタイルを変える傾向を示す。この研究は、日本人に英語を教える教師に下記のことを含蓄する。

a）自分の学生の学習スタイルに精通し
b）その学習スタイルと教授方法が適合するように考え
c）各々の方法に則した授業活動を選択する。

Learning style refers to a person's natural, habitual, and preferred ways of learning. The literature contains dozens of definitions, but perhaps the most quoted is in Keefe (1979) who refers to the "characteristic cognitive, affective, and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (p.4). Similarly, Claxton and Ralston (1978, p. 1) say that every person has "a consistent way of responding to and using stimuli in the context of learning" which is created by the individual's psychological makeup and sociocultural background, while Cornett (1983) states that styles are the overall patterns that give general direction to learning behavior. Guild and Garger (1985) go as far as to say that style is "the most important concept to demand attention in education in many years [and] is at the core of what it means to be a person" (p.viii).

In essence, learning style research suggests that people make sense of the world in different ways and these ways are partly created by cultural experiences. Learning style, then, is where culture and education overlap. The importance of learning style for EFL teachers is not just that we have to consider the cultural backgrounds of our students, but that we can do this in an informed way. This is because the same teaching methods may be more effective for some learners that others. So learning style is central to the growing interest in "learner-centered" instruction as it implies a need to consider further information about the learner when describing courses. This can provide a basis for more personalized approaches to counseling, teaching, and assessment.

Learning Style Research

Learning style research expresses the simple idea that each learner has a clear and coherent set of learning likes and dislikes, but people differ in their learning styles in a number of ways and studies have addressed a huge range of factors. Keefe (1988), for example, lists 40 different components of style including personality traits, attitudes, and physiological factors. In fact, learning styles have four related aspects: cognitive, affective, physiological, and behavioral, although most learning style research has focused on the cognitive, that is the individual psychological strategies of information processing. Cognitive studies tend to describe learners in terms of bipolar characteristics like serialist/holist, extrovert/introvert, reflective/impulsive, studial/experiential, convergent/divergent, and so on. These are all incorporated into Witkin et al's (1977) influential con-

struct of Field Dependence (FD) and Field Independence (FI), or global versus analytic approaches to experience.

In the context of L2 acquisition, this research suggest the FI (analytic) learners outperform FD learners in both form focused and communicative tests (Chappelle & Roberts, 1986; Day, 1984; Hansen & Stansfield, 1981). However, these concepts have been strongly criticized as components of second language aptitude because they are based on psychological constructs which have nothing to do with learning, ignore different learning contexts, and describe invisible mental phenomena (Skehan, 1989). In particular, the central construct of Field Dependence/Independence has come under increasing attack as unreliable, unscientific, value-laden, culturally biased, and irrelevant to an explanation of second language learning (Ellis, 1985; Griffiths & Sheen, 1992; Riley, 1988; Willing, 1988; Sheen, 1993). While the FD/I construct still has its adherents in EFL (e.g., Chapelle, 1992; Chapelle & Green, 1992), it has flaws which make its relevance to SLA highly suspect.

A more socially based approach focuses on the external and concrete aspects of style, examining its physical and affective components. There are now a number of measures which profile independent subscales. Some consider the effects of perceptual preferences for visual or auditory input; others examine instructional factors such as grouping methods or time of day preferences, and some focus on environmental elements such as lighting, temperature, or seating arrangements. This paper focuses on two elements of learning style which are of the most practical concern to teachers, because they directly influence classroom decisions. These are perceptual modalities and preferences for group or individual learning.

Perceptual learning styles refer to the "variations among learners in using one or more sense to understand, organize and retain experience" (Reid, 1987, p. 89). It is probable that about 90 percent of traditional classroom instruction is through talk (Hodges, 1982). The communicative approach is largely based on oral work: we *talk* to our students, *ask* questions, and *discuss* topics. Some researchers have argued that audio-based methodologies are most effective for EFL instruction (Takeuchi et al, (1990). However, Hodges (1982) found only 25 to 30 percent of any large group could remember 70 percent of what was presented in this way. In fact, people tend to have a preference for the way they receive information in a learning situation, and research shows that they use four basic styles or modalities (Guild & Garger, 1985; Hodges, 1982): (a) visual: reading texts or notes, attending to diagrams; (b) auditory: listening to lectures or tapes, discussing; (c) kinesthetic: experiential learning,

role-play, physical involvement in learning; and (d) tactile: "hands-on" creativity, model building, note-taking, experimentation.

Evidence suggest that matching students to their preferred style increases both satisfaction and achievement (e.g., Dunn, 1988; Dunn & Griggs, 1988; Wallace & Oxford, 1992; Wheeler, 1980). Reid (1987), Willing (1988), and Dunn et al (1989) provide extensive reviews of this literature.

Learning Style and Cultural Background

It is true to say that most learning style research has been done from a "Western, white, middle-class perspective and value system" (Claxton & Murrell, 1987, p. 71). Little is known about cross-cultural differences in learning styles, and the importance of cultural factors is still not fully recognized. Willing's (1988) survey of adult migrants to Australia, for example, suggests that the various learning preferences are represented in similar proportions in all ethnic groups. However, learning styles appear to vary according to cultural background. Witkin et al. (1977) and Kaplan (1966), for example, hypothesize that different modes of thinking are characteristic of different cultures, and it seems that socialization plays a role in the development of style differences as children from different cultural groups exhibit different learning styles (Guild & Garger, 1985; Young, 1987). The only published research on this has been carried out by Reid (1987), who examined the perceptual learning style preferences of 1,234 NNSs of English studying in U.S. language programs, and a follow-up study by Melton (1990) of 331 university students in China. These studies confirm that the learning style preferences of ESL students from different language and cultural backgrounds differ significantly.

Japanese Learning Experiences

There is little published research on the learning style preferences of Japanese speakers, although Reid (1987) found that the Japanese differed significantly from all the language groups in her study as they did not identify a single major perceptual learning style. She speculates that this is a result of culture, and it is clear that the language learning experiences of Japanese students differ considerably from those in Western classrooms. While this observation is familiar to teachers of Japanese speakers, it is worth mentioning as it provides an important context for the discussion of perceptual learning style differences.

While English is one of the most widely studied subjects in Japan, its study is regarded as an academic pursuit, and students apparently have

little motivation to learn the language or use it outside the classroom (Benson, 1991; Day & Iida, 1988). The Japanese education system does not seem to value independence nor assign creative or imaginative tasks. At both secondary and tertiary levels traditional methods and materials tend to predominate, classes are teacher-centered, and students are expected to be passive. Methods often involve the use of a reading text in English which students translate into Japanese (Widdows & Voller, 1991), and instruction is likely to be in Japanese and focused on imparting facts about the language (Ellis, 1991; Kobayashi et al., 1992). Memorization and rote learning play important roles in classrooms (Tinkham, 1989), and there is generally no expectation that students will use libraries or source materials (Hendricks, 1991). Written examinations alone determine grades and future success (e.g., Yoshida, 1991; White, 1987), and English exams are primarily tests of grammatical knowledge and vocabulary (Morrow, 1987).

However, students seem to doubt the effectiveness of their instruction (Kobayashi et al., 1992) and may favor interactive and student-centered learning methods over these traditional approaches (Widdows & Voller, 1991). The present study was undertaken to help resolve such issues and to provide teachers with information to enhance students' awareness of their learning style preferences.

The Study

As learners, the Japanese appear to be a distinctive group. Consequently I decided to replicate Reid's study in relation to Japanese speakers. In particular, I was interested in whether Japanese learners have perceptual learning style preferences and whether these change as a result of overseas study or native speaker instruction.

My study used a self-reporting questionnaire designed by Reid to determine respondents' visual, auditory, kinesthetic, tactile, group, and individual learning preferences. The questionnaire consists of randomly arranged sets of five statements on each preference and was validated by Reid by the split-half method and correlation analysis of an original set of 60 statements. The background information—slightly amended to make it more relevant for Japanese learners—concerned the length of time respondents had studied English, the number of semesters they had been taught by native speakers, and whether they had studied abroad. Appendix A includes copies of the full questionnaires in English and Japanese. An explanation of the preferences was distributed with the forms, and teachers decided whether to distribute the English or Japa-

nese versions to their students. The data from the two questionnaires was combined because statistical analysis showed no significant variation in students' answers as a result of the language of the questionnaire.

Eight Japanese universities participated in the survey with 265 undergraduates responding. The questionnaire was also administered to 140 Japanese students at different English proficiency levels at a tertiary college in New Zealand. A total of 405 questionnaires were returned. Table 1 summarizes the information on respondents according to six background variables.

Preference means were calculated for each variable from the student response. These means were then scaled from 0-20 and classified into three categories following Reid's original study: major, minor and negative learning style preferences. These refer to the preference modes in which a student, respectively, learns best, functions well, and has difficulty in learning. The thresholds for each category were established by Reid and retained for purposes of comparison. An analysis of variance and multiple comparison of means were run on the preference means, and the Tukey test was used at 0.1 to determine significance in the comparison of means.

Table 1
Learning Style Variables

Language of Questionnaire	*n*	Sex	*n*
English	116	Male	182
Japanese	289	Female	223
Level of Study	***n***	**Overseas Study**	***n***
Non-University	140	Never	176
Year 1	69	3 months or less	55
Year 2	94	4 to 11 months	60
Year 3	102	12 or more	114
Years with a NS teacher	***n***	**Years of English Study**	***n***
Less than one	147	2 to 7	60
One to 2	141	8 to 9	279
More than 2	117	10 or more	66

Results

A summary of the overall results is presented below followed by a discussion of a number of significant findings.

Overall Results

The overall means of this study indicated that Japanese learners prefer auditory, tactile, kinesthetic, and individual learning as minor styles, $F(5,2424) = 34.1$, $p < 0.001$. This result concurs with Reid's (1987) findings that Japanese speakers do not identify a single strong (major) learning style. Visual and group learning were considered negative learning styles. Table 2 compares Reid's findings with my own.

Both Reid's and my studies identify tactile, kinesthetic, and auditory modalities as the three strongest preferences, and distinguish group learning as the weakest mode of learning. Visual modality is also a negative style, and Reid found that Japanese were the least visual of her eight NNS language groups. The differences in means may be accounted for by the fact that this sample was about four times larger than Reid's Japanese group, and the data presented here include a much wider proficiency range and a high proportion of students who had never been overseas.

Table 2
Summary of Learning Style Preference Means

	Visual	Auditory	Kinesthetic	Tactile	Group	Individual
Reid's Japanese sample	12.52	12.67	13.29	13.32	10.35	12.05
Present total means	10.93	12.33	12.00	12.18	10.06	11.32

Note: Means 13.5 and above = Major Learning Style Preference
Means 11.5 to 13.49 = Minor Learning Style Preference
Means 11.49 or less = Negative Learning Style Preference

In addition to the overall preferences of Japanese learners, I was interested in a possible relationship of particular variables to differences in learning styles. I will focus on the differences in learning styles as a result of years of study, semesters of native speaker instruction, and length of overseas study.

Years of English Study

This variable shows that students who had studied for more than seven years chose tactile, auditory, kinesthetic, and individual learning

as minor preferences. It is interesting to note that students showed greater interest in group learning and that preferences for individual and kinesthetic modes increased with length of English study, with tactile learning showing the strongest trend (Table 3).

Students who had studied English for 10 to 13 years were significantly more tactile than those who had studied for less than seven years, $F(1,124) = 11.38$, $p = .001$. This may be because writing notes, actively working with materials, and physical involvement in learning tasks become increasingly necessary to successful language learning and academic study. Students therefore appear to expand and strengthen their preferences the longer they study English, although an alternative explanation is that students may be self-reporting styles they have adapted to during years of study.

Table 3
Learning Style Preference Means: Years of Study

Years of Study	Visual	Auditory	Kinesthetic	Tactile	Group	Individual
Two to seven	10.79	12.55	11.87	11.28	9.98	11.05
Eight to nine	11.09	12.34	12.09	12.42	10.14	11.61
Ten to thirteen	10.02	12.18	12.30	12.66	10.33	11.99

Note: Means 13.5 and above = Major Learning Style Preference
Means 11.5 to 13.49 = Minor Learning Style Preference
Means 11.49 or less = Negative Learning Style Preference

Years of Native Speaker Instruction

An important finding here is that preferences for auditory, kinesthetic, and group learning all increased over time with native speaker instruction. Students taught by native speakers for more than two years were significantly more kinesthetic and auditory than those who had attended for less than one year, $F(1,262) = 21.78$, $p = .000$, and $F(1,262) = 10.57$, $p = .001$, respectively. These students were also significantly more disposed to group learning, $F(1,262) = 8.4$, $p = .004$. The group with the shortest period of NS teaching chose only auditory and individual learning as minor styles. Once more, no group expressed a major preference, and, again, the means indicate that visual and group learning are of negligible importance to Japanese learners, with preferences for the visual mode declining over time spent with a NS teacher. Table 4 summarizes this information.

Table 4
Learning Style Preference Means:
Period of Native Speaker Instruction

Years of Study	Visual	Auditory	Kinesthetic	Tactile	Group	Individual
Less than one	11.31	11.95	11.18	11.35	9.40	11.87
One to two	10.83	12.24	12.16	12.65	10.18	11.43
More than two	10.50	12.92	12.73	12.41	10.68	11.44

Note: Means 13.5 and above = Major Learning Style Preference
Means 11.5 to 13.49 = Minor Learning Style Preference
Means 11.49 or less = Negative Learning Style Preference

Many Japanese students have native English speaker teachers, and this seems to have more of an impact on student preferences than years of study. Obviously teachers have a variety of instructional styles, and these can be influenced by their own learning styles, their reading, or their professional training. Current EFL methodology favors activity-focused and learner-centered teaching styles and these are more likely to be found in native speaker classrooms, whereas many Japanese instructors favor more traditional methods, reflecting predominantly grammar-translation approaches. The increasing preferences for auditory, kinesthetic, and group learning, then, may reflect the teachers' own preferences for communicative methodologies which emphasize spoken English, interactive tasks, role-play, and active participation in group work. Foreign teachers, then, through their use of communicative methods, clearly have an important influence on learning style preferences.

Period of Overseas Study

All groups picked auditory and kinesthetic as minor learning styles, and group and visual learning as negative styles. Only those students who had never studied overseas or who had gone for less than three months indicated individual learning as a minor style, being significantly more individual in their preference than those studying overseas for four to 11 months, $F(1,113) = 8.58$, $p = .004$.

Table 5 shows the results.

Table 5
Learning Style Preference Means: Period of Overseas Study

Years of Study	Visual	Auditory	Kinesthetic	Tactile	Group	Individual
None	11.48	11.87	11.75	11.94	9.92	11.71
Less than 3	11.27	12.20	12.09	12.24	9.52	12.46
4 to 11	10.28	12.28	12.17	11.87	10.15	10.48
12 or more	10.25	12.77	12.46	12.68	10.65	10.81

Note: Means 13.5 and above = Major Learning Style Preference
Means 11.5 to 13.49 = Minor Learning Style Preference
Means 11.49 or less = Negative Learning Style Preference

The trends here are less marked but mirror those of the native speaker teacher results, with less aversion being shown for group learning, and preferences for auditory and kinesthetic learning strengthening the longer students had studied abroad. Students who had studied overseas for 12 months or longer were significantly firmer in their preference for auditory learning, for example, than those studying entirely in Japan, $F = (1,288) = 9.63$, $p = .002$. Reid (1987) also found that preferences for auditory learning had increased the longer students had lived in the U.S. Another interesting trend shows that students who had studied overseas became progressively less visual in their preferences. The only group to choose visual learning as a minor learning style were those without overseas study experience, who were significantly more visual than those who had studied abroad for over a year, $F(1,288) = 13.49$, $p < .001$.

Japanese Learning Style Preferences

This section briefly summarizes a number of the major findings of the study. First, the study confirms Reid's (1987) finding that Japanese speakers appear to have no strong learning style preferences. While not directly supported by the empirical findings, it is possible that this fact might help explain the language learning difficulties often experienced by many Japanese students (Benson, 1991; Ellis, 1991; Kobayashi et al., 1992). It is possible that without a strong learning preference many students may be unable to develop the strategies necessary for high academic achievement.

Second, this research suggests that Japanese learners favor auditory,

tactile, and kinesthetic modes, and individual learning as minor styles. This confirms Widdows and Voller's findings that "students do not like classes in which they sit passively, reading or translating" (1991, p. 134). It also suggests that an education system which restricts the use of spoken English doesn't take full advantage of learners' auditory preference.

Third, because visual modality appears to be a negative style, many students are hampered by a school system which emphasizes the importance of text-based methodologies such as translation, composition, and grammar exercises. The study suggests that students respond well to oral-aural teaching approaches.

Fourth, a more positive factor is that Japanese speakers have multiple minor preferences. This could allow them to compensate for the lack of a clear learning channel because they are able to process information in a number of ways and may even have a better chance of success than those with a single modality strength (Guild & Garger, 1985). This finding receives some support from a recent article in which Hinkelman and Pysock (1992) demonstrated that a multimedia methodology using visual, auditory, and kinesthetic methods was more effective than catering to any single modality in a vocabulary learning activity with Japanese students.

Finally, auditory, kinesthetic, and group learning preferences increased with overseas or NS teacher experiences. This suggests that learning styles can be modified and extended by adapting to different learning experiences; however, as none of the learning circumstances examined appear sufficiently influential to move preferences into a higher preference band, these findings should be treated with some caution.

It is important to note that I am not describing a stereotype here. Learning style preferences are also affected by personal as well as cultural factors, and many individual exceptions obviously exist. The results do, however, help us to understand something about the way Japanese students prefer to learn.

Implications for EFL Teaching

There are two advantages to identifying the perceptual learning style differences of our students: first, we can improve learning by catering for different learning styles, and, second, we may be able to help strengthen students' negative or minor learning styles.

While the precise relationship between learning style and successful L2 acquisition is uncertain, the evidence points to the need to match teaching methods and preferred learning styles in order to improve

learning. In particular, we have to help students identify their preferred styles and assist them to extend and develop their favored modalities. Here the literature is divided between (a) the need to accommodate learners' preferred styles (Dunn, 1988; Dunn & Dunn, 1979; Dunn & Griggs, 1988; Wallace & Oxford, 1992; Young, 1987), and (b) training learners to strengthen their weaker styles by exposing them to activities which do not match their preferences (Rubin, 1975; Willing, 1988). While it is difficult to draw clear conclusions from the literature on style matching, Bialystock (1985) has argued that disparities between the styles of teachers and students will reduce the potential effects of instruction. Such differences can lead to "Style Wars" (Oxford et al, 1992) and have a negative effect on attitudes to learning and the grades of many EFL learners. This seems to be particularly important in the areas of writing, reading and grammar (Wallace & Oxford, 1992).

Style is a consistent way of learning which reflects cultural behavior patterns and, like other behaviors, may be modified as a result of training or changes in learning experiences. The assumptions, supported by the research reported here and in the literature, are that learning styles are adaptable, and that preferences can be modified. It should be remembered, however, that a preferred learning style reflects the underlying causes of behavior—not conscious actions. In other words, it expresses itself in how a student organizes and responds to L2 input, to general approaches rather than specific tactics. Precisely how changes in learning style affect conscious learning strategies in SLA remains unclear. What is evident, however, is that affective and academic benefits result from characterizing students' requirements in the learning process and varying teaching treatments to meet learning predispositions. There are a number of ways teachers can use this information.

First, we need to assess the learning styles of class members. For most assessment aims we have to rely on learners' reports of their preferences, and a number of instruments exist for this purpose. A great deal of material has emerged in recent years designed to raise the profile of styles and help students consider these issues. Textbooks by Willing (1989) and Ellis and Sinclair (1989) contain practical activities to introduce the idea of styles. Similarly, the questionnaire used in this study provides a useful means of gathering data, raising consciousness, and promoting discussion. Japanese students are generally interested in this metacognitive level of learning, and information about different modalities can also help explain the purpose of different activities in the classroom. This in turn can help students to focus on study skills and learner training tasks to "stretch" their styles through exposure to differ-

ent teaching styles and the opportunity to participate in activities involving a variety of learning modes and groupings.

Second, we can ensure style-matching through a range of activities. Ellis (1989) and Melton (1990) suggest that one way of accommodating learning styles in the classroom is to offer a variety of activity types to the whole class. This will accommodate the various preferences of all learners and simultaneously help them to adapt their styles to a range of instructional tasks, strengthening the skills associated with learning styles in which they are weak. Forcing students to adapt their styles in this way may create anxiety and discomfort, however (e.g., Ellis, 1989), and an alternative approach to style matching is to place students in style-alike groupings. This allows the teacher to cater to particular perceptual preferences and to occasionally mix styles and students to enable learners to participate in activities which develop their weaker styles in lesson plans, consciously including various styles in their classes by marking the primary sensory appeal of each activity.

Third, while style and methods can be achieved by such planning, the range of perceptual styles present in any class has led some researchers to recommend a high degree of teacher flexibility (e.g., Dunn & Dunn, 1979). An experienced and sensitive teacher, trained to be aware of the importance of the range of perceptual learning style differences, can appropriately respond to those differences as the circumstances demand. Clearly most teachers feel able to respond to the needs of their students, but style differences are more significant than previously realized, and this requires a permanent and structural basis of teacher flexibility rather than ad hoc solutions. In particular, it involves the use of a wider range of teaching approaches than older, more conservative ideological methodologies allow (see Fanselow, 1987).

Finally, on a practical level, there are a range of activities that can be used in class to emphasize each style. Visual learners respond to reading resource materials, writing journals of classroom learning and vocabulary, worksheet based tasks, (re)writing notes from texts and lectures, and working on video or TV activities. Students with an auditory preference work best on tasks such as listening exercises from tapes, lecture listening to find new information, verbal stimuli for discussions, cloze exercises from songs and oral repetition, and pair work for the reinforcement of items. Kinesthetic students like to participate actively and therefore suitable tasks include TPR for new vocabulary, charades for concrete vocabulary items, roleplays, problem-solving simulations, and student produced plays. Tactile students are the most difficult to accommodate, but respond to sequencing activities (e.g., strip texts), small

group creations of models, writing notes, interpreting texts through painting, model building, or producing video or audio programs.

Conclusion

This survey suggests that Japanese speakers exhibit distinctive learning styles and that these are modified over time with exposure to NS teachers and living in English speaking countries. It should be pointed out, however, that the self-report questionnaire used to gather the data is an imperfect instrument upon which to base strong claims of learner differences. It would therefore be extremely useful to verify these findings with observations of actual student behavior under a variety of task/grouping conditions. Nevertheless, this exploratory study supports the growing individual differences literature in pointing to the need for a culture-sensitive pedagogy which takes account of learner characteristics. It has been argued here that we have to be aware of our students' different learning style preferences and respond flexibly with a broad range of teaching approaches. Helping students to understand their learning styles and to exercise active control over them will make them more effective language learners.

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References

Bialystok, E. (1985). The compatibility of teaching and learning strategies. *Applied Linguistics, 6*, 255-262.

Benson, M.J. (1991). Attitudes and motivation towards English: A survey of Japanese freshmen. *RELC Journal 22*(1), 34-48.

Chapelle, C.A., & Roberts, C. (1986). Ambiguity tolerance and field independence as predictors of proficiency in English as a second language. *Language Learning, 26*, 27-45.

Chappelle, C. A. (1992). Disembedding "Disembedded figures in the landscape...":An appraisal of Griffiths and Sheen's reappraisal of L2 research on field dependence/independence in second language acquisition research. *Applied Linguistics, 13*, 375-84.

Chappelle, C.A. & Green, P. (1992). Field independence/dependence in second language acquisition research. *Language Learning 42*, 1-37.

Claxton, C. S. & Murrell, P.H. (1987). *Learning styles: Implications for improving educational practices*. Washington: ASHE-ERIC.

Claxton, C.S., & Ralston, Y. (1978). *Learning styles: Their impact on teaching and administration*. Washington, DC: American Association for Higher Education.

Cornett, C.E. (1983) *What you should know about teaching and learning styles*. Bloomington, IN: Phi Delta Kappa.

Day, R. (1984). Student participation in the ESL classroom or some imperfection of practice. *Language Learning 34*, 69-98.

Day, R. R., & Iida, M. (1988). Use, attitude and motivation in foreign language acquisition. *University of Hawaii working papers in ESL, 7*(1), 109-118.

Dunn, R. (1984). Learning styles: State of the scene. *Theory into practice, 23*, 10-19.

Dunn, R., & Dunn, K.J. (1979) Learning styles/teaching styles: Should they...can they...be matched? *Educational Leadership, 36*, 238-244.

Dunn, R. (1988). Commentary: Teaching students through their perceptual strengths or preferences. *Journal of Reading, 31*, 304-309.

Dunn, R., & Griggs, S. A. (1988). *Learning style: Quiet revolution in American secondary schools*. Reston, VA: NASSP.

Dunn, R., Beaudry, J., & Klavas, A. (1989). Survey of research on learning styles. *Educational Leadership, 46*, 50-58.

Ellis, R. (1985). *Understanding second language acquisition*. Oxford: Oxford University Press.

Ellis, R. (1989). Classroom learning styles and their effect on second language acquisition: A study of two learners. *System, 17*, 249-262.

Ellis, R. (1991). Communicative competence and the Japanese learner. *JALT Journal 13*, 103-129.

Ellis, G., & Sinclair, B. (1989). *Learning to learn English: A course in learner training*. Cambridge: Cambridge University Press.

Fanselow, J.F. (1987). *Breaking rules*. New York: Longman.

Griffiths, R. T., & Sheen, R. (1992). Embedded figures in the landscape: A reappraisal of L2 research on field dependence/independence. *Applied Linguistics, 13*, 133-148.

Guild, P.B., & Garger, S. (1985). *Marching to different drummers*. Alexandria, VA: Association for Supervision & Curriculum Development.

Hansen, J., & Stansfield, C. (1981). Relationship of field dependent-independent cognitive styles to foreign language achievement. *Language Learning, 31*, 349-367.

Hendricks, Y. (1991). The Japanese as library patrons. *College and Research*

Libraries News, 221-225.

Hinkelman, D.W., & Pysock, J.M. (1992). The need for multimedia ESL teaching methods: A psychological investigation into learning styles. *Cross Currents 19*(1), 25-35.

Hodges, H. (1982). Madison Prep—Alternatives through learning styles. In J. W. Keefe (Ed.), *Student learning styles: Diagnosing and prescribing programs*. Reston: VA NASSP.

Kaplan, R.B. (1966). Cultural thought patterns in intercultural education. *Language Learning 16*, 1-20.

Keefe, J.W. (1987). *Learning style theory and practice*. Reston, VA: NASSP.

Keefe, J.W. (1988). Development of the NASSP learning style profile. In J.W. Keefe (Ed.), *Profiling and utilizing learning style* (pp. 1-17). Reston, VA: NASSP.

Kobayashi, S., Redekop, B., & Porter, R. (1992). Motivation of college English students. *The Language Teacher 16*(1), 7-15.

Melton, C.D. (1990). Bridging the cultural gap: A study of Chinese students' learning style preferences. *RELC Journal, 21*(1), 29-58.

Morrow, P.R. (1987). The users and use of English in Japan. *World Englishes, 6*, 49-62.

Oxford, R.L., Hollaway, M.E., & Horton-Murillo, D. (1992). Language learning styles: Research and practical considerations for teaching in the multicultural tertiary ESL/EFL classroom. *System, 4*, 439-456.

Reid, J.M. (1987). The learning style preferences of ESL students. *TESOL Quarterly, 21*, 87-109.

Riley, P. (1988). The ethnography of autonomy. In A. Brookes and P. Grundy, (Eds.), *Individualization and autonomy in language learning*. ELT Docs 131. MEP/BC.

Rubin, J. (1975). What the "good language learner" can teach us. *TESOL Quarterly, 9*, 41-51.

Sheen, R. (1993). A rebuttal to Chapelle's response to Griffiths and Sheen. *Applied Linguistics, 14*, 98-100.

Skehan, P. (1989). *Individual differences in second language learning*. London: Edward Arnold.

Takeuchi, O., Edasawa, Y., & Nishizaki, K. (1990). Do films improve EFL students' listening ability? *Language Laboratory, 27*, 79-83.

Tinkham, T. (1989). Rote learning, attitudes, and abilities: A comparison of Japanese and American students. *TESOL Quarterly, 23*, 695-698.

Wallace, W. & Oxford, R. (1992). Disparity in learning styles and teaching styles in the ESL classroom: Does this mean war? *AMTESOL Journal, 1*, 45-68.

Wheeler, R. (1980). An alternative to failure: Teaching reading according to students' perceptual strengths. *Kappa Delta Pi Record, 17*(2), 59-63.

White, M. (1987). *The Japanese educational challenge*. Tokyo: Kodansha.

Widdows, S., & Voller, P. (1991). PANSI: A survey of the ELT needs of Japanese university students. *Cross Currents 18*(2), 127-141.

Willing, K. (1988). *Learning styles in adult migrant education*. Sydney: NCELTR.

Willing, K. (1989). *Teaching how to learn: Learning strategies in ESL* Sydney: NCELTR.

Witkin, H. A., Moore, C. A., Oltman, P., Goodenough, D. R., Freedman, F., Owen, D. R., & Raskin, E. (1977). Field dependent and field independent cognitive styles and their education implications. *Review of Educational Psychology, 69*, 179-211.

Yoshida, R. (1991). Harvest of the standard score greenhouse. *Japan Quarterly, 38* (2),159-168.

Young, R. (1987). The cultural context of TESOL—A review of research into Chinese classrooms. *RELC Journal, 18*(2), 15-30.

Appendix A
Perceptual Learning Style Preference Questionnaire

Name_____ Age_____ Male/Female____
Place of Study: High School_____ year____
University _____ year____
What is your major field?_____
How long have you studied English in Japan?_____
Have you ever studied English overseas?_____
If yes, for how long?_____
Have you ever been taught by a foreign teacher?_____
If yes, for how many semesters?_____

Directions:

People learn in many different ways. For example, some people learn mainly with their eyes (visual learners) or with their ears (auditory learners); some people prefer to learn by experience and/or "hands-on" tasks (kinesthetic or tactile learners); some people learn better when they work alone, while others prefer to work in groups.

This questionnaire has been designed to help you identify the way(s) you learn best—the way(s) you *prefer* to learn.

Read each statement below. Please respond to the statements AS THEY APPLY TO YOUR STUDY OF ENGLISH. Decide whether you strongly agree, agree, are undecided, disagree, or strongly disagree. Mark an X in the appropriate column.

Please respond to each statement quickly without too much thought. Try not to change your responses after you choose them. Please use a pen to mark your choices.

Questionnaire Statements

	strongly agree	agree	undecided	disagree	strongly disagree
1. When the teacher tells me the instructions, I understand better.					
2. I prefer to learn by doing something in class.					
3. I get more work done when I work with others.					
4. I learn more when I study with a group.					
5. In class, I learn best when I study with others.					
6. I learn better by reading what the teacher writes on the board.					
7. When someone tells me how to do something in class I learn it better.					
8. When I do things in class, I learn better.					
9. I remember things I have heard in class better than things I have read.					
10. When I read instructions, I remember them better.					
11. I learn more when I can make a model of something.					
12. I understand better when I read instructions.					
13. When I study alone, I remember things better.					
14. I learn more when I make something for a class project.					
15. I enjoy learning in class by doing experiments.					
16. I learn better when I make drawings as I study.					
17. I learn better in class when the teacher gives a lecture.					
18. When I work alone, I learn better.					
19. I understand things better in class when I participate in role playing.					
20. I learn better in class when I listen to someone.					
21. I enjoy working on an assignment with two or three classmates.					
22. When I build something, I remember what I have learned better.					
23. I prefer to study with others.					
24. I learn better by reading than by listening to someone.					
25. I enjoy making something for a class project.					
26. I learn best in class when I can participate in related activities.					
27. In class, I learn better when I work alone.					
28. I prefer working on projects by myself.					
29. I learn more by reading textbooks than by listening to lectures.					
30. I prefer to work by myself.					

学習方法に関するアンケート

名前＿＿＿＿＿＿＿＿＿＿　　年令＿＿＿＿　性別＿＿＿＿
あなたは以下のどれに当てはまりますか？（○を付けてください。）

高校生　　＿＿年生
予備校生
専門学校生　＿＿年生　専攻＿＿＿＿＿＿
短大生　　＿＿年生　専攻＿＿＿＿＿＿
大学生　　＿＿年生　専攻＿＿＿＿＿＿

日本で何年間英語を勉強していますか？＿＿＿＿＿＿＿＿
外国で英語を勉強したことがありますか？

はい　期間は？＿＿＿＿＿＿
いいえ

外国人の先生から英語を教わったことがありますか？

はい　期間は？＿＿＿＿＿＿
いいえ

回答方法

学習方法は人によって様々です。視覚や聴覚を使うことによって効果的に学習できる人や、実際に身体で覚える学習方法を好む人もいます。また、一人での学習を好む人もいれば、グループ学習を好む人もいます。

このアンケートはあなた自身にもっとも適した学習方法を見つけるためのものです。

下記の文を読み、それぞれをあなたの英語学習に当てはめて回答してください。回答は、‘強くそう思う’、‘そう思う’、‘どちらでもない’、‘そう思わない’、‘全くそう思わない’のうちいずれかとし、適切な欄にX印を記入してください。

記入する際には余り深く考えず、直感的に回答してください。そして一度回答を記入したら、後からそれを変更しないようにしてください。記入の際はペンを使用してください。

アンケート

		強く そう思う	そう思う	どちら でもない	そう 思わない	強くそう 思わない
1.	先生がやり方を説明してくれるとわかりやすい。					
2.	クラスでなにかをやりながら学習するのが好きである。					
3.	ほかの学生と一緒になにかをやるほうが能率的に学習できる。					
4.	グループ学習のほうが効果的に学習できる。					
5.	クラスでは、ほかの学生と一緒に勉強するときが一番良く学習できる。					
6.	先生が黒板に書いたものを読むほうが、良く学習できる。					
7.	クラスで誰かにやり方を教えてもらうほうが、良く学習できる。					
8.	クラスでなにかをやると良く学習できる。					
9.	クラスで聞いた事のほうが、読んだことよりも良く覚えている。					
10.	読んだときのほうが説明を良く覚えている。					
11.	なにかを学習するとき、モデルを作ったほうが良く学習できる。					
12.	自分で説明を読んだときのほうが良く理解できる。					
13.	一人で学習するほうが物事を良く覚えられる。					
14.	クラスの課題でなにかを作成するほうが良く学習できる。					
15.	クラスでなにか実験をしながら学習するのが好きだ。					
16.	図などを描きながら勉強するほうが良く学習できる。					
17.	先生が講義をするほうが良く勉強できる。					
18.	一人でやるほうが良く学習できる。					
19.	クラスでロールプレイをやるほうが良く物事が理解できる。					
20.	クラスで誰かの話を聞くほうが良く学習できる。					
21.	2、3人の生徒と一緒にひとつのアサインメントをやるのが好きだ。					
22.	なにかを作ると、学習したことを良く覚えている。					
23.	ほかの学生と一緒に勉強するほうが好きだ。					
24.	人のいうことを聞くより、読むほうが良く学習できる。					
25.	クラスの課題としてなにかを作成するのが好きだ。					
26.	クラスで、関連ある活動に参加するとき一番良く学習できる。					
27.	クラスでは一人のほうが良く学習できる。					
28.	一人で課題に取り組むほうが好きだ。					
29.	講義を聞くより教科書を読んだほうが良く学習できる。					
30.	一人で勉強するのが好きだ。					