



## METACOGNITION IN FOREIGN/SECOND LANGUAGE LEARNING AND TEACHING

### YABANCI/İKİNCİ DİL ÖĞRENİMİ VE ÖĞRETİMİNDE BİLİŞÖTESİ

Hüseyin ÖZ\*

**ABSTRACT:** Metacognition, an awareness of one's own thought processes, plays a central role in explaining and describing the learning process. As it shapes learners' beliefs about and attitudes toward learning which in turn affect their behaviours, it directly relates to language learning and teaching as well. Thus, cautious teachers should understand and employ the available information on metacognition and then design curriculum and learning environments. This review article sets out to emphasize metacognition in language learning and teaching and to look into the critical ingredients of successful language learning and teaching. After an outline of metacognition and its components such as metacognitive knowledge, experiences and processes, the article dwells upon its relation to learning, beliefs about learning and language learning, and the need for metacognitive training. The article concludes that not only language teachers but also teacher training programmes should devote time to metacognitive training to better understand language learners and lead to self-directed, autonomous learners.

**Keywords:** Metacognition, metacognitive knowledge, foreign/second language learning and teaching, beliefs about language learning, autonomous learners

**ÖZET:** Kendi düşünce süreçlerinin farkında olunması olarak da tanımlanabilecek bilişötesi, öğrenme sürecini açıklama ve betimlemede çok önemli bir role sahiptir. Sonuçta öğrencilerin davranışlarını da etkileyen dil hakkındaki inanç ve tutumlar dil öğrenimiyle de doğrudan ilintilidir. Bu nedenle, duyarlı eğitimciler bilişötesi hakkında mevcut bilgileri anlayıp kullanarak ders programlarını ve öğrenme ortamlarını oluşturmalıdırlar. Bu makale, dil öğrenimi ve öğretiminde bilişötesinin önemini vurgulayarak başarılı dil öğrenme ve öğretmedeki kritik öğeleri tartışmaktadır. Bilişötesi ile bilişötesi bilgi, deneyimler ve süreçler ana hatlarıyla verildikten sonra, makale bilişötesin öğrenme ve dil öğrenme arasındaki ilişki ve bilişötesi eğitime olan gereksinim üzerinde durmaktadır. Sonuç olarak, hem dil öğretmenlerinin hem de öğretmen eğitimi programlarının dil öğrencilerini daha iyi anlayabilmek ve "özerk öğrenciler" yetiştirebilmek için eğitim programlarında bilişötesine yer vermelerini önermektedir.

**Anahtar Sözcükler:** Bilişötesi, bilişötesi bilgi, yabancı/ikinci dil öğrenimi ve öğretimi, dil öğrenimi hakkında inançlar, özerk öğrenciler

## 1. INTRODUCTION

*My mind is always open to accept information about the language ... I always concentrate because I have to learn ... I just don't take it as it comes. I change it in my mind. There's always movement. (Adult L2 learner, in Wenden, 1987)*

Metacognition can be considered as a complex of phenomena related to knowledge about the domain of cognition – consisting of all the mental activities connected with thinking, knowing, and remembering – and its regulation. The two concepts differ in that cognitive skills are those required to complete certain tasks, whereas metacognitive skills are those that determine how the tasks are executed. Researchers assert that metacognition refers to higher order thinking which involves active control over the cognitive processes engaged in learning (Livingston, 1997).

Over the last two decades, psychologists and educators have recognized that metacognition has a great power for descriptions and explanations of the learning process. As an important aspect of the human experience, it plays a central role in successful learning, as it guides the individual throughout the process. It is often described as "thinking about thinking" and can be successfully used to help students learn how to learn. Furthermore, it shapes a person's beliefs about and attitudes toward learning which in turn affect his or her behaviour. It has been shown to have a direct bearing on language learning and research has indicated that it can be taught to learners. Therefore, it is important

\* Yrd. Doç. Dr., Hacettepe Üniversitesi, Eğitim Fakültesi, Yabancı Diller Eğitimi Bölümü. hoz@hacettepe.edu.tr

to study metacognitive activity and development to determine how students can be taught to better apply their cognitive resources through metacognitive control. (Maki and McGuire, 2002; Anderson, 2002, Livingston, 1997; Wenden, 1998). Considering this fundamental role in education, prudent teachers should understand and employ the available information on metacognition and then design a curriculum and learning environments that reflect such insights. Given the importance of metacognition in education in general and language pedagogy in particular, this review article sets out to underline metacognition in language learning and teaching and to investigate the critical ingredients of successful language learning and teaching.

## **2. METACOGNITION AND METACOGNITIVE COMPONENTS**

From a historical point of view, metacognitive processes have been investigated along two separate lines. First, there has been research in cognitive psychology that has dealt with issues regarding the determinants and consequences of the monitoring of one's knowledge. Second, there has been an extensive investigation in developmental psychology, pioneered by the work of John Flavell (1979) and his associates (Brown, 1987; Koriat and Shitzer-Reichert, 2002). In fact, Flavell's work emphasized the critical role of metacognitive processes in the development of memory functioning in children and led to further research not only in psychology but education as well. Today, the conceptualisation of metacognition in educational sciences and language teaching is often attributed to John Flavell, (Flavell, 1979). According to Flavell (1979), metacognition comprises both metacognitive knowledge and metacognitive experiences or regulation.

### **2.1. Metacognitive Knowledge**

Metacognitive knowledge refers to acquired knowledge about cognitive processes, knowledge that can be used to control cognitive processes. In Flavell's words "metacognitive knowledge consists primarily of knowledge or beliefs about what factors or variables act and interact in what ways to affect the course and outcome of cognitive enterprises" (1979, p. 907). In other words, the individual's beliefs about oneself and about others as learners and of the requirements involved in the learning process relate to metacognitive knowledge acquired through both conscious and unconscious means, and in formal and informal settings. Examples of metacognitive knowledge may be the belief that one is good at reading comprehension but poor at listening comprehension, that one has to be intelligent to learn a language, that learning English is easier than learning other languages such as French, or that memory strategies are more appropriate for learning vocabulary. Wenden (1998, p. 528) considers metacognitive knowledge as "a prerequisite for the self-regulation of language learning: it informs planning decisions taken at the outset of learning and the monitoring processes that regulate the completion of a learning task..." It is obvious that metacognitive knowledge as perceived today has influence on language learning. A review of literature generally reveals that it facilitates recall, the comprehension of written texts, the completion of new types of learning tasks, the rate of progress in learning and the quality and speed of learners' cognitive engagement, and thus improves learning outcomes (Oxford, 1990; Wenden, 1987; Wenden, 1998; Wenden, 1999; Victori, 2004). Flavell (1979) divides metacognitive knowledge into three categories: (a) knowledge (knowledge of person variables), (b) task knowledge (task variables) and (c) strategic knowledge (strategy variables). An examination of these dimensions leads to a more thorough understanding of metacognition in language teaching and learning.

#### **2.1.1. Person Knowledge**

Person knowledge, or knowledge of person variables, applies to an individual's overall understanding of how people learn and process information. It also refers to one's awareness of his or her particular thinking and learning processes. For example, an individual may not only know that humans process information in various ways (i.e., auditory, visual, tactile) but that he or she also learns more quickly through a particular medium. Pointing to the beliefs one has about oneself and others as cognitive processors (learners), Flavell (1979) includes two dimensions of person

knowledge: intraindividual differences and interindividual differences (knowledge of personal styles, abilities, and so forth, of oneself and of others), and universal of cognition (knowledge of human attributes influencing learning). When applied to second/foreign language learning, examples of these subcategories would be the beliefs that one can learn better by memorizing, that one's classmates are better language learners than him or her, and that factors such as motivation and intelligence play an important role in language learning (Victori and Lockhart, 1995).

### 2.1.2. Task Knowledge

Task knowledge or knowledge of task variables means that one is cognizant of the character of a specific task, how to best manage it, and the likelihood of one's success. Furthermore, one recognizes the degree of complexity involved in executing the task. In other words, this variable can be described as the knowledge that learners have about the information or resources needed for undertaking certain tasks and about the degree of effort required and difficulty involved in performing them. Presented with an expository passage about the earthquake and expected to demonstrate his/her comprehension of the material, for example, the individual decides that the task is a somewhat difficult one and knows that reading the passage slowly and closely will increase his/her chances of understanding and retaining the information.

According to Wenden (1991, pp. 42-44), task knowledge requires four aspects:

- knowledge about the purpose of a task (what is the objective in performing a given task?)
- knowledge about task demands (what resources and steps are necessary and what is the degree of difficulty involved?)
- knowledge about the nature of the task (what kind of learning is it?)
- awareness of the need for deliberate learning (Does it involve the use of self-regulatory or metacognitive strategies?)

Further examples of task knowledge would be the belief that it is easier to recognize things than to recall them, that reading comprehension is facilitated when the content is familiar and organized, and that one does not have to understand every single word in listening comprehension.

### 2.1.3. Strategic Knowledge

Strategic knowledge, or knowledge about strategy variables, refers to the awareness and application of metacognitive strategies while attending to a task. It rests on the assumption that an individual knows strategies and their usefulness to him or her (Wenden, 1987; Wenden, 1998). A person selects from his or her repertoire of strategies the most appropriate ones that will promote successful completion of the activity. As Livingston (1997, pp. 1-2) states, it also includes "knowledge about both cognitive and metacognitive strategies, as well as conditional knowledge about when and where it is appropriate to use such strategies". Using the example mentioned above, the individual examines the passage and determines which of his or her available strategies will most successfully aid him/her in understanding and retaining the information contained therein. Another example of strategic knowledge would be the belief that it is best to form mental associations among the words so as to memorize lists of unrelated words, or that one does not have to read through all of a reading passage in looking for specific information contained in it.

## 2.2. Metacognitive Experiences

As previously stated, metacognition not only consists of metacognitive knowledge but also metacognitive experiences or regulation. "Metacognitive experiences are any conscious cognitive or affective experiences that accompany and pertain to any intellectual enterprise. An example would be the sudden feeling that you do not understand something another person just said" (Flavell 1979, p. 908). Metacognitive experiences involve the use of metacognitive strategies and are likely to come up "in situations that stimulate a lot of careful, highly conscious thinking" (Flavell 1979, p. 908), in novel

experiences, or “when learning has not been correct or complete” (Wenden, 1998, p. 520). These experiences may change one’s cognitive goals and/or add to one’s metacognitive knowledge base. Since metacognitive strategies are a salient feature of metacognitive experiences, it is prudent to discuss exactly what they entail. Metacognitive strategies are “general skills through which learners manage, direct, regulate, guide their learning, i.e. planning, monitoring, and evaluating” (Wenden, 1998, p. 519). Furthermore, metacognitive strategies ensure that a cognitive objective has been reached.

### 2.3. Metacognitive Processes

Anderson (2002) explains that the metacognitive learning process can be divided into five primary components: (1) preparing and planning for learning, (2) selecting and using learning strategies, (3) monitoring strategy use, (4) orchestrating various strategies, and (5) evaluating strategy use and learning. For clarification purposes, a brief discussion of each component follows (pp. 1-3).

*Preparing and planning for learning* is the first step to take in the metacognitive learning process and it means a number of things. First, an individual creates a mindset regarding a particular activity. One establishes learning objectives and determines if such goals are worthwhile, compatible with his or her needs, and achievable. At this stage one’s person knowledge “has been shown to influence his or her choice of learning objectives and the criteria used for evaluating learning outcomes” (Wenden, 1998, p. 520). In other words, those who have confidence in their learning capabilities are more likely to select challenging goals than their insecure counterparts. The individual then uses his or her task knowledge to classify the activity, determining if it is similar in nature to one previously encountered. Typical self-questioning involves asking what background knowledge will assist with the present task, what direction the process of thinking should take, the order of execution, and how much time is allotted.

Deciding how to complete the activity, i.e. *selecting and using learning strategies*, is the next step in the metacognitive learning process. Employing mnemonic devices and using contextual clues are examples of learning strategies. This is an important step as “the metacognitive ability to select and use particular strategies in a given context for a specific purpose means that the learner can think and make conscious decisions about the learning process” (Anderson, 2002, p. 2).

Once one has chosen and implemented strategies, s/he must regularly question him/herself whether or not those tactics are being used as originally intended (Anderson, 2002, p. 3). That is to say, s/he monitors the use of strategies. *Monitoring* is “the regulatory skill that oversees the learning process that follows the initial planning” (Wenden, 1998, p. 525). This allows an individual to determine if s/he is reaching learning objectives. Furthermore, monitoring requires “taking appropriate measures to deal with difficulties that interfere with the learning process” (Wenden, 1998, p. 525). In other words, when one is unable to continue with a task because the strategy being utilized is inappropriate, s/he must substitute it for a more effective one. Thus, monitoring can result in the modification and/or expansion of one’s existent metacognitive knowledge. Naturally, this implies that a person has more than one strategy at his or her disposal and may ask him/herself how s/he should proceed, what other opportunities are available, and how to resolve gaps in understanding.

At this point, to recognize that some materials may require the use of more than one approach at a time is the ability to *orchestrate a variety of strategies*, which is closely related to the previous step. This is an important metacognitive skill because “the ability to coordinate, organize, and make associations among the various strategies available is a major distinction between strong and weak learners.” (Anderson, 2002, p. 1) For example, when presented with an unfamiliar word in a passage, one can use both word analysis and contextual clues to resolve the dilemma.

*Evaluating strategy use and learning* requires an individual to reflect on and question the effectiveness of his or her actions. This aspect of the metacognitive learning process incorporates the last step. In Anderson’s words, “the whole cycle is evaluated during this stage” (2002, p. 1). That is to say, it considers the objectives and the ensuing use, effectiveness, and substitution of strategies.

One asks him/herself how well s/he did, what alternatives would have changed the outcome, and whether the knowledge is transferable.

It is important to note here that although this paper presents this process in a linear fashion above, it does not occur this way in real life experiences. In fact, all five components interact with each other throughout a given task. To illustrate one can consider again the individual who is presented with a reading on the earthquake. In preparing and planning his/her learning experience, the learner first assesses the nature of the task, which is a reading comprehension activity involving a geological concept. As the learner has an inclination toward this discipline s/he determines that the activity is to his/her liking and within his/her capabilities. First, the learner decides to skim the article to get the gist of the material. Next, s/he rereads it more closely, pausing at determined spots to summarize the information contained therein. At one point, the learner stumbles across an unfamiliar phrase and finds that neither word analysis nor contextual clues assist him/her in determining its significance. Therefore, s/he turns to the glossary and learns of its meaning, making a note of it directly on the passage. The learner concludes the activity by testing himself/herself and uses the results to assess his/her level of understanding of the material, and compare the personal assessment with the original learning objectives. Finally, if the learner detects gaps in his/her knowledge, s/he then employs different strategies to reduce or eliminate such deficiencies.

### 3. METACOGNITION AND LEARNING

What is the significance of metacognition in learning? It can be asserted that the metacognitive process enhances learning by guiding students' thinking, and by helping them follow a wise course of action as they think through a problem, make decisions, or attempt to understand a situation or text. Those learners with developed metacognitive skills engage in reflective learning indeed. As Joseph (2003) points out, "this introspective ability is important because it produces the powerful knowledge that enables students to control their learning by demonstrating a conscious application of cognitive strategies" (p. 151).

Simply put, the effective use of metacognitive skills empowers learners. Learners who are skilled in metacognitive self-awareness are more strategic and perform better than those who are unaware. Furthermore, Wenden (1998) summarises that metacognitive knowledge characterises the approach of expert learners to learning, that it enhances learning outcomes, facilitating recall, the comprehension of written texts, the completion of new types of learning tasks, and that it improves the rate of progress in learning as well as the quality and speed of learners' cognitive engagement (p. 520).

It now makes sense to note the metacognitively well-developed learners' characteristics. They are confident in their abilities to learn. Though they are autonomous learners, they do not hesitate to obtain help from peers, teachers, or family when needed. In fact, they direct the learning process and reflect on each component of it. Such individuals provide accurate assessments of why they are successful learners. Metacognitively mature individuals think clearly about inaccuracies when failure occurs during the execution of an activity. Their tactics match the learning task and adjustments are made to reflect changing circumstances. What is more, they actively seek to expand their collection of learning strategies. These individuals perceive themselves as continual learners and thinkers and can successfully cope with new situations.

### 4. LEARNERS' BELIEFS AND LANGUAGE LEARNING

Learner beliefs, also referred to as *metacognitive knowledge* (Wenden, 1999, p. 435), are so crucial in the learning process that an investigation of it is necessary. Learner beliefs shape attitudes that consequently affect motivation, which in turn directs behaviours, and naturally determine outcomes. Considering the critical role beliefs play in this process, it is important for teachers and students to recognize how these variables shape their experiences. In Niemi's words, "How we learn and comprehend knowledge depends on our beliefs, attitudes, and values and our self-concept as a

learner” (2002, p. 765). By the same token, White (1999, p. 443) asserts that the belief systems learners hold or develop help them adapt to new environments, to define what is expected of them and to act in accordance with those understandings.

Undoubtedly, there exist many factors that can shape learners’ beliefs. A study conducted by Cotterall (1995) reveals that students’ expectations of the role a teacher plays, and by extension the student’s role, greatly influence the learning experience. More specifically, those who believe the teacher should dominate are dependent learners while those who view the instructor more as a facilitator are independent ones. Beliefs about feedback also influence the learning process. It is worthy to say “the usefulness of feedback depends on the match between teacher intentions and student expectations” (Cotterall, 1995, pp. 198-199). In addition, “autonomous learners are unlikely to depend solely on the teacher for feedback” (Cotterall, 1995, p. 199), whereas the opposite is true for their more insecure counterparts.

This information is relevant to all educators as virtually all learners have beliefs and opinions about how their instruction should be delivered. “These beliefs are usually based on previous learning experiences and the assumption (right or wrong) that a particular type of instruction is the best way for them to learn” (Lightbown and Spada, 2003, p. 59). Similarly, Wenden (1999, p. 436) underlines, “When queried about their choice of a particular approach to doing a task, learners’ responses, even if as simple as ‘that’s the best way to do it’, point to what they know and/or believe about learning”. Furthermore, whether because of their learning style or because of their beliefs about how languages are learned, learners’ preferences for learning will have an impact upon the types of strategies they opt so as to gain knowledge of the new.

It is not astonishing that some preconceived notions exist about second and/or foreign language learning, on the other hand. In fact, one study indicated that “many Americans believe strongly ..... that children are better language learners than adults or that second language learning is mainly a matter of learning many new vocabulary words” (Horwitz, 1987, p. 119). Another study revealed that this belief is not exclusively an American one (Horwitz, 1999). Some students may hold that free conversation should constitute a large portion of classroom activities whereas others believe language structure should be the focal point of teaching. Furthermore, the majority of foreign language students understand that it takes considerable effort and time to develop fluency and that in the process, mistakes are bound to happen. Cotterall’s study (1999) revealed that some students believe that a grasp of language rules is a prerequisite to communicative abilities. In another investigation, “all groups agreed that learning a foreign language was different from learning other academic subjects” (Horwitz, 1999, p. 565). It is therefore important to note that learner’ preferences for learning, whether due to their learning style or to their beliefs about how languages are learned, will influence the kinds of strategies they choose in order to learn new material. Benson and Lor (1999, pp. 459-460) stress that if language teachers wish to influence learners’ attitudes and behaviours, they will need to address the underlying beliefs on which they are based. At this point it makes sense to investigate what beliefs learners hold or have towards learning a foreign language, whether those beliefs are positive or negative, and further whether learners with positive beliefs are more successful and more frequently and appropriately employ learning strategies than their pessimistic counterparts.

What does, on the whole, this mean in relation to metacognition? It can be argued that if “the beliefs learners hold may either contribute to or impede the development of their potential for autonomy” (Cotterall, 1995, p. 96) and if the ultimate goal of building metacognitive skills is autonomous and self-directed learning (Victori, 2004, p. 3), then addressing learners’ beliefs is an important starting point. Learners’ beliefs suggest their readiness for assuming greater responsibility for their own learning, which is particularly informative as autonomous, self-directed learners are those who are in command of their learning and that learners’ beliefs are particularly relevant to language teachers.

According to Flavell (1979, p. 907), metacognitive knowledge has a significant role in many cognitive activities concerning language use, e.g. oral communication of information, oral persuasion, oral comprehension, reading comprehension, writing; to language acquisition; and to various types of

self-instruction. If language teachers wish to influence learners' attitudes and behaviours, they will need to address the underlying beliefs on which they are based (Wenden, 1987; Wenden, 1999; Benson and Lor, 1999).

It goes without saying that an understanding of such beliefs allows teachers to develop lessons that more correctly correspond to students' needs. In other words, teachers can use students' metacognitive knowledge as a springboard for more meaningful learning experiences rather than start teaching at an arbitrarily determined point.

## 5. IDENTIFYING LEARNERS' BELIEFS ABOUT LANGUAGE LEARNING

In view of the information mentioned above, language teachers should assess their students' pre-existing beliefs so that they can become aware of their significance on the language learning experience. This is an important initial step in developing more effective metacognitive skills. Despite the fact that unearthing students' beliefs can take several forms, it in essence involves reflection. Pajares maintains that self-reflection provides personal understanding and helps individuals evaluate and modify their own thinking (1993, p. 47). Questionnaires and discussions are two ways in which educators can expose students' beliefs, and journaling is another. In addition, Wenden (1998) acknowledges that "through the use of surveys, oral interviews, and focus groups, they can develop a profile of the metacognitive knowledge of their students" (p. 531). Thinking aloud is helpful in measuring one's beliefs as well. Some class activities should be designed to "create cognitive conflict" with the aim of detecting beliefs and the ways in which students oppose adaptation (Pajares 1993, p. 4). It is essential to remark, however, that such an activity should be undertaken in a gentle, supportive, and non-threatening manner. The failure to do so is likely to result in hostility and defiance. After gaining heightened awareness, students are better able to examine the utility of their beliefs. Non-functional beliefs are scrutinized while functional ones are highly praised, as underlined by some researchers such as Pajares (1993), who believes that behaviour modification is a prerequisite to changes in belief.

The next step is to encourage students to act in ways that are not harmonious with their beliefs, attitudes, and values. Naturally, teachers must ensure positive outcomes, or else the experiences will merely reinforce existing beliefs. Through this experiential endeavour, students are even more acutely aware of inconsistencies, which may compel them to modify their beliefs. What's more, students are provided with alternative ways in approaching learning. In other words, instead of just eliminating erroneous and worthless beliefs, learners replace them with more accurate and effective ones. Continual exposure to and modification of learners' beliefs creates new attitudes, more motivation, different behaviours, and novel outcomes. In the process, students mature in their metacognitive abilities. They are better able to manage their learning experiences, which, as mentioned before, are the ultimate goal of metacognition: autonomous, self-regulated or self-directed learning.

## 6. METACOGNITION TRAINING AND FORMAL EDUCATION

Given the significance metacognitive skills have on learning, the question remains as to whether one can be taught such skills. Although there has been much debate over this issue, research indicates that "when instruction is direct and well focused, the results suggest that gains in practical intelligence are evident. .... Learning to be a strategic learner is a developmental and instructional process and students' metacognitive growth is influenced by teachers and their methods and materials. (Joseph, 2003, pp.151-152). This is promising news that educators should dwell upon. The road to building metacognitive skills is a three pronged one. Teachers must provide direct instruction with modelling, maintain "an on-going dialogue about metacognition" (Joseph, 2003, p. 152), and allow students to regularly practice new insights for the purpose of lifelong, autonomous learners.

In the classroom, teachers can foster students' metacognitive skills by regularly incorporating curricular activities that require learners to access and manipulate that knowledge base. Designing

questions that examine and assess learning strategies is one way to accomplish such goals. For example, a teacher may ask students the following questions: *Why is this activity or concept significant?; When you attempt a new task, what do you need to think about first?; What should you do if you get stuck?; How does context affect the skills you utilize?; How do you know if you've succeeded in an attempt and; What have you learned and how can it be transferred to other situations?*

While the questions above engage students' metacognitive awareness and to some degree develop it, it is essential that teachers should supplement them with modelling activities. Educators must then "become models of the thinking they seek to encourage" (Pajares, 1993, p. 50). This means educators "walk through" the process aloud so that students have concrete examples of what metacognition in action resembles. Teachers must model this process on several occasions in various circumstances with diverse material. Small group activities that parallel such modelling provide additional guided experience so that students gain a more intimate knowledge of metacognition.

It is, however, not enough to address metacognition once or twice over the course of a year or semester. Real growth occurs as a result of on-going training. Teachers, when considering their lesson plans, must deal with metacognitive training on a regular basis. This inherently changes the design of traditional instruction. For example, vocabulary expansion is a common necessity and practice in the language classroom. Instead of merely learning a list of vocabulary terms, teachers direct students to engage their metacognitive skills in accomplishing the task. Students ask reflective questions, adjust their practices, assess their knowledge, and transfer not only the content to other situations but also the processing insights gained from the experience. Along with an on-going dialogue, teachers must present to students more complex metacognitive strategies throughout the course.

The idea of maintaining a continual and deepening practice implies that students have ample opportunity to exercise their metacognitive skills. This is influential in reaching the ultimate objective of metacognitive training, i.e. autonomous learners. Instructors should provide not only direct instruction and cooperative learning activities but also independent, reflective experiences. One technique that promotes metacognitive skills is peer teaching. This means that students teach classmates a topic about which they feel confident. This forces students to break down the learning process and reflect upon it. Some researchers believe that independent practice of such skills can strengthen them (Schwartz & Perfect, 2002). Just as practicing reading and writing strengthens literacy, the same is true with developing metacognitive skills.

It is interesting that in one study, "the majority of students (58.3%) considered the teacher's expertise at showing students how to learn more important than their ability to teach language (31.5%), or to learn languages (11.8%)" (Cotterall, 1999, pp.501). Certainly students can appreciate teachers' efforts in this endeavour. The ultimate goal in enhancing students' metacognitive skills is to create self-directed, autonomous learners (Victori & Lockhart, 1995, p. 223). Training in learning styles broadens students' person knowledge, one aspect of metacognitive knowledge. Without doubt, education in learning styles helps students identify their strengths and weaknesses in the learning experience. Many times students have an idea of their preferences but do not know how to translate this information into practical activities they can incorporate into their learning experiences. Learning styles inventories and diversified instruction that caters to all modalities exposes students to the range of available strategies and tactics. In doing so, learners are able to appreciate their uniqueness, which undoubtedly boosts their self-esteem. Thus, not only does it expand their person knowledge but it also can affect their underlying belief structure. As mentioned several times, positive beliefs create a fruitful basis for metacognitive maturation.

As previously stated in this paper, learners' ability and willingness to make choices independently emphasize the essence of autonomy. Autonomous learners practice self-regulation. They monitor and evaluate learning, are flexible, productive, and set goals. In the language classroom learning autonomy means linguistic autonomy. Considering this, teachers, throughout the development of the course, should gradually lead students into more self-directed learning situations.



Again, this changes the nature of traditional teaching approaches. The teacher is now a tutor or “guide on the side”, responding to learners’ needs. In fact, this role parallels with some students’ beliefs about education: “the view of teacher as counsellor and facilitator of learning” (Cotterall, 1995, p. 198).

## **7. CONCLUSION**

Metacognition, or “thinking about thinking” as referred to in the literature, is an internal process that has a direct bearing on students’ learning experiences. It is comprised of metacognitive knowledge and metacognitive experiences. The former consists of three components: knowledge of person, task, and strategy variables. The latter involves metacognitive strategies and executive control. The metacognitive experience has five interdependent aspects: preparing and planning for learning; selecting and using learning strategies; monitoring strategy use; orchestrating various strategies, and; evaluating strategy use and learning.

Learner beliefs are a crucial factor in the learning process as they can either enhance or impede instruction and learning. This is due to a chain reaction found in human nature: beliefs shape attitudes, which affect motivation that then directs behaviour, eventually resulting in predictable outcomes. Preconceived beliefs abound in the educational setting. Researchers have revealed that such beliefs are especially pertinent in the language classroom. Even though people firmly hold certain beliefs, there are ways in which educators can bring about change. It is a delicate process in which teachers challenge student beliefs through exposure, classification, and new experiences with the goal of replacing mistaken and non-functional beliefs with more accurate and effective ones.

Metacognitive training involves a three-pronged approach. Teachers provide direct instruction and modelling, maintain on-going dialogues regarding metacognitive strategies, and allow students ample opportunity for metacognitive experiences. This manner of teaching deviates from conventional practices in that students become active learners and instructors become tutors, counsellors, or facilitators. Due to beliefs, comfort, and ignorance, teachers and teacher educators have as yet to fully embrace research findings regarding the significance of metacognition in the learning process. Regardless of this hurdle, by developing metacognitive skills in all educators, change is possible. The ultimate goal of metacognitive training is self-regulating, positive, confident, and mature learners who take responsibility for their learning experiences.

On the whole, teacher education programs should involve the study of metacognitive awareness because pre-service teachers seldom apply their knowledge of metacognition when working with students in their field experiences (Freeman and Johnson, 1998; Freeman, 2001; Joseph, 2003). This is mainly due to the fact that they are products of traditional instructional methods, meaning that the larger part of their educational experience—elementary, secondary, and possibly university years—was spent developing passive learning skills. Moreover, “most teacher candidates have had positive school experiences and bring to teacher education an identification with teaching that leads to the perpetuation of conventional practice and reaffirmation of the past” (Pajares, 1993, p. 46). Regardless of the challenge this presents to the progress of educational reform, the same process can be implemented to awaken educators’ awareness of the importance of metacognitive intelligence. Teacher educators are in the position to begin this process, serving as role models and guides for pre-service teachers who will then hopefully pass on their knowledge and skills to their students.

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