

Critical Thinking Skills and the MBA Case Method: An Academic ESP Challenge

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Abstract

This paper investigates the need for the development of thinking skills in an EAP context, defines what the required thinking skills are, and explores the thinking skills and L2 pedagogy literature in search of paradigms relevant to the development of the target thinking skills in an L2 learning context. Along the way, the paper will identify the target thinking skills as "critical thinking" skills; it will also point out that the issue of developing cognitive procedures in an L2 learning context has been almost completely ignored within the fields of EAP and academic ESP. By situating the target thinking skills in the critical thinking domain, both the profundity of these target skills and the need for a careful and systematic approach to their development can be appreciated. The absence of relevant developmental paradigms within the EAP and academic ESP fields means that the explorations in the literature will range some way beyond these fields' boundaries.

1. INTRODUCTION

It has long been recognized that the MBA case method represents a great challenge for many overseas students studying in the U.S.A. The MBA case method represents a pedagogy that places great demands on independent modes of thinking that are more the master of knowledge than its servant and, thus, more learner-centered than many overseas students have ever experienced or expected (Christensen, 1982). Japanese students, in particular, by virtue of their number and their educational culture have been identified as one group that finds this thinking-knowledge relationship difficult to adapt to (e.g. Takagi, 1981). In response to this challenge, North American MBA educators have been urged to find ways to soften the adjustment process for certain groups of overseas students, but, largely because of the very large class sizes of the typical MBA course and its frequently hectic schedule, nothing that would represent a systematic program of adjustment has been suggested so far (e.g. Christensen, 1982).

The recent growth in academic ESP preparation programs for prospective MBA students who are relatively non-proficient (e.g. TOEFL range 500-600) non-native speakers of English (Saltz, Smith, Vik, Westerfield, 1993) in North America and elsewhere has raised the issue of who should deal with the process of helping these students to adjust to the intellectual requirements of the MBA case method - the content program educators, the academic ESP educators, or both. In the ideal world, of course, both sets of educators would collaborate for this purpose and some kind of joint involvement of this sort has been achieved in pre-sessional academic ESP programs run at the University of Oregon and at a program run by the University of Boston in Kobe, Japan (Saltz,

Smith, Vik, Westerfield, 1993). In most cases, however, such an ideal arrangement is not possible. The question then arises: at what stage of the MBA student's education should this adjustment process be initiated - during the pre-sessional academic ESP program or at some later stage during the content program itself?

In order to answer this question, this paper will first attempt to critique the notions of "critical thinking" that appear to hold sway in the ESL/EFL professional community and will argue that the MBA case method represents a good instance of the sort of knowledge-thinking relationship that should be classified as one form of "critical thinking". Such a classification will not only help to convey some impression of the very high level of cognitive challenge that the MBA case method presents, but will, more importantly, locate this challenge in a knowledge domain and an educational domain both of which are still in a relatively early state of development and flux where there are far more questions than answers. The Japanese learners who are featured in this study and their difficulties in coming to terms with the case method's requirement for "critical thinking" will then be described. Some empirical evidence in favor of initiating the adjustment process during the pre-sessional academic ESP program will be complemented by references to a theoretical framework that does not regard *adult* language learning as a singular learning process, but rather regards *adult* language learning and problem-solving cognitive activities as parts of a single learning continuum.. The paper will indicate that principles of syllabus design relevant to such an ambitious ESP program will be found outside the conventional boundaries of EAP and ESP, and will conclude with a look at the key elements of such a syllabus.

2. CRITICAL THINKING

"Critical thinking" is one of the most widely misunderstood and misused terms in English language teaching. Benesch rightly criticizes those in the ESL profession who use "critical thinking" simply as a convenient, but vague and redundant, synonym for "one or more of a number of hierarchically ordered cognitive skills", which appear to range from high-order activities such as reacting to content in a text to mid-order activities such as reading context-reduced texts, and points out that the lack of distinction made between the terms "critical" and "cognitive" leads to their being used interchangeably (Benesch, 1993). The logical alternative to abandoning use of the term, "critical thinking", altogether is to infuse it with some content from the realm of experience to distinguish it from the formal types of cognition with which the term, "cognitive", is associated. Citing a number of impressive references, Benesch proceeds to do just that, but, unfortunately, the type of infusion Benesch and the cited authors have in mind leaves the reader wondering whether "critical thinking" has become a redundant synonym of another sort. For the reader is presented a stark choice between, on the one hand, regarding "critical thinking" as a redundant term for higher

order cognitive processes and, on the other hand, as a "search for the social, historical, and political roots of conventional knowledge and an orientation to transform learning and society" (Benesch, 1993: 545-6). This "transformation" turns out to be the fairly modest one of focusing "...on social inequities and prob[ing] the disparities between democratic principles and undemocratic realities" (Benesch, 1993: 546). Such a narrow definition of "critical thinking" in relation to experience appears to amount to an appropriation of "critical thinking" by democratic socialist political philosophy and, if this view is indeed correct, leaves "critical thinking" with the same sort of identity crisis that it was originally diagnosed as suffering from.

To present the choice of definitions for "critical thinking" in these stark terms as *either* a set of decontextualized cognitive operations *or* as their total opposite, a social-political study agenda, looks suspiciously like the sort of false dichotomy that "critical thinking" is surely designed to prevent, or, if unprevented, to criticize. If "critical thinking" is to have an independent meaning of its own, such a meaning can only exist in the conceptual center, where neither pure abstraction nor historical contingency dominate. Such a conception of critical thinking is entirely consistent with the origins of "critical thinking" in the "critique" of late eighteenth- and nineteenth-century philosophy which was concerned, among other things, with the evaluation of ideas in terms of their internal consistency and their consistency with experience, a category that encompasses all empirical phenomena. Kant, Hegel and Marx, the supreme exemplars of "critical philosophy", were all adamantly opposed to any conception of "reasoning" that, on the one hand, reduced it to a set of abstractions cut off from any empirical/historical context or that, on the other hand, reduced it to the pursuit of a socio-political cause without a method. It is this tradition of "critique", furthermore, that informs the contemporary academic genre of the "critical review" and helps ensure that it comprises more than just logical nit-picking.

The preoccupation of twentieth-century philosophy in North America and England with forms of logic and logical operations tended, for much of the century, to focus the attention of philosophers and "pure thinkers" on formal cognitive operations, on such things as syllogisms, abstract puzzles and the writings of Edward de Bono, and thus obscured the other, empirical, dimension of critical thinking. Educators and psychologists, however, have always remained in touch with the two-dimensional nature of critical thinking. Dewey (1916) noted that different subject disciplines, such as the sciences, geography and history, "liberate" the mind in different ways. Bruner (1971) argued that thinking skills can only be developed when cognitive development and the use of knowledge are integrated. As de Sanchez (1987:413-414) points out, Piaget (1968) and Gagne' (1977) disagreed about much, but both agreed that thinking involves *operations on content*. Furthermore, these educators and psychologists are treated as spiritual forefathers by members of an emerging "critical thinking" subdiscipline. All of the contributors to the "Theoretical Perspectives on the Teaching of Thinking" component of the *Second International*

Conference on Thinking (Perkins, Lochhead, Bishop, 1987), for example, cite these and associated references when they refer to "critical thinking". Though few critical thinking specialists now appear to agree wholeheartedly with Ennis's uniform conception of knowledge, all can find a common point of reference in his famous baseline definition of critical thinking as "reasonable reflective thinking that is concerned with what to do or believe" (Ennis, 1962). Indeed, since Ennis wrote these words, the thinking-content relationship has become so well-established within the fields of thinking in general and of critical thinking in particular that the main debate today concerns the question of whether or not critical thinking skills can be transferred from one subject discipline or field of knowledge to another: all agree that the teaching of critical thinking skills must start within a specific subject discipline because of the specific knowledge structures of different disciplines (e.g. Adler, Perkins & Salomon, Swartz, 1987).

"Critical thinking", then, should not be regarded as either confined to formal cognitive operations or to a particular field of enquiry. It is practical enough to be concerned with "what to do or believe" and broad enough to include any field of enquiry that has more than purely formal content. Furthermore, the consensus that exists among "critical thinking specialists" on the subject-specificity of critical thinking skills indicates that the process of deciding "what to do or believe" must conform, at least initially, to the knowledge structure of the subject discipline. This view of critical thinking is the one that will inform this paper's treatment of critical thinking in the context of the MBA case method.

Critique of differing notions of critical thinking has thus far identified a general purpose and a legitimate domain for critical thinking, but it does little to define the immediate aims and the processes of critical thinking (which are related to these aims). On these questions, unfortunately, there appears to be a lot of disagreement because there are differences of view about the epistemological character of critical thinking. At one extreme stands a traditional view of critical thinking as the pursuit of knowledge in the form of "truth" alone. This view regards the boundaries between different fields of knowledge as relatively insignificant since "judgments of evidential confirmation or support are *global* judgments" (Adler, 1987: 255). Such a view is associated with Ennis, who also helped define the traditional view of critical thinking as a painstaking philosophical enterprise (Ennis, 1985, cited in Paul, 1987: 378-379). "Open-mindedness", for example, is described as a tripartite activity that comprises (1) considering other points of view than one's own, (2) reasoning from premises with which one disagrees, though without letting the disagreement interfere with one's reasoning, (3) withholding judgment when the evidence and reasons are insufficient."

At the other extreme stands Adler (1987) who has pointed out that this traditional view of critical thinking, which is based on a universal, internally consistent, notion of truth and on a purely disinterested search for it, regardless of practical outcomes, may not fit the real world of

practical decision-making very well. For example, being too open to other points of view may lead to information overload and inaction. For example, the demand for impartiality and for total consistency of principle and action can lead in practice to the kind of false *either/or* dichotomy by which something is done totally or not at all. The rich man is given the choice between giving all his money away or none at all. For example, the total rejection of self-interest and bias in critical thinking, is just unrealistic morally since it is morally idealistic, and unrealistic in practical terms since self-interest and bias, under certain conditions, may play a positive role in filtering information input. In this practically grounded view of critical thinking, knowledge is regarded as the product of various dialectical processes. One process is propelled by the need to avoid information overload by seeking "bold theories and explanations to help us understand the natural and social world" and by the subsequent need to subject these theories and explanations to criticism. Within the domain of a particular area of enquiry the acceptance of valiative assumptions peculiar to the domain, in contrast to a notion of universal truth, will lead to the existence of multiple, and possibly conflicting, aims which will have to be optimized "without benefit of a decision procedure or firm principles to adjudicate disputes" (Adler, 1987: 255). At the attitudinal level, attitudes such as dogmatism, boldness, tolerance of ambiguity etc., are normally regarded as in themselves "negative" in terms of a disinterested search for truth, yet when set in a relationship of tension with their opposite attitudes – openness, humbleness, insistence on clarity and precision – the resulting dialectic can help the critical thinker bridge the chasm between right thinking and right action, between being skeptical all the time and knowing when skepticism is most appropriate and valuable.

This latter view of critical thinking is the one that will be invoked to identify the kind of thinking that is required by the MBA case method. As will be seen, this kind of thinking is action-oriented, dialectically driven, tolerant of ambiguity and does not expect a final "right" answer. Another shared similarity that will become apparent is its insistence on constant practice with case studies since "practical wisdom is required to give guidance" when there are no clear adjudicating principles and attitudes and beliefs can be shifted by action as much as by thought itself (Adler, 1987: 257).

The Learners and the MBA Program at the International University of Japan

The learners who are featured in this study are all Japanese adults who are virtually all males in the 25-35 age group. By the standards of their own educational culture, these learners represent an educated elite: all are already in possession of undergraduate degrees, many of them obtained at prestigious universities such Tokyo, Kyoto, Keio and Waseda; virtually all of them are

employees of major Japanese corporations and many of them are being groomed for important managerial positions in important overseas assignments. The majority of these learners have scores from the quantitative section of the GMAT which place them in the top decile of MBA candidates worldwide, despite the handicap of having to take the test in English, a language in which their proficiency levels range only from intermediate to high intermediate (e.g. TOEFL 500-600).

The MBA program is offered at the International University of Japan, a two year English-medium graduate institution which is the only one of its kind in the whole of Japan. The Graduate School of International Management (GSIM) was set up in 1988 as a joint venture with the Tuck School of Business Administration at Dartmouth College in the U.S.A., with the result that, in the first years of its existence, GSIM's curriculum was heavily tilted towards the use of the MBA case method pioneered and championed by the Harvard Business School. Although in recent years the emphasis placed on the case method in the GSIM curriculum has lessened, it still remains an important part of many GSIM courses. Furthermore, some courses which do not employ the full-blown case method nonetheless incorporate some of its experimental aspects, such as the testing of general concepts and norms against various types of data.

The GSIM curriculum is, without exception, fully English-medium. The Japanese learners represent about 40-50% of the enrollment in any one year: the other students are almost all non-native or native English speakers from various parts of Asia, Europe and North America.

The MBA Case Method

The case method used in MBA programs around the world was developed at the Harvard Business School in the 1920s as a means of bridging the gap between knowledge and action, theory and practice (Gragg, 1940; Christensen, 1987). It is based upon "the belief that management is a skill rather than a collection of techniques" and that the "best way to learn a skill is to practice in a simulation-type process" (Shapiro, 1984a: 2). What this means in practice is that students have to discuss real-life business situations, often featuring internationally famous companies, and reach a decision regarding a practical course of action that should be taken by the central character(s) in the case. Shapiro describes this process in the following way:

"While there is no 'one ideal way to approach a case', some generalities can be drawn. The student gains the most by immersing him- or herself in the case and actively playing the role of the protagonist. The protagonist is usually one manager but is sometimes a group. By actively studying the case, the student begins to learn

how to analyze a management situation and develop a plan of action, and then to defend and back up that plan of action. By participating in an involved manner in the case discussion, the student learns to commit him- or herself to a position easily and to express that position articulately. The core of management decision making consists of these processes: analysis, choice, and persuasion."

Hammond (1980:2) makes much the same point, but places emphasis on the to-and-fro of the case discussion debate:

"Cases, and the related case discussions in class, provide the focal point around which the participants' expertise, experience, observations, and rules of thumb are brought to bear. What each class member brings to identifying the central problems in a case, analyzing them and proposing solutions is as important as the content of the case itself. The lessons of experience are tested as the participant presents and defends his or her analysis against that of participants having different experiences and attitudes gained by working in other jobs. It is here where common problems, interdependencies, differences of attitudes and organizational needs, and the impact of decisions in one sector of an organization upon other sectors emerge and force participants to face and deal with them."

Shapiro in another text (Shapiro, 1984b: 2), brings these strands together by making the general point that the function of cases is not to transmit knowledge or techniques, but to help "in the development of skills, approaches, and a philosophy of management".

The precise nature of the relationship between knowledge and techniques, on the one hand, and the simulation practice provided by the case method, on the other hand, is a subject that is curious for its neglect by most writers about the MBA case method. Christensen (1987), however, comes closest to providing an explicit explanation of this relationship. In his view, the knowledge and techniques yield general propositions and abstract concepts which are necessary, but not sufficient, to deal with the complexity of managerial decision-making (Christensen, 1987: 34). He quotes Cantor approvingly on the limits to the utility of such propositions and concepts:

"Logic and mathematics do not begin to exhaust the nature of reality. Yet most of us have grown up in the tradition that the solution to human problems is found in statements, logical propositions. Our formal education is primarily intellectual. We learn answers, general propositions, abstract concepts. We accumulate facts but continue behaving pretty much the same as the generations of biblical times.

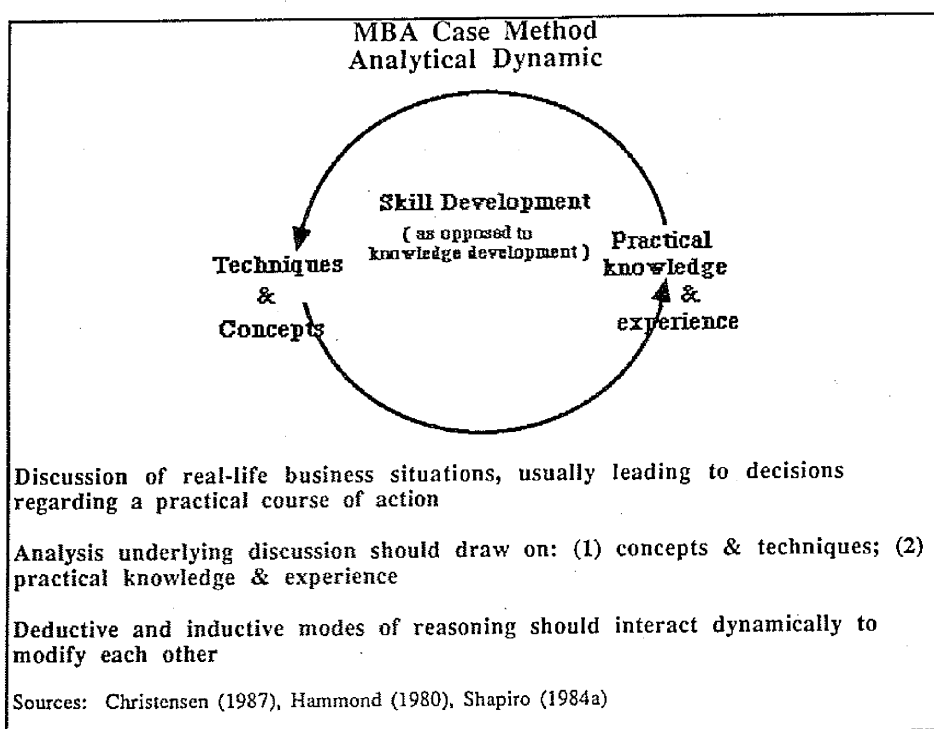
Knowledge does not seem to make much difference." (Cantor, 1958: 85, cited in Christensen, 1987: 34)

As Christensen sees it, the general propositions and concepts and the case studies exist in a state of dynamic tension, the former enabling assimilation of a mass of complex problems and data, the latter constantly subjecting the former to the pressure of empirical reality and the need to act. The five "basic dimensions" of the case method that he identifies all bear witness to the need for selectivity, for tolerance of ambiguity, imprecision and inconsistency, for acceptance of the lack of precise and final answers, that characterizes real managerial decision-making and the well-applied MBA case method:

- managers must have "a sense for the critical, the jugular"
- specific actions should be tied a "larger conception of what is to be accomplished"
- intent and action are not the same - "action requires skill in carving out doable tasks and sequencing these initiatives for maximum effectiveness, as well as a sense for when objectives and plans need to be reappraised"
- concepts that can be nicely defined as "technical, financial or conceptual issues" become "'people problems' as they move toward the action stage"
- "the complexity of the general manager's problems rules out 'solutions' in the conventional sense of that word" - instead, the manager must settle for accommodations, "knowing that [the problem] will never disappear and, even if managed successfully, will recur" (Christensen, 1987:34)

In terms of the dialectical processes that Adler identifies with critical thinking, the MBA case method generates intellectual movement through such tensions as those between analysis and judgment, between strategy and action, between willingness to listen and willingness to assert, and, above all, between concepts and techniques, on the one hand, and empirical reality, on the other hand. This latter form of dialectical reasoning involves the application of techniques and concepts and practical knowledge and experience, whether acquired directly through personal experience or indirectly through texts, in which the two reasoning modes, one deductive and the other heuristic, or inductive, interact dynamically to modify each other and create new ways of looking at problems. As will be seen, Japanese learners appear to experience particular difficulty in understanding and applying this deductive-inductive form of dialectical reasoning.

Figure #1.



The Pre-Sessional Intensive English Program: Phase 1

At the same time the MBA program at IUJ was launched in 1988 the university's pre-sessional Intensive English Program (IEP) was expanded to accommodate the new group of prospective Japanese MBA students. Out of purely pragmatic considerations, the responsibility for preparing these learners for the linguistic and academic challenges they would face was devolved entirely to the IEP syllabus designers and teachers. From the very beginning, then, the teachers had to confront the question of what kind of relationship would in practice exist between the conceptually separate notions of "linguistic development" and of "critical thinking". This was an urgent question since both the MBA case method pedagogy and the concept of the MBA program as a forcing house for exchanges of views and ideas among an *international* student and teacher body made it imperative that the Japanese learners be given the training and the confidence to speak out and debate in a large and lively forum like a case discussion class. More specifically this raised the question of whether or not case debating skills could be developed independently of a "critical thinking" agenda that would, *prima facie*, be best left to the experts, the MBA content teachers who

would encounter the Japanese learners immediately after the IEP. In a narrowly empirical sense, this question was soon put to the test.

Figure #2

Pedagogical Approaches Contrasted

Japanese Education System	The MBA Case Method
deductive	critical (deductive and inductive)
expository	experiential
knowledge/facts	thinking process
correct answers	good questions and cogent argument
lectures	discussions
teacher-centered	group-centered
"authority" = truth	truth is relative

The need to prepare the Japanese learners for MBA case debates represented both a challenge and a tremendous opportunity. The challenge lay in the mismatch between the case discussion process and the educational and social processes the Japanese learners had been accustomed to all their lives. The MBA case discussion is lively, sometimes aggressive and very much student-centered. The Japanese learners, however, attested that they had been inculcated in quite different educational values. Their social and educational culture, as they themselves described it, idealizes the wisdom of the teacher and the virtue of the student's silence, the superiority of accumulated knowledge over individual intellect, the value of humility and the ugliness of assertion. Figure #2 gives an overview in tabular form of the striking contrasts that exist between the pedagogy with which the Japanese learners were familiar and the new pedagogy to which they had to be exposed.

The opportunity lay in the communicative intensity of the case discussion process itself. As Charles (1984), Piotrowski (1982) and Sawyer (1989) have all pointed out, the MBA case method has potentially boundless possibilities for applications within a meaning-focused or task-focused communicative language course design.

The actual performance of the Japanese learners in the case discussion practice classes was neither as bad as was feared nor as good as was hoped. They were all sophisticated enough to realize that some adjustment to a new educational culture was required and pragmatic enough to

realize the value of structured discussion activities as a means of increasing their oral fluency in English. Curiously, however, the willingness of the Japanese learners to participate in the case discussions for the purpose of improving their language fluency was also accompanied by complaints from a lot of them about the credibility of the case method as a pedagogical tool for learning about business administration. Typical complaints included the following:

- 1 business administration should be taught as a "scientific" discipline in which the application of relevant concepts and techniques will automatically yield the "correct" answers
- 2 the amount of data in the cases was far too small to form a basis for reliable judgments (the assumption that the complexity of reality is a function of sheer quantities of data)
- 3 the cases focus on failures, rather than successes, and, therefore, provide no models for correct business conduct
- 4 internationally famous and successful companies are incapable of making simple mistakes

"I want to know how to get the right answers to specific problems", one learner seemed to sum up, "I can get these from the professors and the textbooks, not from listening to the other students." That these sorts of complaints are not unique to IUJ, or indeed to Japanese learners, is clear from some published Harvard Business School materials, such as the "Ko Tanaka" case (Takagi: 1981) which details the struggles of a Japanese student at Harvard Business School and Christensen's (1982) more general comments in "Foreign Students: opportunities and challenges for the discussion leader".

These negative attitudes toward the value of case discussion as a content learning tool had a clear and visible effect on the Japanese learners' performance both in the MBA program itself and in the IEP. In the MBA case discussions the Japanese students usually remained silent, despite the ability of many of them to follow what was being said. When a few of them did speak out, however, the MBA teachers often complained that they didn't seem "to get the idea of case discussion", that, in other words, they appeared to have no sense of the analytical dynamic that should inform a good case discussion. In the practice case discussions held during the IEP, the discussions seldom rose above the level of description. The resulting absence of disagreements and controversy meant that the learners had neither the need nor the motivation to develop a full discussion and argumentation repertoire in English. Linguistic exponents were fed in by teachers, but were not used by the learners. Truly behavioral performance targets, such as criticism of others' opinions and defense of one's own opinions when criticized, were simply unrealizable.

The Intellectual Challenge of the Case Method

If it is accepted that the MBA case method represents a reasonable pedagogy which has a reasonable aim and that the Japanese learners have, by virtue of choosing IUJ, freely chosen to encounter new and unusual educational values, it follows that the Japanese learners had to be shown how they might adapt to the intellectual demands of the MBA case method. In the context of the IEP this meant developing a course design framework in which the development of cognitive strategies could be integrated with the development of the other language skills required by the case method.

The first stage in the search for relevant course design principles was to identify as clearly as possible which cognitive strategies were essential for "unlocking" the case method and with what sort of linguistic inputs and outputs these essential strategies were most closely associated. Given that these adult learners were sophisticated and appeared willing to express fairly energetic, occasionally assertive, attitudes to many aspects of the learning process, the major barrier to internalization of the case method procedure appeared to be less one of introversion or of lack of confidence and more one of an inability to set aside certain assumptions about the nature of the learning process itself. The critical clue was provided by the severe difficulties the learners were obviously encountering in trying to read and make sense of the case texts which contained all the information about the particular business situations that formed the subject of the case discussions. These case texts do not exist in isolation. Often linked with them, directly or indirectly, are textbook chapters and academic journal articles which are normally distributed simultaneously with the case texts by the content course teacher. Within the terms of reference of the case method the relationship between these two sets of texts is regarded as a complementary one. The textbook chapters and journal articles provide students with generalized concepts and techniques, while the case texts represent the stuff of business reality in which a particular array of circumstances and a set of problems requiring a decision(s) are presented. The former set of texts help to organize or "assimilate" the messy confusion of reality; the case texts remind the MBA student that the concepts and techniques, while necessary, do not in themselves represent a substitute for human judgment in the everyday operations of business administration. Thus the two sets of texts embody the essential dialectical tension between knowledge on the one hand and judgment and experience on the other hand that exists in the Harvard-style MBA learning process. Without some understanding and acceptance of this underlying logic, it is very difficult to make any real sense of the case texts.

It was without the benefit of this understanding and acceptance that the Japanese learners in the IEP had first encountered Harvard Business School case texts. The difficulties they faced may be best explained in terms of schema theory. They had little problem reading the deductively

organized textbook chapters and journal articles as these could be decoded quite straightforwardly by applying the scientific knowledge schemata they had developed through their own L1 educations. But the case texts left them at a loss as to what kind of schemata to apply. Some learners appeared to try to apply the same schemata they had applied to the deductively organized texts to the case texts and complained that they could find neither a unifying theme nor any prospect of a credible solution to the case problem. The very flat rhetorical structure of the case texts also caused them to complain that the case text writers wrote in a very unclear way that was clearly at odds with the way they themselves were being taught to write. Other learners understood that the cases represented some sort of heuristic exercise, but treated them as self-contained puzzles and did not utilize any of the convenient intellectual entry points into the cases that the related textbook chapters and journal articles provided. These learners appeared to lose their way in the sea of details that comprises the typical case text, their copies of the text transformed into a solid gleam of highlighter pen marks. A third set of learners were those who, after much struggle, eventually figured out the complementarity of the two sets of text and realized that the case texts could not be read in the same way as a textbook or a puzzle. These outcomes created a feeling that there was little prospect of generating meaningful case discussion above a purely descriptive level unless all the learners could be made aware fairly quickly that they would have to apply a new approach to the reading of and intellectual processing of certain texts. But it remained an open question exactly how systematic and narrowly targeted this awareness raising would have to be.

In Search of a Theoretical Framework for Integrating Development of Cognitive Strategies with L2 Development

The difficulties the Japanese learners had suffered with the case texts were at first surprising. After all, the interplay of the deductive and the inductive in human thought is the very stuff of informal learning from a very early age (e.g. Piaget, 1955). Furthermore, there was no reason at all to suspect that these particular learners lacked any cognitive *capacity* : quite the reverse, in fact. A quick investigation of the literature on thinking and the learning of thinking, however, added to these common sense observations a realization that thinking is a highly complex and variegated activity which, for reasons that are yet not fully understood or agreed upon, often turns out to be surprisingly context-bound. As Nickerson, Perkins and Smith (1985: 335) have noted:

"Transfer poses a special challenge to efforts to enhance thinking. Belmont and Butterfield (1977) reviewed a number of studies designed to teach cognitive skills,

finding little evidence of transfer. Even though a skill learned in one context may in principle apply to another, quite commonly a person who has mastered the skill in the first context does not think to apply it in the second. Moreover, many skills acquired in one context do not carry over straightforwardly to others, but require significant adjustment, another barrier in the way of smooth transfer."

If it is true that thinking skills learned in a formal learning context do not automatically transfer to other contexts, then *a fortiori* it must be true that thinking skills learned in informal contexts do not automatically transfer to formal learning contexts. Furthermore, there is a consensus that the transfer of *critical* thinking skills is especially difficult because of the intimate relationship of formal critical thinking skills with the formal subject disciplines in which they are applied. Swartz (1987: 270-271), for example, while rejecting the strong claim that different subject disciplines possess their own *logics*, agrees that there is a point to the argument that the different fields of study have their own epistemologies, which means that "perhaps the standards of knowledge and rational belief and the ways in which knowledge is gathered and used vary from field to field." Swartz, therefore, recommends that critical thinking skills should be taught in specific domains and then transferred. Even Perkins and Salomon (e.g. 1987), who are optimistic that a general metacognitive model of thinking can be operationalized for learning purposes, still see the learning of thinking as a "transfer" problem. Because of such considerations, Nickerson et. al. (1985: 335) argue bluntly that the teaching of thinking skills generally will most likely achieve results when it is aimed "as directly as possible to the target performances it hopes to improve."

The immediate question was answered: the raising of the learners' awareness with respect to the different schemata of the case-related texts and to the dialectical connection between them would have to be both systematic and targeted. But this answer entailed the next question: exactly what kind of system should be used? While no precise answers were expected or needed, it was, at a minimum, going to be necessary to develop some sense of what constitutes cognitive difficulty to the extent that it would be possible to begin and end the presentation of texts and activities in a pedagogically sound sequence and, at the same time, to ensure that this sequence would be consistent with the language proficiencies and the language learning needs of the learners.

A preliminary search of the critical thinking and general thinking literature has not identified any recommended procedures specific to the MBA case method. Most of the applied research has been conducted at the middle and high school levels in the U.S.A. and relates to the teaching of "lower order" thinking skills such as observation and classification. The relative youth of the entire field is underlined by Swartz's (1987:275) comment that "Project Impact" (Winocur, 1982) represented the only generalized checklist of critical thinking skills in some sort of hierarchical

order in existence at that time. This checklist, it should be mentioned, placed "inductive" and "deductive" reasoning processes at the very top of the critical thinking pyramid.

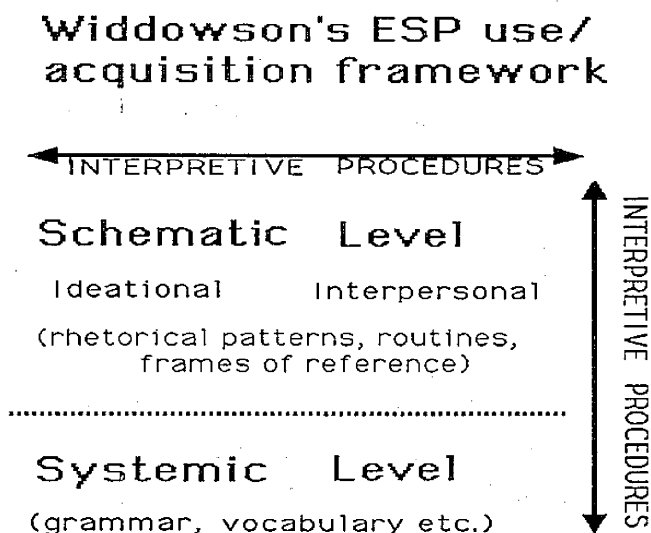
Cognitive Strategy Development in the EAP and Academic ESP Literature

In these circumstances, and since the issue of the relationship between L2 development and cognitive development could not be ignored, the search for a relevant model of cognitive strategy development shifted to the fields of EAP and academic ESP. The literature of these two fields, however, is overwhelmingly dominated by the assumption that L2 adult learners have already undergone an L1 education process that has equipped them intellectually to deal with the academic tasks they will have to perform in the L2 (e.g. Hutchinson and Waters, 1987; Swales, 1990; Widdowson, 1983). In addition, it is only recently that the previously dominant paradigm that academic reading skills are not subject-specific (e.g. Hutchinson and Waters, 1987: 13) has begun to be reassessed in the light of growing awareness that EAP and academic ESP learners can benefit by extending the application of insights obtained from schema theory to include not only the development of formal schemata, which refer to formal features of text organization and presentation and which cut across subject discipline boundaries, but also the development of content schemata, which refer ultimately to the epistemological constraints that bound the specific subject discipline (Blue, 1993).

While there appears to be the beginning of a movement to incorporate within EAP and academic ESP a broader view of schema theory that may embrace the knowledge structures of subject disciplines as well as subject-independent text structure, no systematic theoretical frameworks or, indeed, anything of general utility have yet emerged from it. The most relevant existing general framework is the very general "language use and acquisition framework" proposed by Widdowson (1983) (see figure #3). This appears to be appropriate for three reasons. First, it was specifically developed with ESP in mind, though the scope of its principles reach far beyond ESP. Second, it clearly distinguishes between cognitive processes and schemata and, through reference to schema theory, proposes a mechanism that explains how schemata are developed. Third, it regards general education and language education pedagogies as entirely compatible. This compatibility derives from Widdowson's view that differences among forms of education are far less significant than the differences between education, a creative problem solving process, and training, a more limited process which aims for no more than an input-output equivalence. As Widdowson puts it, all forms of education seek "to provide for *creativity* whereby what is learned is a set of schemata and procedures for adapting them to cope with problems which do not have a ready-made formulaic solution" (Widdowson, 1983: 14). The relevance of such a framework to

the particular learning problems of the Japanese learners presented earlier in this paper should require no elaboration.

Figure #3



Source: Widdowson (1983)

Within Widdowson's framework all learning is defined as a continual process in which schemata are selected, applied in various situations, and adjusted as new evidence conflicts with them (Widdowson, 1983: 32-79). The commonality of language learning and general learning is expressed in this way:

"[Interpretive] procedures, then, are used to match up and adjust schemata in the discourse process: they are the interactive negotiating activities which interpret the directions provided and enable us to alter our expectations in the light of new evidence as the discourse proceeds. And it is this procedural ability which realizes schematic knowledge as communicative behavior that I refer to as capacity. This concept, therefore, covers a range of different activities which have been variously referred to as inference, practical reasoning, computing cross reference, negotiation of meaning, problem solving, and so on." (Widdowson, 1983: 40-41)

In the same vein, Widdowson also draws a parallel between his conception of learning and Piaget's account of learning as involving the complementary processes of assimilation and accommodation (Widdowson, 1983: 67).

Though this framework is useful in several ways, it is particularly useful for the light it casts on the role of schemata as universal mechanisms that mediate between interpretive processes and raw data and, by virtue of their mutability, help the two domains to adjust to each other. With respect to the particular learning difficulties the Japanese learners face in dealing with the MBA case method, it indicates that a very plausible strategy would be to expose the Japanese learners to the MBA case texts in such a way that they adjust their existing inventory of schemata to the peculiar rhetorical rationale that underlies them. Strong though the framework is in setting out strategic directions, however, it is noticeably silent about the sorts of tactical operations that can be conducted to actually generate movement in the desired directions. In the case of ESP learners, this silence appears to be the result of a very confident assumption that the learners are already headed in the right direction. This assumption is based on the apparent belief that it is a foregone conclusion that ESP learners have already undergone an L1 grounding in the discipline they have chosen to study through the L2. Thus, there is no need to worry that the learners are in need of major cognitive assistance as they are already empowered with all the relevant schemata and other cognitive equipment they will need to complete their ESP studies. Indeed, the need for adjustments in methodology lies entirely on the other side of the fence with the learners' ESP teachers, who should adapt their language teaching methodologies to the schemata and the "cognitive style" that the learners have developed through their previous studies of the subject discipline (Widdowson, 1983: 102-104). There appears to be no room in Widdowson's imagination (or that of most other writers on EAP and ESP) for ESP learners who have yet to acquire the schemata and cognitive style relevant to their chosen field of study.

Widdowson leaves us with a good schema strategy, but no tactical directions for operationalizing this strategy. The obvious next step is to locate literature on the *teaching* of schema. The author's preliminary literature searches have failed to identify any such literature that may be relevant to the concerns of this paper. The search will continue, but for now a detour will be made in the hope of reaching the same destination by a different route, or, failing that, in the expectation that the journey will take us into territory that is nearby and not unlike the destination itself. As far as possible, this detour will stay within familiar boundaries of language learning theory and practice.

The nature of schemata themselves, of course, can offer clues to their teaching. Widdowson's comparison of their operations to Piaget's view of learning has already been cited, but it is appropriate here to cite it in a little more detail:

"One might note the relevance here of Piaget's account of learning as involving the complementary processes of *assimilation* and *accommodation* Assimilation can be understood as the acceptance of information into established schematic categories, and accommodation as the adjustment of these categories to account for new experience." (Widdowson, 1983: 67)

On the face of it, the adjustment required of the Japanese learners in dealing with the MBA case method is one of adjusting their existing schematic categories to account for the decidedly new experience of the MBA case texts. Yet, at the same time, we should not remain blind to any opportunities that present themselves from the other, assimilative, side of the process equation. The outstanding issue is clearly a methodological one: how is this process of adjustment to be facilitated? The sort of working hypothesis that should be adopted is less clear. But working in accord with a sense of probabilities, and being careful to keep an open mind, the working hypothesis to be adopted will be that the necessary process of adjustment is mainly accommodative, but can possibly be assisted by more assimilative procedures.

A Methodological Paradigm from Children's ESL

The search for a methodological paradigm of cognitive development and adjustment leads us straight out of the EAP and ESP fields, past mainstream EFL, and into the rich pastures of children's ESL. In the last decade, the theory and practice of children's ESL in North America has experienced phenomenal development: what was once a Cinderella of the language teaching field has staked a claim to great seriousness and innovation. Mohan (e.g. 1982) and Cantoni-Harvey (e.g. 1987), two of the major pioneers of children's ESL theory and practice, have built upon the vast tradition of progressive education in North America (e.g. Dewey, 1916; Bruner, 1960) to develop the conception that L2 education for ESL children should be as much a cognitive process as a linguistic process. Furthermore, cognitive growth and language growth are seen as mutually related: the cognitive growth creates the need for new forms of expression; the new forms of expression allow new modes of thought to be expressed. From the work of the progressive educational theorists Mohan and Cantoni-Harvey developed the twin principles that thinking skills should eventually comprehend the underlying structure of knowledge of each discipline and that these thinking skills should initially be developed experientially through practical problem solving activities, to be followed later by a movement towards more abstract expository modes of

development. In essence, they both propose a principled and coordinated application of the familiar teachers' injunction that content and activities should be sequenced so that they move from the familiar to the unfamiliar, from the concrete to the abstract, from the simple to the complex. Mohan's own formulation of this principle is presented in figure #4, together with Shapiro's proposed sequence for reading, discussing and generalizing from case texts.

Figure #4

Mohan's ESL sequence	
1.	practical to theoretical discourse
2.	practical to theoretical content
3.	experiential to expository learning
Source: Mohan (1986, pp 117-8)	
MBA Case Method Sequence	
1.	individual analysis and preparation
2.	optional informal small-group discussion
3.	[more formal] classroom discussion
4.	end of class generalization about the learning [relate the case to other assigned readings, especially general and theoretical ones]
Source: Shapiro (1984a, p 2)	

Within children's ESL the relation between the theory and the practice of this sequencing model appears sound and uncomplicated. Before applying it to serve the needs of the adult Japanese learners of this study, some pause for reflection on the degree of similarity and difference between them and young ESL learners is necessary. In one dimension they are similar: both sets of learners are faced with a combined cognitive-linguistic challenge. In another dimension, however, they are different: the Japanese learners are fully mature adults whose cognitive repertoires are fully developed with the exception of a particular form of critical thinking; young ESL learners are only at the beginning of their cognitive development. The existence of this difference has two major implications. First, it is highly likely that the adult learners will be able to develop the target thinking procedures relatively quickly since they will be able to locate and, therefore, objectify these procedures within well-developed cognitive frameworks. Second, it means that we have to modify the assumption that what is near and familiar to the learner is always

tangible, personal and experiential, for the sorts of deductive, theoretical, expository pedagogy that the Japanese learners experienced for many years at school and undergraduate university are also, in a sense, "near" and "familiar", perhaps as near and familiar in some ways as their knowledge of their own business areas. Any use of Mohan's sequencing model, therefore, must allow for its "accommodation" to the new "experience" that these Japanese learners represent.

The Pre-Sessional Intensive English Program: Phase 2

The syllabus unit put together to introduce the Japanese learners to the MBA case method and allow them practice in the relevant reading, analysis and discussion activities conforms to the underlying structure of knowledge of the case method, or, at least, conforms to it to the extent of the syllabus unit designer's understanding of this knowledge structure. This has entailed creating a relatively simple two-tier structure for the syllabus unit.

Figure #5

Developing "Critical" Skills The Sequence of Activities in one Case Cycle	
1.	Read "concepts & techniques" texts - identify rhetorical patterns/ skim read/ summarize main points/ discuss
2.	Use summaries as guide to reading of the case text/ notes on convergence & divergence of texts
3.	Small group discussion (a) of relationship between the texts
4.	Small group discussion (b) - assume general texts are perfect - criticize the company's performance
5.	Small group discussion (c) - assume the company's performance is perfect - criticize the general texts
6.	Small group discussion (d) - problem identification & decision options
7.	Open-class, formal case discussion

The lower of the two tiers relates to the sequence of activities that comprise each "case" and that in a fundamental sense represent the case method. These activities are already in a rough experiential-to-general order (see Shapiro's proposed case activities sequence in figure #4). The "accommodation" of this sequence to the needs of the Japanese learners revolves around these learners' feelings of comfort and familiarity with deductively presented general concepts. The

result is that the internal case sequence starts with generalization procedures and returns to them again in the middle. In this way, the activities begin with the sorts of cognitive procedures that are familiar to the Japanese learners. The move away from this familiar territory into the newer territory of the dialectical deductive-inductive relationship between ideas is carefully orchestrated by *decompressing* the normal flow of case activities and by *analyzing out* and *objectifying* them (see figure #5). The decompression naturally aids language learning/skills development as much as it does general cognitive development. A good example of the objectification is presented by steps #4 & #5 in figure #5. The aim of this orchestration is to guarantee as far as possible that the stretching and molding of the learners' existing schemata occurs through the actual *experience* the sequence of activities gives learners, with explicit instruction performing a complementary and reinforcing role. Steps #4 & #5 are unnatural in the sense that they would never be encountered in a "real case", but *essential* in that they reveal the interaction of inductive and deductive modes of reasoning without which the case would not be a "case".

The higher of the two tiers embodies the notion that repetitive practice is a *sine qua non* for the development of the skill and judgment that good managers must possess. The relevance of this notion to language learning should need no comment other than the one that it is especially relevant to the development of the specialized reading skills and debate skills required by the case method. This higher tier comprises a sequenced set of five case modules, each of which takes the learners through the same set of activities - case reading, analysis, discussion. The earlier modules decompress and objectify these activities; the last two modules take the learners closer to a simulation of the rapid compression that characterizes the case method in actual operation. The sequencing of these five case modules conforms closely to the "normal" interpretation of what constitutes the near, the familiar and the tangible, and what constitutes the more distant, the less familiar and the less tangible. The three main criteria for selection here relate to the subject matter of the case text, to the complexity of the input from the deductively organized textbook chapters and journal articles, and most important of all, to the critical thinking challenge each case represents. Ideally, of course, the first two or three case texts would refer to Japanese companies operating in a purely Japanese environment, but, unfortunately, the virtual non-existence of published cases that fit this description means that the choice of these texts is determined by the sorts of companies that are second most familiar to the Japanese learners - very famous American corporations that engage in the production of relatively low-tech, easy-to-understand and universally familiar goods. Figure #6 gives a partial outline view of this sequence of case modules.

Thus, the first two case modules incorporate case texts related to Nike Corporation, which is well-known in Japan as a supplier of fashionable sports shoes, and to McDonald's and Burger King, which are two of the biggest and best known fast food restaurant chains in the world. Nike

is placed first in the sequence simply because the input from the journal article, "Creating and Managing Joint Ventures in China," is relatively simple, consisting of a list of prescriptive do's and don'ts for foreign companies wanting to enter China and very obviously related to the contents of the case text. The critical thinking challenge is also simple to formulate. Nike breaks several "rules" and obviously suffers because of this. Interestingly, however, Nike does not always appear to benefit from the observance of the rules. The learners have to figure out why this is so.

Figure #6
The Sequence of Case Modules

Concepts & Techniques		Cases	
1	<i>Creating and Managing Joint Ventures in China</i>	1	<i>Nike in China</i>
	Set of prescriptive rules		Rules broken? Mistakes made? Decision : stay or leave?
2	<i>Operations Management</i>	2	<i>McDonalds and Burger King</i>
	Classifying operations Classifying operations strategies		Classify their operations Classify their operations strategies? Account for divergences Which operations strategy is most coherent?
5	<i>Competitive Strategy Operations Management Marketing</i>	5	<i>Skil Corporation</i>
			Problem identification - problems disparate or linked? Decision trade-offs

Likewise, the relation between the "McDonalds" and "Burger King" case texts, on the one hand, and the chapter from the textbook, "Operations Management", on the other hand, is basically that of examples to general rules, but the learners have to figure out the paradox that McDonalds is a mass producer and yet is not highly automated, whereas Burger King offers more customer choice and yet is more highly automated than McDonalds. This paradox does not appear at first sight to sit easily with the concepts presented in the textbook chapter.

By the time the fifth and final case module is reached, the learners are expected to deal with a more sophisticated critical thinking challenge in which they must conduct several difficult procedures: first, make judgments about the compatability or incompatibility within the case situation of concepts from widely differing fields of business management, such as competitive strategy, operations management and marketing; second, re-interpret and sometimes modify these

concepts in the light of the case data; third, rank these concepts in terms of operational priority; fourth, decide which concepts can be coordinated and which cannot; fifth, subject existing insights to the case data once again; sixth, identify several plausible decision strategies; seventh, evaluate these competing strategies according to criteria which are not entirely given (and cannot be entirely given); eighth, subject these strategies to the "reality test" of the case data again and again.

This elaborate attention to the imperatives of the dialectic of the case method, it has been argued, is a necessary part of the pre-sessional IEP that the Japanese learners attend: without it, a majority of the Japanese learners will not be able make sense of either the case texts they will have to read or of the case discussions that are informed by these texts. Equally, however, it should be apparent that the sequence of case modules presented above cannot represent a totally sufficient EAP syllabus design: there is no room in it for intensive writing skills and vocabulary components; listening and presentation skills development activities can find no easy and convenient home there. Furthermore, there is no reason to believe that some ingenious integration of all these elements would in itself be desirable: it might, for example, have the effect of diffusing the tight focus on critical method that the unit of case modules achieves. In practice, therefore, these skills areas are dealt with separately from the case modules unit. In the end, the underlying structure of the MBA case method determines the structure of the EAP syllabus: reading and discussion activities are closely interwoven; work on other skill areas is performed separately and according to different developmental principles. The loss of design elegance and the slight awkwardness this arrangement entails is more than compensated by the generative power of the interlocking reading and discussion activities. Repetitive practice is often subject to diminishing returns: mastery slowly increases, but interest may also decline. The unit of case modules has repetition built into it every step of the way, but the multiple levels of meaning that are generated by the case method help insure against any decline in interest. Lower order reading and discussion skills work can be repeated again and again on the same raw input. The function of a key paragraph in the case text, for example, the functions of key discourse markers in the discussions, both small group and open-class, for example, can be endlessly reiterated because each return to them occurs in a continually shifting context of meaning and understanding. If desired, and provided the case selection has been done carefully, the same open-class case discussion can be repeated two, three, four times without fear of exhausting the learners' interest. Indeed, after several hours of repetitive case discussion practice, the most frequent complaint of the learners is that they didn't have enough time to discuss the case as fully as they wanted. Thus, in the same way it can help to resolve some of the tension between the ideal and the real in business administration, dialectical method can also help to resolve the tension between the creative and the mechanical in language learning.

Conclusion

Although the initial practical results of the syllabus design application have been encouraging, more research into the pedagogy of cognitive development and its relation to L2 learning in formal contexts needs to be undertaken. In particular, should such approaches exist, pedagogical approaches to the development of schemata need to be investigated. There is less scope for direct empirical testing of the pedagogical treatments actually provided in the pre-sessional IEP since the small population size – only twenty-five subject learners annually – is unlikely to generate convincing statistical evidence of gains in thinking power that can be associated with particular instructional procedures. Nonetheless, some empirical confidence in the effectiveness of instructional procedures can be drawn from summaries of research studies conducted in L1 contexts. These indicate that instruction is most effective in the following sorts of conditions: the population is "of low initial ability"; the target thinking skills are narrowly defined and carefully objectified; "sufficient" (i.e. more than just two or three hours) time is allocated to the practice tasks; the instructional methodology is clear and systematically applied (Nickerson et. al., 1985: 326-340).

Added to this confidence should be a sense of urgency about the need to develop a coherent instructional paradigm for the joint development of cognitive and L2 abilities within EAP and academic ESP contexts now that the whole East and South-East Asian region, and not just Japan alone, is being integrated into a global economy that communicates through English. Hong Kong and Singapore are, perhaps, already prepared for this challenge. Other nations in the region which are not prepared are suddenly pushing ahead with the implementation of English-medium programs at university level. In Thailand in early 1995, for example, several English-medium MBA programs based on American models and, in several cases, involving visiting faculty from American MBA schools had just been established or were in the process of being established (personal communications at the Thai TESOL conference held January, 1995). The similarities in culture and pedagogy among the nations of the region make it highly likely that those tertiary level educational institutions which aim to conduct their programs in English and to achieve a globally recognized standard of excellence will have to come to grips with the need to encourage and develop new ways of thinking, as well as new forms of knowledge, in certain subject discipline areas. The important role that English language teachers will have in helping to prepare the learners for these challenges make it highly likely that EAP and academic ESP programs in the region will have a lot to consider in the years ahead.

REFERENCES

- Adler, J.E. 1987 On Resistance to Critical Thinking. In D.N. Perkins, J. Lochhead & J.C. Bishop (eds.) *Thinking: The Second International Conference*. Hillsdale, N.J.: Lawrence Earlbaum Associates.
- Austin, J. 1985. *Nike in China*. Boston: Harvard Business School. (Case 9-386-065)
- Belmont, J.M. & E.C. Butterfield. 1977. The Instructional Approach to Developmental Cognitive Research. In R.V. Kail, Jr. & J.W. Hagen (eds.) *Perspectives on the Development of Memory and Cognition*. Hillsdale, N.J.: Lawrence Earlbaum Associates. [cited in Nickerson et. al., 1985.]
- Benesch, S. 1993. Critical Thinking: A Learning Process for Democracy. *TESOL Quarterly* 27, 3, 545-548.
- Blue, G.M. (ed.). 1993. *Language, Learning and Success: Studying Through English*. London: Macmillan.
- Bruner, J. 1960. *The Process of Education*. Cambridge, Mass: Harvard University Press.
- Bruner, J. 1971. *The Relevance of Education*. New York: W.W. Norton.
- Cantoni-Harvey, G. 1987. *Content-Area Language Instruction*. Reading, Mass.: Addison-Wesley.
- Cantor, N. 1958. *The Learning Process for Managers*. New York: Harper.
- Charles, D. 1984. The use of case studies in business English. In James, G. (ed.) *The ESP Classroom: Methodology, materials, expectations*. papers from the 4th biennial Selmsous conference, Exeter, March 1983, Exeter Linguistic Studies vol. 7, Exeter: University of Exeter.
- Christensen, C.R. (ed.) 1982. *Foreign students: opportunities and challenges for the discussion leader*. Boston: Harvard Business School. (Case 382-150 Rev. 1/84)
- Christensen, C.R. 1987. *Teaching and the case method: text, cases, readings*. Boston: Harvard Business School.
- Davidson, W.H. 1987. Creating and Managing Joint Ventures in China. *California Management Review*, Vol. 29, 4, 77-94.
- Dewey, J. 1916. *Democracy and Education*. New York: Macmillan.
- Ennis, R. 1962. A concept of critical thinking. *Harvard Educational Review*, 32, 81-111.
- Gagne, R.M. 1977. *The Conditions of Learning*. New York: Holt, Rinehart, & Winston.
- Gragg, C.I. 1940. *Because wisdom can't be told*. Boston: Harvard Business School. (Case 451-005)
- Hammond, J. 1980. *Learning by the Case Method*. Boston: Harvard Business School. (Case 9-376-241)
- Hutchinson, T. & A. Waters 1987. *English for Specific Purposes*. Cambridge: Cambridge University Press.
- Mohan, B.A. 1986. *Language and Content*. Reading, Mass.: Addison-Wesley.
- Nickerson, R.S., D.N. Perkins & E.E. Smith. 1985. *The Teaching of Thinking*. Hillsdale, N.J.: Lawrence Earlbaum Associates.
- Ong, C.G. 1988. *Skil Corporation*. Boston: Harvard Business School. (Case 9-389-005)
- Paul, R. 1987. Critical Thinking and the Critical Person. In D.N. Perkins, J. Lochhead & J.C. Bishop (eds.) *Thinking: The Second International Conference*. Hillsdale, N.J.: Lawrence Earlbaum Associates.
- Perkins, D.N., J. Lochhead & J.C. Bishop (eds.) 1987. *Thinking: The Second International Conference*. Hillsdale, N.J.: Lawrence Earlbaum Associates.
- Perkins, D.N. & Salomon, G. 1987. Transfer and Teaching Thinking. In D.N. Perkins, J. Lochhead & J.C. Bishop (eds.) *Thinking: The Second International Conference*. Hillsdale, N.J.: Lawrence Earlbaum Associates.
- Piaget, J. 1955. *The Child's Construction of Reality*. London: Routledge and Kegan Paul. [cited in Widdowson, 1983: 67]
- Piaget, J. 1968. *Six Psychological Studies*. New York: Vintage Books.

- Piotrowski, M.V. 1982. Business as usual: Using the case method to teach ESL to executives. *TESOL Quarterly*, 16, 2. pp 229-238.
- Porter, M. 1989. *Michael Porter on Competitive Advantage*. [Video program]. Boston: Harvard Business School.
- Rikert, D.C. 1980. *Burger King Corporation*. Boston: Harvard Business School. (Case 9-681-045)
- Rikert, D.C. 1980. *McDonald's Corporation*. Boston: Harvard Business School. (Case 9-681-044)
- Saltz, A., R. Smith, S. Vik & K. Westerfield. 1993. *Pre-MBA Intensive English Programs: Seeing the Total Picture*. Colloquium given at the 1993 TESOL Conference in Atlanta, U.S.A.
- Sanchez, M. de. 1987. Teaching Thinking Processes. In D.N. Perkins, J. Lochhead & J.C. Bishop (eds.) *Thinking: The Second International Conference*. Hillsdale, N.J.: Lawrence Earlbaum Associates.
- Sawyer, M. 1989. Language learning by the case method. In Bickley, V. (ed.) *Language Teaching and Learning Styles within and across Cultures*. Hong Kong: Institute of Language in Education, Education Department.
- Schroeder, R.G. 1989. *Operations Management*. New York: McGraw Hill.
- Shapiro, B.P. 1984a. *An introduction to cases*. Boston: Harvard Business School. (Case 9-584-097)
- Shapiro, B.P. 1984b. *Hints for Case Teaching*. Boston: Harvard Business School. (Case 585-012)
- Swales, J. 1990. *Genre Analysis*. Cambridge: Cambridge University Press.
- Swartz, R.J. 1987. Critical Thinking, the Curriculum, and the Problem of Transfer. In D.N. Perkins, J. Lochhead & J.C. Bishop (eds.) *Thinking: The Second International Conference*. Hillsdale, N.J.: Lawrence Earlbaum Associates.
- Takagi, H. 1981. *Kho Tanaka*. Boston: Harvard Business School. (Case 381-127)
- Widdowson, H.G. 1983. *Learning Purpose and Language Use*. Oxford: Oxford University Press.
- Winocur, S.L. 1982. *Project Impact*. Costa Mesa, CA: Orange County Board of Education. [cited in Swartz, 1987]