Output Hypothesis and English Language Teaching in Thailand

"สมมุติฐานส่งออก" และการสอนภาษาอังกฤษในประเทศไทย

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บทคัดย่อ

บทความนี้กล่าวถึงแนวคิด ๒ แนวคิดที่สำคัญและบทบาทของแนวคิด ๒ แนวนี้ในการรับภาษาที่สอง อันได้แก่ "สมมุติฐานรับเข้า" ของแครเชน (Krashen's input hypothesis) และ "สมมุติฐานส่งออก" ของสเวน (Swain's output hypothesis) โดยเฉพาะในส่วนที่เกี่ยวกับ "สมมุติฐานส่งออก" บทความนี้กล่าวถึงหน้าที่รายข้อของ "สมมุติฐานส่งออก" จากนั้นเสนอข้อวิจารณ์ของงานวิจัยเชิงทดลองที่มุ่งตรวจสอบบทบาทและผลกระทบของ "สมมุติฐานส่งออก" ต่อการรับภาษาที่สอง แม้ว่าในปัจจุบันยังไม่มีการประเมินผลของ "สมมุติฐานส่งออก" โดยตรง แต่งานวิจัยเหล่านี้แสดงให้เห็นความสำคัญของ "สมมุติฐานส่งออก" นอกจากนี้ บทความนี้ยังเสนอกิจกรรมทางภาษาที่เอื้อต่อการประยุกต์ใช้ "สมมุติฐานส่งออก" ในการเรียนการสอนภาษา ทว่า ภาษาอังกฤษในประเทศไทยมีสถานภาพเป็นภาษาต่างประเทศ

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กอปรด้วยลักษณะเฉพาะของผู้เรียนไทย ดังนั้น การประยุกต์ "สมมุติฐานส่งออก" ร่วมกับการใช้คอมพิวเตอร์ช่วยสอน (CALL) อย่างรอบคอบในการเรียนการสอนภาษาอังกฤษในบริบทประเทศไทย น่าจะช่วยให้การเรียนการสอนภาษาอังกฤษประสบผลสำเร็จยิ่งขึ้น

คำสำคัญ : สมมุติฐานส่งออก สมมุติฐานรับเข้า การสอนภาษาอังกฤษ

Abstract

This paper introduces the two central concepts and roles of theoretical foundations to second language acquisition (SLA) : Krashen's input hypothesis and Swain's output hypothesis. Specifically focusing on output hypothesis, the functions of output are explicitly laid out. A critical examination of a number of experimental research studies conducted to validate the role and impact of the output hypothesis on SLA is presented. Although, up until this point, the effect of the output hypothesis has not yet been directly assessed, these studies illuminate the pivotal role and contribution played by the output hypothesis. Task types that seem to be relevant and beneficial to the implementation of the output hypothesis are suggested. Taking into consideration the fact that the English language is taught as a foreign language in Thailand and the unique characteristics of Thai learners, the adoption of the output hypothesis must be undertaken with caution.

Keywords : output hypothesis, input hypothesis, English language teaching

Introduction

In global communication, the knowledge of the English language is an asset contributing to the success of communication. However, as English language teachers experience, even in the flux of the information world, learners' English language knowledge and abilities are not developed sufficiently. It was firmly believed, for instance, that Krashen's input hypothesis (1985) was effective in facilitating the acquisition of the language. However, in 1985, Merrill Swain proposed the alternative output hypothesis. In spite of the controversy surrounding these two hypotheses, empirical evidence supporting their advantages was generated from a number of experimental studies. This article takes a critical look at these two hypotheses, particularly providing a global picture of how the output hypothesis emerged, its role in second language acquisition or SLA, and specifically studies conducted on the effects of output hypothesis in SLA. The paper highlights the role of Thai learners' unique characteristics and the Thai context that might be influential in determining the success of language learning. Finally, how the two theoretical foundations can be combined to enhance Thai learners' English language learning is proposed.

Roles of input in language learning

The input hypothesis or IH posited by Krashen (1985) holds that language learning occurs when the learner is exposed to a large amount of 'comprehensible input' of the language. Comprehensible input contains *i + 1; i* represents the learner's current level of competency, and *+1* indicates the competency level slightly beyond the current stage of the learner's language development. Because *i + 1* is provided automatically through contextual and extra linguistic cues as well as general knowledge of the world, Krashen argues that it is unnecessary for the learner to consciously manipulate the target language to get intake. At this juncture, according to Gass (1997 : 5), intake is the process of assimilating linguistic materials; it refers to the mental activity that mediates input and grammar.

In an effort to support the IH, Krashen points to caretaker speech, foreigner

talk, and teacher talk as examples of instances where learners are provided with input containing *i + 1* because, as Krashen views it, these phenomena center on communication and provide learners with syntactically simple and roughly tuned input. Since learners under these conditions do in fact learn language, Krashen deduces that input containing *i + 1* is indeed provided, thus explaining how learners under these circumstances acquire language (Krashen 1985).

Since there is no empirical evidence offered by Krashen to support the hypothesis that the above phenomena actually lead to language learning, it is not possible to infer that caretaker speech, foreigner talk, and teacher talk provide the learner with *i + 1*. Furthermore, since Krashen did not operationalize *i + 1*, it is impossible to subject this construct to empirical validation; therefore, his theories remain controversial (Gass and Selinker 1994). Nonetheless, the role of input in language learning continues to be of interest to those who seek to provide a theoretical basis to explain how input becomes intake. Recognizing the importance of input in SLA, investigators again turned to viewing the learner as an active participant in making input comprehensible (Gass 1997).

The earliest attempt to examine the role of the learner in making input comprehensible is the early version of the Interaction Hypothesis (Long 1981; 1983a; 1983b). In this view, input becomes comprehensible when learners negotiate meaning through interactions with interlocutors. More specifically, Long (1983a; 1996) proposed that interactions between native and non-native speakers make input more comprehensible through conversational adjustments, such as confirmation checks, comprehension checks, clarification requests, self repetitions, other repetitions, and expansions. If comprehensible input promotes language learning, and interaction can be shown to make input comprehensible, then, Long deduces, one can hypothesize that interaction may promote language learning.

This early version of the interaction hypothesis has generated numerous inquiries which have examined the nature of interaction. These classroom-based studies have examined the effects of interaction by task type, learner participation

pattern, and input modifications (e.g., Gass and Varonis 1984; 1985; 1988; Varonis and Gass 1982; 1985; Pica and Doughty 1985).

Roles of output in second language learning

A challenge to Krashen's input hypothesis (1985), in which comprehensible input plays a central role, was made by Swain (1985; 1995) and later by Swain and Lapkin (1995). They argued that comprehensible input seemed insufficient for language learning and claimed a more prominent role for output in the development of target language towards target language levels of ability in language learning. The impetus for Swain's output hypothesis was the paucity of output produced by sixth grade children observed in a French immersion classroom setting. The children's language production was analyzed using a number of different grammatical, discourse, and sociolinguistic measures. Despite receiving considerable comprehensible input, the children failed to achieve the target-like proficiency. Swain hypothesized that their development was lacking, not because their comprehensible input was limited but because their comprehensible output was limited in two ways. First, the students, especially in the later grades, were simply not given, adequate opportunities to use the target language in the classroom context. Second, they were not being 'pushed' in their output. The lack of native-like productive use of the French language led Swain to suggest that input alone is not enough. According to Swain, the role of output in language learning needs to be highlighted in the development of a second language.

Functions of output

Swain (1995) and Swain and Lapkin (1995) discussed three language functions of output in SLA which can be explicated as follows. At this juncture, it should be noted that output fundamentally enhances the fluency, not accuracy, of producing language. Thus, speaking and writing are always considered as language output.

Its first function is that output promotes noticing. At this juncture, noticing in Swain's sense coincides with Schmidt's noticing hypothesis, which is later fully developed and explored by Schmidt (1995; 2001) and Schmidt and Frota (1986). Thus, by producing output (be it speaking or writing), learners are able to see the gap between what they want to produce and what they can actually produce. They will notice what they do not know or know partially and thus consciously recognize some of their linguistic problems. In short, output leads to noticing, and then noticing gaps may trigger cognitive processes which might generate linguistic knowledge that is new for learners, or that consolidates their existing knowledge. Meanwhile, noticing leads learners to pay attention to relevant input.

Second, in Swain's opinion, the activity of producing the target language may enable language learners to realize some of the linguistic problems consciously or notice gaps in their knowledge. That is, language production allows learners to notice the gap between what they can say and what they want to say and recognize what they do not know or know incompletely. In so doing, the learners may be forced to move from the semantic processing that might occur in comprehension to the syntactic processing which is needed for production. When speaking, elements of a sentence or of an utterance must be put in some order. Swain (1985) referred to this as 'comprehensible output' or 'pushed output'. Comprehensible output means pushing the learner 'toward the delivery of a message that is not only conveyed, but that is conveyed precisely, coherently, and appropriately' (Swain 1985 : 249). Learners are pushed or stretched in their production as a necessary part of making themselves understood. In so doing, they have to make use of all the language resources and all types of strategy they have previously learned, with the ultimate goal of making their output more comprehensible, causing language modification (be it grammar, vocabulary, or pronunciation). Any misunderstanding or partial understanding resulting from learners' production would also 'push' the learners to modify their own output. They might modify a previous utterance or they might try forms that they had not used before. Producing language thus provides learners with

the opportunity to test their hypothesis about the target language by trying out more appropriate, accurate, and complex forms and structures as they attempt to satisfy communicative needs while getting feedback on those forms.

The last function of output is metalinguistic in nature. The metalinguistic or consciousness reflection function involves learners using language to reflect upon or talk about difficulties they encounter while speaking and/or writing. The output can deepen the learners' awareness of forms and rules and later help them understand the relationship between meaning, forms, and function in that particular context. Output here thus promotes reflection that permits the learners to 'control and internalize linguistic knowledge' (Swain 1995 : 126).

In short, output has the three functions of : 1) causing learners to notice what they do not know and leads them to pay attention to relevant input; 2) being a means of testing out ideas about how the language works; and 3) being a means of reflecting on what is said or written. In this regard, Swain argues that without output, language learners' conversational and writing abilities in the target language will lag behind their comprehension abilities. In conclusion, output solicited provides a driving force for language development and better understanding of how a language is learned (Swain 1985; 1995).

Studies on the output hypothesis

A number of experimental studies have aimed to evaluate the output hypothesis empirically. Pica et al. (1989), for instance, had pairs of native speakers (NSs) and non–native speakers (NNSs) interact in different tasks. The aim of the study was to describe how NNSs reacted when the NSs indicated that they had difficulty understanding NNSs in tasks that differed in the amount and type of information needed. The results showed that different tasks and the linguistic demands associated with the tasks played a role in the amount and type of 'pushed output.' In other words, various tasks forced the NNSs to modify their output. Although it is not clear how these modified or reprocessed responses are maintained in the

learners' interlanguage, Pica et al. concluded that the process of modification contributes to second language acquisition.

Another study evaluating the output hypothesis is by Nobuyoshi and Ellis (1993). Their study is intriguing despite the small-scale of the study of only three experimental participants and three control participants. In the experimental condition, 'focused meaning negotiation,' the participants received a clarification request every time they made a past tense error. In the control condition, 'unfocused meaning negotiation,' they received a clarification request only when there was a genuine communication problem. In a second session (one week later), both groups experienced only unfocused meaning negotiation. The results showed that two experimental participants improved their accuracy in the use of the past tense and maintained this improvement in the second session. 'Pushing' learners to improve the accuracy of their production resulted not only in immediate improved performance of their production but also in accuracy over time. On the one hand, this study seems to indirectly support the output hypothesis in the sense that 'pushed output' focused on a specific linguistic aspect led to sustained improvement. However, as Ellis (1994) pointed out, this study lends potential evidence that output may lead to better control of features that have already been acquired, but it is not clear whether 'pushed output' can result in the acquisition of new linguistic features. On the other hand, the size of the sample is too small to give this study much weight. In addition, the conclusions are based on a very low number of obligatory occasions. Therefore, this study can only be considered exploratory, and replication of the study is needed with a larger sample and with different linguistic features before any definite conclusions can be safely drawn.

Swain and Lapkin (1995) reported on a study in which they looked at adolescent learners' awareness of gaps in their linguistic performance, and the way in which the learners dealt with those gaps. In this study, 18 grade eight students of French in an immersion setting had to write an article on ecological problems. They were not allowed to use a dictionary and did not get any support from the

teacher. The researcher sat with the students and asked them to think aloud when their behavior suggested that there was a problem (e.g., when there was a pause or correction of text). From the transcripts, the researcher selected so called 'language related episodes' and analyzed them in depth in order to find out what cognitive processes were generated by the output problems. The study's outcomes show that the learners did indeed become aware of the gaps and applied various strategies to overcome the problems. Some of the learners' evaluations appear to have been influenced by whether an utterance sounded right or made sense. It was concluded that output triggered mental processes that lead to modified output, and this appears to be part of the process of second language learning.

The studies discussed above can be interpreted as somehow supporting the output hypothesis. However, from these studies, it has not become clear how output might play a role in acquisition. These studies, while demonstrating the combined effects of several variables (i.e. input, output, instruction, or attention), could not isolate the impact of any variable in particular, nor did they provide direct evidence that output leads to language acquisition. Therefore, the issue cannot be thoroughly tested or proved and thus remains to be validated. Gass (1997) remarked that output is actually not a stage in the acquisition process but rather an overt manifestation of that process. Therefore, according to her, output is not a way of creating knowledge but a way of practicing already existing knowledge. In short, output is not a means to develop competence; however, she agrees that it does play an active role in acquisition, serving as a means of hypothesis testing.

The low frequency of comprehensible output produced in many experimental studies contributes to the speculation cast on the output hypothesis (e.g., Pica 1988; Pica et al. 1989; Lyster and Ranta 1997). These studies have found that the amount of output produced by language learners is comparatively small. The scarcity of the output was apparent in the target language produced by low-level and intermediate learners in Pica's 1988 and Pica et al.'s 1989 studies, respectively. In her 1988 study of ten one-hour interactions between low–level ESL learners and NS teachers,

only 87 instances of comprehensible output were found. Out of 87 interactions, only 44 cases were modified output and only 13 out of 44 were modifications involved grammatical form. The intermediate ESL learners in Pica et al.'s 1989 study produced only 116 responses containing modified output, or about 6% of the NS's 1952 utterances. Similar findings were reported by Lyster and Ranta (1997), who investigated the corrective feedback and learner uptake in four immersion classrooms at the primary level. In peer–dyads, 51 instances of negotiation of meaning were recorded. Of these, speakers modified their output 20 times. In peer–teacher dyads, there were 49 instances of negotiation of meaning and 20 instances of alteration of output. In short, comprehensible output is comparatively infrequent. This piece of critique does not assume that quantity of output is more important than quality. Definitely, what matters is the quality of information made available through output. However, if output occurs very sparingly, it might be deemed too limited to make a real contribution to language learning. Thus, the role of output is, as of yet, inconclusive.

The study conducted by Ellis, Tanaka and Yamazaki in 1994 also confirmed the scarcity of output. The study examined the vocabulary acquisition of 206 Japanese learners under three conditions : 1) pre–modified input (input recorded from a task performed with a NS and NNS who could request clarification) 2) interactionally modified input (the NNS could interact with the NS) or 3) unmodified input (input recorded from a NS doing the task with another NS). Of the 42 learners in the interactionally modified group, only seven engaged in meaning negotiation, whereas the others listened. The study also found that the learners who actively participated in negotiating meaning did not have a better understanding than those exposed to modified interaction. In addition, the active participants did not learn more new words than the inactive learners. These findings are intriguing and tantalizing for they suggest that acquisition can take place in spite of the absence of output.

Izumi (2002) and Shedadeh (2003) expressed their concern that data which proved that learner output or output modifications do have a positive impact on

language learning are essentially lacking. In response to their concern, more recent studies were conducted. For instance, Griffin (2005) focused on the writing output of English second language learners, and found that lexical and syntactic modifications led to L2 writing development with regard to sentence coherence. McDonough (2005) focused on oral production and found that the modified output produced by learners in response to negative feedback was a prediction of EFL question development. Gao and Zhen (2006) and Zeng and Wang (2007), in the Chinese context, both concluded that the combination of interactional features and language output facilitated the learning of participles and vocabulary, respectively.

Song and Suh (2008) focused on the role of output and the efficacy of two different tasks (a reconstruction task and a picture–cued writing task) in noticing and learning the English past counterfactual conditional (e.g., *If it hadn't rained last night, I would have gone out.*). The participants were 52 adult Korean EFL learners. It was found that, across the two task types, the more opportunities the learners had to produce output, the more noticing occurred. The study suggested that learners' with more output opportunities performed significantly better than those without, in learning English.

At this juncture, it should be noted that output or output modifications, according to the output hypothesis, are triggered by interactional features (such as negative feedback provided to language learners to push them to produce output). Even though these studies congruently and indirectly validated its facilitative role in second language acquisition, direct evidence which proves how output contributes to language learning supporting Swain's hypothesis has not been directly established yet for the following reasons. First, language development observed can possibly be the result of either the provision of interactional features alone or a combination of interactional features together with output or output modifications. Second, the occurrence of output produced by language learners in general is quite infrequent. Third, the output hypothesis bears an inherent assumption that learners can be 'pushed' to produce language, which is not always the case in certain educational

contexts. Therefore, it has been difficult to reach a comprehensive conclusion about the facilitative role of the output hypothesis. Unless there is consistent evidence for comprehensible output or for failure of other means of developing competence, it can be claimed that the output hypothesis is a reasonable strategy and does indeed have a central role in SLA. Taken together, more studies that directly assess the impact of output or output modifications on language learning are crucially needed. Even so, it remains unclear how experimental research findings can be generalized and successfully inform pedagogical practices in actual classroom settings.

Output hypothesis and task types

With reference to the practical aspects of the output hypothesis, task based language teaching or TBLT is relevant (Pica et al. 1989; Swain 1995). That is, through language tasks, the awareness of accuracy in the output can be promoted, and thus the focus is placed on form in a manner that still profits from the value of a focus on meaning. Specifically, previous studies support the use of collaborative tasks to provide learners with the opportunity to produce output and modify that output when breakdowns in communication occur.

Tasks used in language learning, if carefully designed, can provide a means for encouraging learners to maximize their linguistic competence. That is, they can use output to elicit both linguistic and non-linguistic feedback from their interlocutors. The feedback obtained would be a good indicator that there is something right or wrong with the language produced and thus the learner is aware that something needs to be fixed to achieve more successful interaction.

Tasks, with reference to the framework of TBLT, are activities which encourage learners to produce and modify output. Given the tasks to carry out, learners are provided with both the purpose and the form to focus on. In doing so, they discover what they actually can and cannot do. Different task types are known to elicit different language output. For instance, although the jigsaw task seems to generate consistent proportions of signals of clarification request and learners'

responses of modified output, the task does not seem to provide favorable contexts for interaction. As for the discussion task, even though it can generate a high number of clarification requests, it does not seem to generate output modification responses in general, nor syntactic modifications in particular. In this regard, the information-gap task, rather than the jigsaw or discussion tasks, seems to provide better conditions for learners to modify their output because it provides more consistently favorable contexts for not only teachers to signal their need for confirmation or clarity but also for learners to respond with modified output.

Output hypothesis and English language teaching in the Thai context

Based on the assumption that the output hypothesis bears a central role in language learning, this section aims to address how applicable the hypothesis is in the EFL context of Thailand. Given the intertwined relation between the input hypothesis and the output hypothesis, language input is pivotal. In the EFL context of Thailand, English language learners can be said to be exposed to three major channels of language input : teachers, teaching materials, and (peer) learners. A critical look at how beneficial these three sources of language input are insightful.

First, it is clear that few English language teachers, particularly those teaching below undergraduate level, have qualifications in English (Kanoksilapatham 2010a; 2010b). As a consequence, the amount of language input from these teachers is likely to be not only limited but also flawed. In addition, the large size of classes seems to limit the opportunities for individual teachers to provide interactional features and for individual learners to produce output or modify output. All in all, implementing the output hypothesis in an English classroom in Thailand does not come naturally. For successful implementation, initially, Thai teachers of English need to have a clear understanding of the hypothesis and its crucial inherent characteristics or principles.

Secondly, teaching materials are considered to be a much more reliable source of input in terms of both quality and quantity. An emphasis in English lessons

in Thailand is placed on reading and grammar because these are the major components of the university entrance examination (Foley 2005). Speaking and writing are measured minimally, if at all. Moreover, the input provided in the teaching materials focusing on speaking and writing does not seem to be interactional in nature, limiting the learners' opportunities to produce output or modify output.

Finally, (peer) learners play a crucial role, contributing to the amount of input. However, it is known that Thai learners' characteristics are quite unique; they are usually shy and reticent. Given that the output hypothesis predicts that language acquisition would be facilitated if they are pushed to produce output in order to get ideas across precisely, coherently, and appropriately, some learners, especially the shy ones, might find that being pushed to speak is frustrating, whereas the others might not. Many learners find speaking in their target language very intimidating and thus might not benefit much from being 'pushed' to engage in tasks that require attention (Young 1990; Price 1991). With reference to the output hypothesis, learners are required to get involved in a number of activities simultaneously (i.e., listening, comprehending, and responding) and within the time constraints during a conversation or a writing task, this can be considered cognitively overloading and psychologically unhealthy for sustainable language learning. These dynamics may limit the facilitative role of output as assumed by Swain (1985; 1995). All in all, the level of success in language learning within the framework of output hypothesis relies heavily on learner variables, and Thai learners' characteristics seem to override the output hypothesis.

The English proficiency of Thai learners is known to be unsatisfactory (Wongsothorn et al. 2003). As a result, language input from peer learners is potentially full of mistakes. Worse than that, peer learners' corrective feedback provided to their peer learner output (if any) containing mistakes might be considered by their peers (who are not proficient in English) as a confirmation of their inaccurate production. Of course, once learners learn something, it is usually challenging for teachers to persuade their learners to unlearn them.

The implementation of the output hypothesis might be constrained by other factors. The teaching English environment in Thailand poses another constraint to language input and output. Thai learners tend to be deprived of opportunities to be exposed to natural and authentic input, and in most cases, the input is produced in contrived situations. In turn, the output produced, if any, is rare and also in contrived situations. Therefore, Thai learners need substantial support and direction to get them used to the practice of making successful use of the limited input available and of producing output.

Learning styles commonly practiced in Thailand may hinder the adoption of the output hypothesis. Traditionally, teacher–fronted classroom learning styles have been prevalent and become the norm in Thailand. Therefore, innovations or deviations in teaching/learning styles are likely to be questioned and doubted, not only by practitioners but by also learners. All these factors culminate in the fact that to develop English language learning in Thailand, the output hypothesis needs to be modified to take into account the uniqueness of Thai learners of English.

CALL : A possible (but partial) solution

Currently, computer assisted language learning or CALL has provided a powerful medium for language learning from both teaching and learning perspectives. CALL is the use of computer technology for language learning through various types of learning activities, and is capable of overcoming some of the limitations presented earlier in a number of ways (Porto, 1998; Salaberry, 1999; Warschauer, 1996; 1997; 2004). First, the authenticity of the input can be assured through CALL. In this regard, according to Garrett (1982), CALL provides easy and rapid access to a weath and variety of multiple resources of dynamic and authentic input in all areas of language that language teachers could not offer without additional teaching aids. Authentic tasks (like problem–solving tasks, information gap tasks), language games, and animated graphics available from CALL provide attractive and authentic contexts for learners to actively interact in the target language and negotiate meanings through

the target language. As a result, learners' interest, motivation, and confidence will be enhanced (Skinner and Austin, 1999).

Second, in alignment with the output hypothesis, CALL, especially CMC or computer mediated communication, helps encourage foreign language learners to produce comprehensible output. Given the typical nature of Thai learners (being shy and easily intimidated) that might hinder language learning, learners' being pushed to produce language output through CALL, and not in the classroom, can, to a certain extent, be undertaken with some comfort and ease.

Third, CALL allows learners to focus on which skills or language areas they want to develop. That is, language learners can enjoy their own autonomy and individuality because they can determine their own pace, level, and time of language development. Consequently, overcoming the limitations of time and resources, individualized language learning can be maximally enriched and less frustrating.

Fourth, CALL caters to learner–centered classes, allowing learners to control or specify their learning time and effort, while exposed to authentic speaking and writing tasks related to authentic communication with partners (Warschauer and Kern 2005). The nature of CALL allows itself to be applicable to a classroom setting particularly in which learners have incompatible styles of learning.

The advantages of CALL outlined above are not to suggest that computer technology should replace the language classroom. Disadvantages do exist (e.g., Chapelle, 1997; Warschauer. 2004). For instance, it might not be easy for language teachers to adjust their relatively rigid curriculum for CALL authentic activities. Additionally, in some areas, due to the relatively high cost of computer technology, it is not always affordable and available. On a practical basis, trained teachers with basic technology knowledge and familiarity are needed to effectively implement CALL. More important is the lack of CALL programs that perfectly satisfy specific needs of particular language classrooms or individuals. This limitation is transparent in the area of speaking (Warschauer, 2004). A number of speaking programs are able to evaluate language learners' spoken input based on correctness. However, as

a lingua franca, spoken English output should not be assessed based on correctness, but intelligibility. A question emerges : Is there a CALL program that is intelligent enough to tolerate a certain level of incorrectness at the expense of intelligibility?

Despite these disadvantages, the author believes that CALL has great potential for use of facilitating the English language teaching/learning in Thailand. As ELT practitioners, to maximize the benefits of existing CALL programs or materials, informed choices about the implementation of CALL and how CALL can be integrated into our Thai teaching situation or learning context need to be made. Finally, with relevance to the theme of this paper, and particularly in the English language teaching context of Thailand, CALL materials, if well selected, seem to satisfy the three major functions of output. That is, CALL materials provide the initial and quality input for noticing to take place, a forum for learners to test how English works, and the means to reflect the quality of the language output.

Conclusion

Krashen's input hypothesis and Swain's comprehensible output hypothesis do not compete with each other. In fact, the role of the output hypothesis should be considered complementary to that of the input hypothesis to facilitate language learning, as endorsed by Griffin (2005) and Yang et al. (2010). However, certain caveats are in order because successful implementation of the hypotheses requires not only substantial preparation on the part of the teachers and learners but also a new mindset and perspective of how English language classrooms are managed.

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