Autonomy and Autonomous Language Learning: Extra-mural Media in intra-mural Language learning Milieu: Focus on Reading

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ABSTRACT :

As giant strides taken in the advancement in ICT in the 21st century, a giant stride is also to be taken in language learning and teaching concerning ICT application and implementation. This project presents a promising solution to satisfy a high number of English Language learners' needs. Grounded on socio-cultural and constructivist theories of language learning including Krashenian, Vygoteskian and Ecological views, it focuses on promoting autonomous and self-directed language learning among the learners by meta-learning strategies and helping them find their feet and be equipped with thinking abilities. Having two homogeneous groups, from Humanities and Sciences students taking General English in Ardebil Payame Noor University, the control group, 36 subjects, were taught through printed programmed textbooks and conventional procedures   e.g. reading texts and answering the likely questions raised individually. The experimental group, 36 subjects, instructed by their teacher and collaborated with both the teacher and the peer group in activities concerned with awareness-raising (telling 'aha') and higher order skills mastery and meta-cognitive skills including: problem-solving, hypothesis forming, and hypothesis testing, sound reasoning, gap-filling, as well as, receiving different options supplied through extra-mural facilities, in the form of aural, visual, and kinesthetic media. The data were analyzed based on t-test. The final tests results held comprehensively in Payame Noor University Centers in Iran, indicated that the subjects enjoying the higher order skills instruction and availing to various extra-mural facilities had a meaningful difference in their GL acquisition at 95% confidence level compared to those deprived of these privileges. Concerning different fields of study, Chemistry majors outperformed in GL acquisition. In the gender criterion a meaningful difference was found among the girls who outperformed the boys.

Keywords: Autonomous Learning, Self-directed Learning, Meta-Learning, Extra and Intra Mural Learning Milieu, Constructivist Approach, Ecological Approach, ICT and language learning.

INTRODUCTION:

"A teacher affects eternity; he can never tell where his influence stops."

(Henry Brooks, American man of letters)

In the forthcoming century the likely sound view towards language learning should be that of English as an additional language neither EFL nor TESOL can satisfy the needs which the new view holds, though they have satisfied the limited number of people's needs in the past.

According to Bernat (2006), with increasing globalization in commerce, science and technology, increased movement of capital, labor, and its widespread use in media and entertainment, English has become the vehicle for international communication. English is now an international language in much demand globally.

The implementation of ICT with its fifth generation in the educational milieu is a giant revolution. Although the invention of print was a great aid in the realm of development of education in all its facets, ICT utilization in English language learning and teaching is and will be a spectacular phenomenon in the forthcoming century. It is likely that its development will not be confined to only few native speakers worldwide, rather it will be hypothesized, tested and manipulated by non-native practitioners globally.

In the post modernist's view of English as an additional language acquisition requires new methods and means. One such solution to the problem is likely pushing most of the stakeholders in the state of art to the back and those of their counterparts to the front, that is , the task of tackling of bringing the out-side world to the class and taking the class room world to the world out-side.

In a succinct way, any theory or methodology which manifests this shift, namely, the interchange of the stake-holders functions is likely to survive. If the students become a teacher of themselves, and the teachers become students in search of new knowledge; if teachers become power with the students rather than power over them; if students teach the point in question to others in order to learn the points themselves in the learning milieu, then it is hopeful to attain success in acquiring English as an additional language in the 21st century.

Instead of chalk and talk; drill and kill practices in intra-mural milieu of the traditional style of teaching and learning, the researcher hypothesizes manipulating extra-mural facilities inside the class, as well as, anywhere else. In this hypothesized milieu all the learners learn regardless of the site and the size, learning globally or locally, in an individualized procedure or in group participation.

The study is grounded in socio-cultural and constructivist theories of language learning including Krashenian, Vygotskian and Ecological view.

The ultimate source of exceptional performance is exceptional learning. Therefore, the question is how can we best produce exceptional learning in young people, or how can we make exceptional learning unexceptional? Self- directed learning occurs when teaching and learning becomes the same thing, neither leading nor trailing one another. In this relation Rogers (1969) states,

> The goal of education, if we are to survive, is the facilitation of change and learning. The only man who is educated is the man who has learned how to learn; the man who has learned how to adapt and change; the man who has realized that no knowledge is secure, that only the process of seeking knowledge gives a basis for security. (p, 103)

For Walker (2000) schools of the past taught mainly to the auditory learners; schools of the future must teach to all learners. Schools of the past which were managed by the transfer of notes from teachers' to the students' notes, an activity in which none of the stakeholders was truly engaged and neither of their brains was thinking. The whole activity was a mere transfer of information from the teacher's reservoir to that of the student with no immediate or real use. However, the appearance of new technologies with their manifold usage and applications demand new procedures for training abundant numbers of new students in the 21st century, as well as, finding new solutions for tackling problems on the road. The

spurt in the ever-increasing number of higher education seekers, particularly, seekers of English-language mastery, has debased traditional lecture-oriented and teacher-centered language learning through chalk and talk in a specific time and place in presentational classroom and has given way to the discovery-oriented, student-centered, self-directed, autonomous language learning for all learners all over the world with no limit in time and space in the forthcoming 21st century through the sky universities. The media mania in learning environment is and will be a must.

LITERATURE REVIEW:

The history of the point in study goes back to Confusius (551-479) a Chinese philosopher who said that I read I forgot; I saw, I believed; I did, I understood. In the 20th and 21st centuries the theories which relegate the lion's share task of learning to the learners are (1) Vygotskian theory of learning in doing and his advocacy of the zone of proximal development; (2) Krashenian view of comprehensible input and intake environment, which was succinctly stated as i+1 input theory ; (3) Bronfenbrenner's Ecological System Theory ; (4) The latest Constructivist theory ; (5)The Learning Gaps Framework and (6) The Neurological Interpretation of learning process.

A brief and succinct explanation of the above mentioned theories will clarify the point in question. What binds all these theories together, I believe, is the principal role in learning which is allocated to the autonomous, self-directed, and cooperative and in the life-stream line involved learner, who acquires and internalize the up-taken information into an institutionalized knowledge systems.

WHAT IS CONSTRUCTIVISM?

Competence in terms of lifelong learning is about thinking and doing, learning how to process knowledge, how to negotiate meaning, and how to develop the attitudes to be successful in life. Spady (1994) maintains "The first basic premise is that all students can learn and succeed but not on the same day in the same way" (p. 9). Spady goes on to say that learning rates and learning styles need to be taken into consideration in the classroom if successful learning is to take place. Thus Outcome-Based Education puts the learner at the center of the instructional process and the National Curricula Statement accordingly prescribes that teaching and learning be learner-centered, with the teacher in the role of mediator, and with a curriculum which leaves considerable room for creativity and innovation on the part of teachers in interpreting what and how to teach. The fundamental premise of constructivist approach is that cognition is the result of mental construction. In other words, learners learn by fitting new information together with what they already know. Constructivism also believes that learning is a social mitigation, that it is affected by the learning context as well as the learners' beliefs and attitudes. The main underlying assumption of constructivism is that individuals are actively involved right from birth in constructing personal meaning that is their own personal understanding, learning from their experiences. In other words as Balladon (2004) states "everyone makes their own sense of the world and experiences that surround them." (p. 105)

A creative learning process is the antithesis of the traditional teacher-centered, content-driven approaches in which learners passively receive knowledge which they are required to repeat at a later stage for evaluation purposes. Learners engaged in creative learning are active, making meaning, constructing and processing knowledge. Learning involves a process of ongoing transformation, of infinite becoming. This infinite becoming, or transformation, occurs at the confluence of activated resources within learners and those resources provided by the classroom situation. The teacher facilitates learning

by giving learners access to the tools they need to engage in the becoming process: an awareness of the resources they already have, new information and situation of context which allows, challenges and motivates learners to learn experientially, through participation. Building on their knowledge and skills, making sense of what they are learning by doing, behaving and reflection a transformation takes place and new knowledge and new being comes into existence, a process which is based on transformation beyond stability to tap the creative powers in instability. Creative learning is lifelong learning going beyond the immediate recall need of fact for normative assessment tests.

This notion of creative learning process stems from constructivist learning theory. What a person knows is not just received passively but is actively constructed by that person and integrated into the person's existing body of knowledge, which through the incorporation of new knowledge, shifts and re-coheres in response to the new. Hence, what we know is always in a process of becoming, and, thus, we as beings are as a consequence also always in a process of becoming.

Constructivism in education is rooted in notions from cognitive and social constructivism. The former is grounded in the works of Piaget and accentuates cognitive development and individual construction of knowledge and the latter emphasizes social construction of knowledge and is generally attributed to the work of Vygotsky (1978). Piaget's developmental theory advocates a holistic approach. Learning is a developmental process that involves change, self-generation, and construction, each building on prior experience. According to Kaufman (2004), in exploring the social origins of thought, Vygotsky advanced the view that children's thinking and meaning-making is socially constructed and emerges out of their social interactions with their environment. Thus, we draw on

theoretical perspective located within constructivist, socio-cultural- historical framework that emphasizes the centrality of language, interaction, and culture in the construction of meaning.

VYGOTSKY'S SOCIAL CONSTRUCTIVISM:

Alongside the influence of Piaget, another major influence on constructivist thought has been the work of his contemporary, the Soviet psychologist Lev Vygotsky. He argued that immersion in practice coupled with a certain type of overt guidance gives learners a degree of reflective awareness and conscious control over the relationship between form and meaning in a social language not typical of social languages acquired largely through immersion alone. According to Aronoff (2003), the type of overt guidance Vygotsky argued was the sort that focuses the learner consciously on conceptual relationships, verbal links, and connection between form and meaning. He argued that this was the primary goal and effect of efficacious schooling.

Vygotsky thus believed that we can learn from others, both of the same age and of higher age and developmental level. One of the main ways this operates is through scaffolding in the zone of proximal development. This latter concept, one of Vygotsky's main contributions to learning theory, refers to the gap between what a person is able to do alone and what she or he can do with the help of someone more knowledgeable or skilled than her or himself. It is here that the role of teachers, adults and peers comes to the fore in children's learning, in that they can help bring the child's knowledge to a higher level by intervening in the zone of proximal development by providing children's thought with so-called scaffolds, which once the learning process is complete are no longer needed by the child. Not all children are as educable in

this respect, some being able to learn more in the zone of proximal development than others.

ZONE OF PROXIMAL DEVELOPMENT AND SCAFFOLDING:

Based on Vygotskyian perspective of development, Perera (2001) defines scaffolding as " temporary support or assistance provided by someone more capable ,that permits a learner to perform a complex task or process that he or she would be unable to do alone" (p.253). . In a classroom scaffolding is carried out by either teachers and/or peers, or by the L2 learners themselves which is called "self-scaffolding".

Increased attention in recent years to the science of learning, knowing, and developing understandings has brought constructivism with its emphasis on the combined cognitive and socio-cultural impact on learning, to the forefront in education. Constructivism has placed the learner's individual development at the focus of instruction and learning and has acknowledged the critical role in the learning process of endogenous factors and internal schema combined with exogenous social and cultural variables that contribute to the transformation of learner's internal schema.

The integration of new technologies across disciplines and educational contexts has grown dramatically in recent years and the impact of constructivism in the development and implementation of virtual environments has intensified with the ever-increasing technological advances that have opened new possibilities. Learners pursue investigations that lead them to a deeper understanding of literacy, numeracy, and scientific concepts. Computer, video, and wireless technologies, have provided optimal media for the application of constructivist principles to learning and teaching, created communities of learners in electronic learning environments and greatly enhanced student achievement and teacher

learning.

In brief, adopting the concept of scaffolding to classroom activities, in the forms of routines, common classroom expressions, verbal interactions with learners will surely help the teacher to assist the transformation of pre-sleep dialogue into creative language.

ECOLOGICAL APPROACH

One example of constructivist theory is ecological system theory. The child experiences cognitive development in the context of a complex system of relationship including parent-child interaction, the "micro-system", the extended family, school and neighborhood, the " meso-system", and the general society and culture, the "exo-system". Changes at any of these levels have the potential to influence cognitive development.

Ecology is (a) holistic, (b) dynamic and interactive, and (c) situated. These same categories can be applied to the ecosystem of language and language learning. In the same wave length Van Lier (2001) who devised the ecological jungle metaphor, simply states that knowledge of language for human is like knowledge of jungle for animal. The animal does not have the jungle; it knows how to use the jungle and to live in it. Perhaps we can say by analogy that we do not have or possess language, but that we learn to use it and live in it. We learn language in the same way that an animal learns the forest, or a plant learns the soil.

John T. Sanders (1996) in his article on Ecological Approach to Cognitive Science states that it is not the brain which think, it is people. Things that go on in the brain are necessary for cognition, but cognition could not go on in the absence of interaction with the environment, and environment could not be negotiated in the absence of bodies…. Organisms- and especially people find their dispositions in their muscle-tone and in the balance of hormones coursing through their

bloodstream not just in their brain. They fix their belief not only in their heads but in their worlds as they attune themselves differently to different parts of the world as a result of their experience. According to Sanders (1996) "It is exciting to see that, more and more, discussion of cognitive science are focusing greater attention on the importance for day-to-day cognitive activity of interaction with the changing environment, both at the level of individual cognition and , ultimately, at the level of understanding cognition more generally" (p.37).

COMPREHENSIBLE INPUT AND
INTAKE ENVIRONMENT:

To learn a language, to be able to speak, it only takes, in maximum, about two years both for a child and an adult to learn "what to say" in that language. While it takes a lifetime for them to learn and master "what not to say" in that language, in other words, it seems obvious that if there is no deficiencies in both the learners and the learning environment, natural route of language learning is going to be covered and language learners learn ' what to say' in that language. But when it comes to ' what not to say' in that language, the task becomes an exacting and a demanding process whose mastery may last a lifetime. In both aspects of language learning, i.e. learning 'what to say' and learning 'what not to say' environment and input play an important role in covering the route successfully and effectively. To this end the following pages are allocated to clarify and exemplify the attributes of an effective and comprehensible input along with an appropriate, fruitful and effective 'intake environment' which finally leads to autonomous learning processes, that result in different levels of information arsenal in different individuals. In this regard Krashen (1988) states,

> "It is a question of obvious importance to the teacher and language student and has also become a matter of concern to the

psychologist interested in the nature of primary linguistic data, or linguistic input necessary for language acquisition to occur…. (P.40)"

If we accept that both reception and production-based factors are important in second language acquisition, then it will be useful to examine the role that learner initiative and teacher response may have in accomplishing input and output. Garton (2005) concludes that perhaps the most significant pedagogical implication to be drawn is that any teacher or method that facilitates a realignment of the traditional roles of teacher and student, so that students can take greater initiative or assume more responsibility for their own learning, is likely to encourage in-class oral interaction, which in turn can increase comprehension of input.

Based on the comprehensible Output Hypothesis, in order to acquire a language successfully, learners must not only be given opportunities to produce language, but they must also be pushed into making their meanings clear. By encouraging learners to make their output more comprehensible via the use of clarification request and comprehension checks, teachers may actually help to improve accuracy as learners are forced to attend to the form of their utterances.

This discussion of negotiation of comprehensible input and output is closely tied to theories of learning through social interaction and the work of L. S. Vygotsky(1978) in the field of cognitive psychology. Researchers working in the field of language acquisition have particularly made use of Vygotsky's idea of 'verbal scaffolds' whereby teachers build 'scaffolds' to support learners' language development and then gradually remove them so that the learners become independent. It is not possible to go into details here, but there is an extensive discussion of Vygotsky's theory for language learning in Johnson (2001). Van Lier (1996) also makes frequent reference to Vygotsky's work.

So, one can deduce that certain types of input are more effective than others. This would have dramatic consequences for language teaching. Aronoff (2003) sums up Krashen's input hypothesis and its central claim is that language acquisition depends solely on comprehensible input-language which is slightly ahead of the hearer's current stage but which they can comprehend through means such as situational clues; language is acquired through trying to understand what people are saying (p. 504) .

NEUROLOGICAL PERSPECTIVE OF L2 LEARNING:

Except for those who live in deepest poverty, the psychological needs--love power, freedom, and fun-- take precedence over the survival needs, which most of us are able to satisfy. All our lives we search for ways to satisfy our needs for love, belonging, caring, sharing, and cooperation. If a student feels no sense of belonging in school, no sense of being involved in caring and concern, that child will pay little attention to academic subjects.

In line with the above mentioned views on the importance of creating an enriched and emotionally supportive environment Walker Tileston (2000) states,

"Environment is so important that none of other techniques discussed will be really effective unless the issues of enrichment and support are addressed first. In a world full of broken relationships, broken promises, and broken hearts, a strong supportive relationship is important to students. While we cannot control the students' environments outside the classroom, we have tremendous control over their environment for seven hours each day. We have power to create positive or negative images about education, to develop an enriched environment, and to become the

catalysts for active learning. We know that how we feel about education has great impact on how the brain reacts to it. Emotion and cognitive learning are not separate entities; they work in tandem with one another. (p.1)"

In order to understand the importance of enrichment and support, we must examine how learning takes place in the brain. Two types of cells, neuron and glial (meaning glue) are of great importance to learning. Neurons communicate through their parts: the cell body and the dendrites, and the axon. According to Walker Tileston (2000),

"The cell body is represented by the palm of your hand. Information enters the cell body through appendages called dendrites, represented by your finger. Just as you wiggle your fingers, your dendrites are constantly moving as they seek new information. If the neuron needs to send a message to another neuron, the message is sent through the axon. Your wrist and forearm represent the axon. (p.2)"

When a neuron sends information down to its axon to communicate with one another neuron, it never actually touches the other neuron. The message goes from the axon of the sending neuron to the dendrite of the receiving neuron by swimming through a space called a synopse. As the neurons make connections, the brain grows dendrites and strengthens the synopses. Glial cells are support cells that hold the neurons together and act as filter to keep harmful substances out of the neurons. They may have great significance in regard to how well we think. When examinations of Albert Einstein's brain tissue were conducted, scientists found that he showed more glial cells per neuron than the average person.

Students', who feel threatened in the classroom, whether physically or

emotionally, are operating in a survival mode, and while learning can take place in that mode, it is with much difficulty. If a student feels that no matter what he does he can never please the teacher; if a student feels that no matter how hard he tries he can never understand the subject-- whether the threat is real or perceived- he will not ever be able to reach his potential in that environment.

LEARNING GAPS:

Ellis (1999) believes that maybe not always, but ideally, you need experimental controls to test causal hypothesis. Teachers often see learning as an outcome in terms of a state of knowledge which students achieve as detached selves rather than as an outcome of a 'process of constructing' which they achieve within an integrated social situation. While lecturers may have a sense of what they would like their students to achieve it in the assessments, they frequently have a very limited idea of why students are failing to achieve. The situation, moreover, is picked up and acutely felt by students who have no idea of what the nature of the problem is. In such situations the teacher's response is commonly limited to rather unhelpful comments about, for example, their exam results or course work not being up to standard, or suggestions that the student is not working hard enough. A deeper understanding of why learning is not achieved is missing: it remains hidden in a kind of shadow land. Here we explore some of the relevant research and literature in terms of how learning might occur. We do so within a framework of five learning 'gaps'. Briefly, they can be described as being between
1   recall and understanding;
2   understanding and ability;
3   ability and wanting to;
4   wanting to and actually doing;
5   actually doing and ongoing change.

These gaps lie between a continuum of different areas of learning -- each encompassing the previous ones-- laying out the extent of the professional challenge At the most basic level, there is a gap between the ability of learners to recall or recognize information and being able to understand it. Even if understanding is achieved, however, there can then be a gap between that and being able to or having the abilities/skills to actually put that understanding into practice (practical understanding). In subjects like medicine and dentistry, it has long been clear that students may often be able to write reasonable examination answers and yet be very incompetent when faced with real patients. Sometimes efficient learning situations can be devised which result in students with knowledge, understanding and ability to use that understanding, and yet they end up not actually use it. The very efficiency of some systems may indeed contribute to turning students away from a real commitment to their subject or their work. An even bigger gap, one that can be quite disturbing for teachers as well as students, occurs when the student understands, is able to put that understanding into practice, even wants to do so, but still does not actually do so. Of course, there are many excuses such as time- tabling or pressure of work, but there is often a great deal more to it than this. A final gap- possibly a more postmodern gap- emerges with understanding , ability, wanting to and actual doing coupled with a failure to change the situation (and the postmodern conditions) of our practice mutate and change. Many of these gaps have more to do with conceptions of self and the anxieties and threats which students and teachers perceive about them, rather than ignorance or lack of competence.

From whatever went on in the foregoing pages, we can grasp a sound view of critical role of the learners, the environments and the teachers. The preceding pages made it clear that learning is to take place either inside or between the learners. Learning is dyadic or triadic as well as intrinsic to the learners, which is fully and clearly

displayed in Vygotsky's views, summarized in Merrill Swain's words. Thus, the latest and the soundest perspective in language learning is the Vygotskian views , that is, the social interaction and dialogues between the acquirer and the people around him or her. Cook (1997) sums up the gist of the point in question as follows:

> "If one accepts a Vygotskian perspective that much learning is an activity that occurs in and through dialogues, that development occurs first on the inter-psychological plane through socially constructing knowledge and processes, then it must be that a close examination of dialogues as learners engage in problem-solving activity is directly revealing of mental processes. The unit of analysis of language learning and its associated processes may therefore more profitably be the dialogue, not input or output alone. (p.142)"

Now, it deserves to elaborate on the two most important stakeholders in the state of art, that is, the idea of autonomy and autonomous learners, as well as, the application of ICT as one of the fruitful options among too many alternatives in supplying promising environments and resources for L2 acquirers.

AUTONOMY AND AUTONOMOUS LEARNING:

According to Little (2002) learner autonomy is a problematic term because it is widely confused with self-instruction. It is also a slippery concept because it is notoriously difficult to define precisely. The rapidly expanding literature has debated, for example, whether learner autonomy should be thought of a capacity or behavior, whether it is characterized by learner responsibility or learner control, whether it is a psychological phenomenon with political implications or political right

with psychological implications whether the development of learning autonomy depends on a complementary teacher autonomy.

There is a consensus that the practice of learner autonomy requires insight, a positive attitude, a capacity for reflection, and a readiness to be proactive in self-management and interaction with others. This working definition captures the challenge of learner autonomy: a holistic view of the learner that requires us to engage with the cognitive, meta-cognitive, affective and social dimensions of language learning and to worry about how they interact with one another.

WHY LEARNER AUTONOMY?

There are two general arguments in favor of trying to make learners autonomous. First, if they are reflectively engaged with their learning, it is likely to be more efficient and effective, because more personal and focused, than otherwise; in particular, what is learned in educational contexts is more likely to serve learners' wider agendas. Second, if learners are proactively committed to their learning, the problem of motivation is by definition solved; although they may not always feel entirely positive about all aspects of their learning, autonomous learners have developed their reflective and attitudinal resource to overcome temporary motivational setback. Benson (2001) believes the autonomous learner appears to be a particular person rather than a person who possesses particular cognitive skills or abilities that can be acquired.

Vinkenveugel (2004) states: the development of a capacity for reflection and analysis, central to the development of learner autonomy, depends on the development of an internalization of the capacity to participate fully and critically in social interactions. Students need help in developing skills such as critical thinking, questioning techniques and self-assessment, and often fail to realize the

depth of their own knowledge and skills.

Concerning another attributes of autonomous learner Vinkenvleugel equates autonomous learning to independent learning. He states that: "Independent learning is fostered by creating the opportunities and experiences which encourage student motivation, curiosity, self-reliance, and positive self-concept; it is based on students' understanding of their own interest and valuing of learning for its own sake." (Educational Policy Statement in Independent Learning)

From what went on, one can deduce that the higher the stake of taking responsibility, the more independent the learner becomes in the process of learning. Then, the word ' independence' calls the idea of 'self-management' and 'self-governing' as well as 'individualized' learning to one's mind. It does not, by no means, liberate the learner from the teacher, rather, the learner is free in up-taking the necessary and vital ideas which come in through the teacher or other resources. Here, the phenomenon of ' up-taking' imposes a dynamic role to the learner. It is the learner who makes the decision about ' what to take in'; ' how to take in'; and when to take in'. The teacher's role is the supplier of effective conditions, rather than the supplier and depositor of information. The teacher is a facilitator and mediator than a mere supplier of information. An autonomous learner does not signify a teacher-less class in the mind, rather, a class with two participants whose aim is to create real conditions for emerging the real character of the learner's capacity in the learning process. In other words, it is the creation of a mode of dynamic activity which changes the learner into a teacher, that is, the user of the language. At this moment we say that the learner is the teacher of himself, i.e. the user of the language, no matter, how lower is the level at the early stages.

To all intents and purposes, the autonomous learner makes a pro- active role in the learning process, generating ideas and availing himself learning opportunities, rather than simply reacting to various stimuli of the teacher. As we shall see, this line of reasoning operates within, and is congruent with, the theory of constructivism.

FOSTERING AUTONOMY:

The supreme creativity and inspiration you have to let the bird sing on a tree. It won't sing in a cage. When my students chose for themselves, I think their language could develop deeper and faster, although they still make grammatical mistakes which, I think, need a new cycle of action research.

Attempts to theorize the process of autonomousization have been strongly influenced by neo-Vygotskian psychology, which sees learning as a matter of supported performance and emphasizes the interdependence of the cognitive and social-interactive dimensions of learning process. According to this model, the teacher's role is to create and maintain a learning environment in which learners can be autonomous in order to become more autonomous. The development of their learning skills is never entirely separable from the content of their learning.

In the same wave length Kumaradivelu (2001) in the article "Toward a Post-method Pedagogy" states three dimensions on context for fostering autonomy. These three dimensions are Particularity, Practicality, and Possibility. If context-sensitive pedagogic knowledge has to emerge from teachers and their practice of everyday teaching, then they ought to be assisted in becoming autonomous individuals. This objective cannot be achieved simply by asking teachers to put into practice theories conceived and constructed by others. It can be achieved only by helping teachers develop the knowledge and skill, attitude, and autonomy which is necessary to construct their own context-sensitive pedagogic knowledge that will make their practice of everyday teaching a

worthwhile endeavor.

AUTONOMY & THE TEACHER:

The paradigm of inside-out rather than outside-in direction in language learning, I believe, is going to revolutionize L2 learning. In My 29 years of teaching experience I have worked on the output of the learners i.e. the production of the learner than the input of the teacher i.e. the provision of information by the teacher, I have gained good outcomes. This notion does not neglect the role of the teacher and the course materials whatsoever; rather, it relegates the largest task on the shoulders of the trainees. If students are to learn to ' take control ', the teacher may need to learn to ' let go ' even as she provides scaffolding and structure… If teachers are not autonomous themselves, how can they develop students' autonomy?

Logan (2004) says that it is also generally agreed that teachers play a key role in helping learners to learn autonomously. Without teacher autonomy, learner autonomy in pedagogical contexts remains a theoretical ideal, which is difficult to achieve. It seems that freedom to learn the way an adult learner chooses is essential for his or her development. Adults appear to value their freedom and respond more positively and work hard if this freedom is guarded and respected. Van Lier (1996, cited in Daoud 1996) emphasizes this point when he writes: "If there is excessive control, and we are told exactly what to do, then education ceases to be education" (p.8).

AUTONOMY & RESOURCES:

Now that we touched the peculiarities of an autonomous learner and the role of the teachers succinctly, let's have some elaboration on the effects of materials in developing autonomy in learning. In fact teaching is nothing more than showing that something is possible, and learning is merely discovering that something is possible. Training should be a course in learning how to learn. No school or even university can provide its pupils with all the knowledge and skills they will need in their active adult lives. It is more important for a young person to have an understanding of himself or herself, an awareness of the environment and its working, and to have learned how to think and how to learn." Therefore, those materials are the most effective in autonomous learning which make the learner think, as well as, learn how to learn. The use of authentic materials is perhaps the most important target of this explicit learning. McCarthy(1998) notes that authentic texts can play a key role in enhancing positive attitudes in learning, in promoting a wide range of skills, and in enabling students to work independently of the teacher.

Any good material should provide opportunities for reflectivity and self-awareness. This process of learning is an on-going process of self-discovery. The materials used in this process are not the goal rather they are the means of discovery. Thus, one can deduce from the above quote that the best material for a course is one which comes from the class members, i.e., the teacher and the students.

Perhaps one of the principal goals of education is to alter learner's beliefs about themselves by showing them that their putative failures or shortcomings can be ascribed to a lack of effective strategies rather than to a lack of potential. After all, according to Vygotsky(1978), learning is an internalized form of a formerly social activity, and 'a learner can realize his potential interactively-- through the guidance of supportive other persons such as parents, teachers, and peers'.

RESEARCH QUESTIONS:

In the line with the foregoing pages

and having acknowledged that new technologies require new methods of training with their unseen problems, the research questions for this study are:

1. Is there a difference in degree of acquisition between the students who had the privilege of using extra-mural facilities as well as meta-learning facilities and those who did not have access to them?

2. Is there a difference in the degree of enhancement among boys and girls?

3. Is there a relationship between Computer Enhanced Language Learning and the field of studies of English language learners with regard to higher-order skills manipulation and extra-mural facilities?

PARTICIPANTS:

The study was carried out on Ardebil Payame Noor University students who took the General English Course for three credits as an obligatory course. Since this course was offered to all students of Humanities and Sciences, classes were selected from both fields of studies, including B. A. and B.S. majors in Persian Literature, Chemistry, Mathematics, Education, Accounting, Theology, Biology, and Geology. All the students who had registered for this General three-credit English course had already passed a mandatory two-credit pre-requisite English course which was mainly on Basic English Sentence Structure, namely, grammar course. The passing of this course, as well as, participating in the pre-test on General English proficiency held at the onset of the project, somewhat, guaranteed the homogeneity of the subjects in the control and the experimental groups. The age-range of the participants was, mostly, from 18 to 23. Most of the participants were in their second or third term of their educational career. The homogeneity of the subjects were also calculated and supported later

according to the related statistical calculations.

PROCEDURE

The project was fulfilled based on scientific method. At least four classes were chosen. Two observed intact classes were taught only through printed programmed textbooks through the conventional procedures used in classes, for example, reading texts by the teachers and answering the likely questions raised individually to the class. These participants comprised our control group with the ultimate number of 36 subjects after applying the regulatory measures, such as, attending most of the presential (attendance) classes.

The experimental group or students in laboratory settings comprised two classes for about 40 students each. These students were selected and placed in the laboratory setting in each class from both Humanities and Sciences students, half from each field of study. The final number of the subjects left in the experimental group was 36 as well. The criteria for subjects' sampling include gender, field of study, age and last but not the least, their successive attending of the classes, since in Payame Noor University attending classes is not compulsory for students, and the participants class attendance was compromised for both groups on their own will at the very commencement of the course.

The experimental classes, besides covering their programmed self instructional textbook, received instructions by their teacher and collaboration with both the teacher and the peer group in activities concerned with awareness-raising (telling 'aha') and higher order skills mastery, meta-cognitive skills including: problem-solving, hypothesis forming and hypothesis testing, sound-reasoning, gap-filling, reflective thinking, as well as,

receiving different input options supplied through extra-mural facilities, in the form of aural - visual and kinesthetic media. Kinesthetic activities will be the most emphasized ones. Of the salient resources they enjoyed the privilege of them were: copy of 4 CD's on general English language realm, enjoying the English Language Lab facilities on their own will which were only for English Language Translation Majors at that time, accessing the Computer Site facilities in the University Local center or having access to them privately in their domicile.

The data collected both for observed classes in pre-test and post-test , as well as, for the treatment class were analyzed based on appropriate relevant statistical processes of t-test. The statistical investigation were done both on the pre-test and post-test appraisals through researcher-made tests during the study, as well as, through the final centralized tests held comprehensively all over various Payame Noor centers in Iran.

RESULTS:

To get the results and consideration of the findings the following tests have been applied.

I.   Independent Samples t-test
First, Independent Samples t-test was used to compare the results of final tests among the two groups. The results are exhibited in table 4-1.

Table 4-1: The results of final tests between the two groups

Group	N	Mean	Std. Deviation	T	Df	Sig
Control	36	49.72	9.41			
Experimental	36	67.50	15.83	-5.79	56.97	0.000

table 4-1 indicates the value of the mean for 36 students in control group is equal to 49.72 with Std. Deviation of   9.41, whereas , these values for 36 students in the experimental group are equal to 67.50 and 15.83, respectively. The results of t analysis shows that the value of the derived t = -5.79 with df = 56.97 and p=0.000 < 0.05 at confidence level of 95% is meaningful, which with regard to the values of the mean, we can conclude that the degree of the acquisition of the subjects in the experimental group is higher than that of the control group at 95% of level of confidence in the final test. Albeit, it is necessary to mention that since Levene's Test for Equality of Variances with F= 10.79 and P=0.002 < 0.05 was meaningful, therefore we have used the two communities t with unequal variances. In this condition the degree of freedom (df) is calculated through the following formula.

$$df = \frac{(\frac{s_1}{n_1} + \frac{s_2}{n_2})^2}{\frac{(\frac{s_1^{\,2}}{n_1})^2}{n_1 - 1} + \frac{(\frac{s_2^{\,2}}{n_2})^2}{n_2 - 1}}$$

II. Independent Samples t-test

In the second step for investigating any probable differences between the two groups at the beginning of the study, the scores in the pretest of the subjects in both control and experimental groups were compared by using the Independent Samples T Test. And the results are presented in table 4.2.

As the data in table 4-2 indicate the mean value for 36 students in control group is equal to 28.66 with Std. Deviation of 8.26. Whereas these values for the 36 subjects in the experimental group are 32.99 and 16.04 respectively,

the t analysis results indicate that the obtained t = -1.44 with df =52.37 and p = 0.155 > 0.05 at confidence interval of 95% is not meaningful. This means that the control and the experimental groups, from the very beginning of the experimentation, did not have any meaningful difference in learning from each other. It is worth mentioning that the value of Levene's Test for Equality of Variances F = 16.88 with p = 0.000< 0.05 was meaningful. Thus, we have used t, as well as, the degrees of freedom of differences (df) of two communities with unequal variances.

Table 4-2: Consideration of the meaningfulness of the difference between the two groups in the pretest

Group	N	Mean	Std. Deviation	t	Df	Sig
Control	36	28.66	8.28			
Experimental	36	32.99	16.04	-1.44	52.37	0.155

Table 4-3: The study of meaningful score differences in pretest and posttest of the two groups

| Group	N	Mean	Std. Deviation	t	df	sig
Control	36	21.07	11.48	-4.36	70	0.000
Experimental	36	34.51	14.52			

III. Independent Samples T-test

For further study of resultant probable and interactive changes in this section the difference in the pretest and posttest scores (pretest scores subtracted from posttest scores) were analyzed through using Independent Samples test. The results are presented in table 4-3.

As the data in table 4-3 indicate the mean value for 36 students in control group is equal to 21.07 with Standard Deviation of 11.48. Whereas this values for 36 subjects in the experimental group are 34.51 and 14.52, respectively. The results derived through t analysis shows

that the obtained t =-4.36 value with df = 70 and p = 0.000 < 0.05 at confidence level of 95% is meaningful. With regard to the mean values at 95% of confidence interval we can conclude that the resultant changes in the experimental group scores from the pretest to posttest were higher than the resultant changes in the scores of the control group. It is necessary to mention that the value of Levene's Test for Equality F=1.89 with p=0.174> 0.05 was not meaningful. Thus, we have used the t of the two communities with equal variances. In this case the degree of freedom has been calculated through df = n1 + n2 -2 formula.

The results derived from the study so far in this section are presented in the graph 4-1
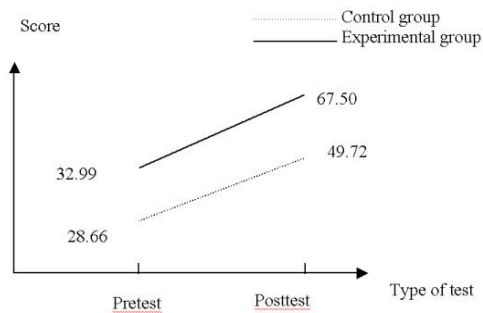
As the graph 4-1 indicates there is interactive condition in the scores of pretest and posttest of the control and experimental groups.

Hypothesis 2: Is there a difference in the amount of learning in both the control and the experimental group with regard to gender?

To study this hypothesis Univariate Analysis of Variance was used. The descriptive results are presented in table 4-4. It is worth saying that for this analysis the difference between the pretest and posttest scores have been the basis of the analysis.

Table 4-4: Descriptive Statistics

Group	Gender	Mean	Std. Deviation	N
Control	Male	14.78	6.94	10
	Female	23.49	12.06	26
	Total	21.07	11.48	36
Experimental	Male	27.27	7.36	6
	Female	35.96	15.24	30
	Total	34.51	14.52	36
Total	Male	19.46	9.27	16
	Female	30.17	15.10	56
	Total	27.79	14.45	72

As the data in table 4-5 show the value of the obtained F= 0.000 (1, 1, 68) with p = 0.998 > 0.05 at level of confidence of 95% is not meaningful. That is, we cannot conclude that the level of difference in learning in both control and experimental groups is meaningful in interaction with gender.

But, the derived value F (1 & 68) = 5.49 with p = 0.022 < 0.05 at level of confidence of 95% is meaningful. This means that we can conclude that the level of difference in learning in both groups of boys and girls regardless of being from control or experimental group is meaningful, which the data in table 4-4 indicate that the value of the difference in girls' learning from the pretest to posttest was higher than that of the boys'. In other words, regardless of being in control or experimental group, the difference in learning was prominent among girls. The results have been displayed in graph 4-2. The results of variance analysis have been presented in table 4-5.

Table 4-5: Tests of Between- Subjects Effects

Source	Df	Mean square	F	Sig
Corrected Model	3	1392.71	8.56	0.000
Intercept	1	30437.73	186.98	0.000
Group	1	1842.05	11.32	0.001
Gender	1	893.60	5.49	0.022
Group * gender	1	0.002	0.000	0.998
Error	68	162.79		
Total	72			
Corrected total	71			

Dependent Variable: final-pre
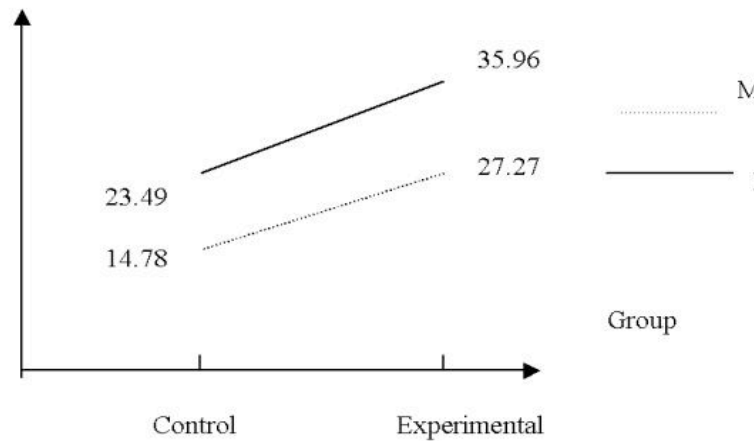
As the graph 4-2 indicates there is interactive cycle concerning the difference in learning in the control and experimental groups with regard to gender.

Hypothesis 3: Is there a difference in students level of learning in both control and experimental groups with regard to different fields of study?

To study this hypothesis we analyzed the value of differences in the scores of subjects in the pretest and posttest of both control and experimental groups by using one-way ANOVA. The descriptive results have been presented in table 4-6.

Table 4-6: Descriptive Statistics

Field of study	N	Mean	Std. Deviation	Std. Error
Literature	11	37.83	12.9	3.89
Chemistry	11	39.79	15.27	4.61
Accountings	7	20.81	10.026	3.79
Mathematics	6	32.81	13.31	5.43
Total	35	34.18	14.59	2.47

Likewise the obtained results of ANOVA have been presented in table 4-7.

Table 4-7: ANOVA

	Sum of Squares	df	Mean square	F	Sig
Between groups	1755.1	3	585.03		
Within groups	5487.1	31	177.00	3.305	0.033
Total	7242.17	34			

Dependent Variable: final - pre

As the data in table 4-7 indicate the obtained value $F_{(3 \text{ and } 31)} = 3.305$ with $p = 0.033 < 0.05$ at the confidence level of 95% is meaningful. This means that we can conclude, with 95% of confidence, that the resultant difference in learning in the experimental group among the different fields of study is meaningful.

For further study and determining the difference among the different fields of study we used the follow up LSD test. The results are presented in table 4-8.

Table 4-8: Post Hoc Tests, Multiple Comparisons LSD

I Field	J field	Mean Difference (I - J)	Std. Error Sig	Sig
Literature	Chemistry	-1.96	5.67	0.73
	Accounting	17.017*	6.43	0.013
	Mathematics	5.016	6.75	0.46
Chemistry	Literature	1.96	5.67	0.73
	Accounting	18.98*	6.43	0.006
	Mathematics	6.98	6.75	0.309
Accounting	Literature	-17.016	6.43	0.013
	Chemistry	-18.98	6.43	0.006
	Mathematics	-12.00	7.40	0.115

As the data in table 4-8 show the following comparisons at the level of confidence of 95% are meaningful.
(Literature > Accounting) (Chemistry > Accounting)
For a better comparison, the obtained results have been presented in the graph 4-3.

As the graph 4-3 indicates the highest difference in score in the pretest and posttest belongs to the field of study of Chemistry and the lowest belongs to Accounting.

Scores
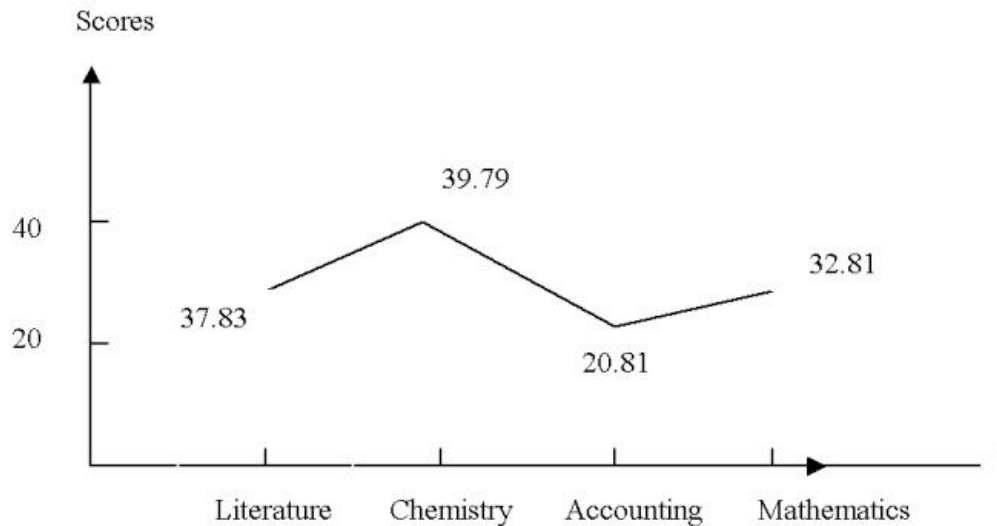
DISCUSSION:

In the proceeding lines the results obtained and the findings tapped through the implementation of the project are discussed and elaborated according to the research questions and hypotheses announced at the aforesaid sections of the project.

1. Enjoying the privileges of extra-mural facilities as well as meta-learning facilities

Our first research question, i.e., " Can manipulation of extra-mural facilities enhance English language learning among adult learners?" or put it in another way, i.e., " Is there a difference in the degree of acquisition between those students who had the privilege of using extra-mural facilities and those who did not have access to them?" addressed as the main concern of the present study. It was statistically found that there is a meaningful difference in the degree of English language acquisition between the two groups involved in the study, namely the control and the experimental groups. This increase in the degree of acquisition of general English achievement can be alleged to different factors discussed thoroughly in the previous parts of the project including the " intake- rich environment", " arising autonomy among subjects ", constructivist approach in teaching", " ecological view of language

acquisition ", " computer enhanced language learning" and to a plethora of other impetuses which are our concern in our hypotheses in the study.

2. Difference in degree of enhancement among boys and girls

With regard to our second research question, i.e.," Is there a difference in the degree of enhancement among boys and girls in English language acquisition?" the statistical findings indicate a meaningful difference in the degree of acquisition among the subjects of the two genders. The girls outperformed in English improvement compared to boys. Though there was no difference at the prior stage of the commencement of the study, the girls' improvement was prominent at the final test results. This meaningful difference among them may be due to some potential factors including the incongruity in the number of boys and girls in both the control and the treatment groups, the short period of carrying out the project and its appraisal, as well as, the overpopulation of the female students compared to male students which has been changed into a prototype pattern concerning the participants in the study and the normal classes as well.

Roughly speaking, approximately 79% of the students in Payame Noor University are female and the rest are male. In our authentic study male comprised only less than 10%. Besides, the motif among male

students to attend classes regularly is far below than that of the female students. Exploiting other subjects from other educational systems along with Payame Noor University students was opposite to our overall rationale of Payame Noor University which is an advocate of distance education.

Besides the forgone interpretation, one semester of different instruction along with only 10 sessions is not an ample time interval to verify our hypothesis. To have a firm and sound conclusion, at least, some successive terms are required together with other aspects of English language aptitudes, i.e. E.S.P., writing potentials etc. which the students of all fields are going to be trained and specialized.

3. A relationship between Computer Enhanced Language Learning and such things as difference in the fields of studies of English learners

Our final research question posed " Is there a relationship between CELL (Computer Enhanced Language Learning) and such things as difference in the fields of studies of English language learners? One of the statistically meaningful difference among the two groups performance was that of Chemistry students with the highest average score of 39.79 among the other majors. The rationale behind this out performance and the highest increase in the degree of enhancement may be due to the fact that both Chemistry and language are systemic bodies of knowledge rather than the stocks of information. Both fields of studies are rule based systems contrary to some other fields which are merely body of information only acquired merely in a continuum.

CONCLUSION:

It is hoped that the findings of the study will be able to shed light with regard to the overall view that humans are

genetically pre-wired to learn language. The researcher is, hopefully, looking forward to seeing that the study findings will pave the way to the 21st century language acquirers.

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