A DIACHRONIC SURVEY ON THE EVOLUTION OF COMPUTER AIDED TEACHING OF ENGLISH

M.M.Uma Maheswari, Ph.D., Assistant Professor, Department of English and Foreign Languages,

Faculty of Engineering and Technology, SRMIST, Kattankulathur.

Email ID:umamahem1@srmist.edu.in

Abstract

The current pandemic era has made us face problems and the compulsion of devicing solutions. Out of plentitude of stumbling blocks that the pandemic has unleashed on humanity are the issues raised in the educational sector. Humans as typically tool dependent species have been tackling education oriented problems with the help of technology. Attempts are made worldwide to replace physical classroom instructions with online instructions. The distanced teachers and students are brought together by internet and devices. The author, a newly turned virtual teacher of English to tertiary level students has attempted through this paper to position the digital teaching of English in relation with the wider literature and theory of teaching and learning. The researcher has specifically surveyed the literature that focuses on the usefulness of computer technology in language teaching.

Keywords: Second language acquisition research; methods and approaches; computer aided teaching; computational linguistics

Introduction

Second language acquisition research

Language researchers and the teachers turned researchers through their conduct of empirical studies in second language learning paved way for the emergence of a new academic subject called second language learning research or second language acquisition (SLA). No precise date can be

prescribed for the establishment of second language acquisition research. However, there is a general agreement that it took place around the end of 1960s. This period witnessed the emergence of SLA as an area of empirical enquiry.

SLA research renders insights into an understanding of why people learn other languages, how the knowledge of other language is stored and learnt (Vivian Cook, 2008) and on the aspects and procedures that promote learning. From the date of inception, SLA research has evoked several kinds of developments effected by the replacement and refinement of various methods and approaches.

A diachronic survey of methods and approaches in second language teaching

It is evident from the history of language pedagogy that the teaching methods are evolutionary and are subjected to changes. Different ideas about language teaching have emerged, flourished and declined over the years. In the recent years attempts for delineating a single method as the best suited for teaching a language for all learners in all contexts are losing vigour. It has been realized that there was no and probably never will be, such a right method. Researchers and teachers are now focusing on the development of suitable classroom tasks and activities that are consonant with the process of second language acquisition and also with the dynamics of the classroom (David Nunan 1991).

The varied ideas and approaches of teaching share common considerations. A.P.R.Howatt (2004) elucidates these fundamental considerations as the definition of purpose (the language knowledge or ability that the students should acquire at the end of the course) and the process of learning (the formulation of the student's activities that would promote effective learning).

Grammar Translation Method

500 years ago, Latin dominated all aspects of life and it was the language of education, commerce, religion and government in the western world. However, in the 16th century, the political changes in Europe displaced Latin and raised English and French to prominence as languages of spoken and written communication.

Latin ceased to be a 'living language' however the study of Latin took on a different function. The rote learning of the classics of Latin and its grammar became the model for foreign language study

from seventeenth to nineteenth centuries. By the nineteenth century, Latin based teaching had become the standard way of teaching foreign languages. This approach came to be known as the Grammar – Translation Method. Some of its leading exponents were Johann Seidenstucker, Karl Plotz, H.S. Ollendrof, and Johann Meidinger.

Reform Movement : The Grammar – Translation Method faced a gradual but well composed opposition in the mid and late nineteenth century. Increased opportunities for communication among the Europeans led to the emerging need to acquire oral proficiency in foreign languages. Failure of public education system to meet out the demands paved way for the spurt of language teaching specialists like Marcel, Prendergast, and Gouin spelling out varied proposals for teaching. Practical minded linguists like Henry Sweet in England, Wilhelm Vietor in Germany, and Paul Passy in France headed for widespread pedagogical reforms and their effort came to be labeled as the Reform Movement in language teaching.

Ideas proclaimed by this movement failed to receive wide spread support or attention. None of its proposals as pointed by Jack C.Richards and Theodore S. Rodgers (1986) assumed the status of a method in the sense of a widely recognized and uniformly implemented design for teaching a language. However, these principles reflected the beginning of the study of second and foreign languages teaching and learning.

Natural Method

Parallel to the Reform Movement, an interest in the naturalistic principles of teaching language was also attempting to create an impact on the teaching of foreign language. Towards the end of nineteenth century, L. Sauveur (1826-1907)   and other believers in these natural principles utilized the demonstrations and bodily actions to convey a meaning in the foreign language instead of translation or the use of the learner's first language. The method they utilized was referred to as the Natural Method. The emergence of the natural methods led to the development of what came to be known as the Direct Method.

Direct Method

Though the Direct Method proved successful in private language schools, it failed to work effectively in public secondary schools. Over-dependence on the teacher's skills and the failure to

consider the practical realities of the classroom has led to the decline in the use of this method in non-commercial schools in Europe.

Applied linguists started identifying the limitations of Direct Method and urged on the need to develop sound methodological principles that could serve as the basis for teaching techniques. The subsequent developments led to Audiolingualism in the United States and the Oral Approach or Situational Language Teaching in Britain.

Emergence of Audiolingualism

In America during 1940s, the Army Specialized Teaching Program (ASTP) rendered intensive specialized courses for teaching languages to service personnel. The method ASTP followed was Audio Lingual method that incorporated the ideas of Bloomfieldian and European descriptive linguistics (Peter Strevens 1977). It became the dominant language-teaching method of the fifties and the sixties.

This method was based on behaviourist psychology and structural linguistics that were mutually supportive. Behaviourist theory believed that the recurrent exposure to stimulus or stimuli would lead to the reinforcement of the stimulus or stimuli. B.F. Skinner (1957) created a new concept called operant conditioning based on the early theoretical and empirical work of Pavlov and Watson. Through his model, he accounted for learning in terms of the reinforcement of the stimulated consequences or responses.

Language-teaching methodologists like Brooks (1960) and Lado (1964), drew extensively on behaviourist psychology as a means of justifying. Structural linguistic analysis viewed a language as a set of blocks of smaller constituents segmented from linguistic structures and patterns. Leonard Bloom Field (1933), the most noted of the structural linguists, rendered a psychological explanation to the process of language learning.

Audiolingualists demanded a complete reorientation of the foreign language curriculum. "A radical transformation is called for, a new orientation of procedures is demanded, and a thorough house cleaning of methods, materials, texts and tests is unavoidable" (Brooks, 1964). They dismissed the study of grammar or literature and advocated a return to speech – based instruction that primarily focused on oral proficiency.

Situational language Teaching

In 1950, Hornby in the book 'The Situational Approach in Language Teaching.' set out to bring a systematic approach to the teaching of grammar in some ways as a response to the American initiative. However the Situational Approach "was typical of British ELT in its emphasis on the classroom rather on the linguistics of the method, and it stressed two main points: firstly, new grammatical structures should be presented in class in simple situations which made their meaning clear and secondly, they should be carefully graded." (A.P.R.Howatt, H.G.Widdowson, 2004).

In the mid-sixties the principles of Situational language Teaching were subjected to questioning. The functional approaches in the 1970s made it evident that language is not a collection of situationally sensitive phrases like 'How do you do?' or 'May I help you?'

However the method's impact on linguistics could never be undermined as the procedures associated with Situational Language Teaching are continued to be advocated in many current British methodology texts e.g., Jack C.Richards and Theodore S. Rodgers 31

Objections leveled against audiolingual learning theory

Audiolingualism lost its lustre by the gamut of theories leveled against it. For instance the linguists and the teachers are dissatisfied with the over-simplification of the learning as a matter of method: "it is not the method that performs the trick, it is the learner' Politzer (1965).

The principles of audioligualism are centred on the production of linguistic features automatically without reference to the meaning. The learner reproduces, in response to the stimulus rendered by the teacher, a particular 'linguistic feature' (a word, a sound, a sentence pattern) that could be compared to the speech sounds by some talking birds. The teacher reinforces the correct responses. Erroneous responses are corrected as they are considered to have a negative impact on learning. In its approach to errors, audiolingualism believes that the learner's attempt to transfer his native language into the target language causes errors.

This practice method never creates an authentic situation to use the language learnt. Restricted use of cognitive skills in this method, had led to little appeal among the adult learners and the subsequent failure in effecting effective classroom learning. "There was considerable empirical evidence among language teachers that the audiolingual method and its behavioural principles did not

deliver the results promised" (Tom Hutchinson & Alan Waters,42). However, audiolingualism has provided relevant referential points for subsequent thinking and research.

The Cognitive Anti- method

The early sixties saw the rejection of learning effected by the external manipulation of the behaviour of the learner. The emergence of a powerful theory that stressed on mentalistic nature of linguistic knowledge followed the rejection of audio-lingual theory. This theory, supported by empirical research, provided a radical view of the second language classroom learning that came to be known as cognitive anti-method. It equated second language learning with the first language acquisition, and that effective learning of the second language could be achieved by non-interference with the natural process of learning. Newmark and Reibel in the sixties had published a series of articles on this method.

The cognitive theory assigns significance to the role of the learners in language learning. Basing its principles on internal mental processing, it seeks to explain the process of learning as an establishment of knowledge by the learner's existing cognitive system.

The Cognitive Code Method

This method bases its principal assumption on the perception that the awareness of second language rules preceded the use of these rules. The assumption, partly derived from the competence/performance distinction, equates competence with the explicit knowledge of linguistic rules and performance with the practicing their use (Rod Ellis1990). Learners initiate learning with the laying of foundations of their linguistic knowledge and proceed on to perform.

This method denounces the behaviourist theory of externalization of the language learning. It identifies that the mechanical memorizing or mimicking, drilling and pattern practice as tools might lead to language behaviours and not to competence. "Language is not a habit structure. Ordinary linguistic behavior characteristically involves innovation, formation of new sentences and patterns in accordance with rules of great abstractness and intricacy" (Chomsky1966). It encourages the learners to do conscious analysis of linguistic forms with the use of creative and innate abilities to perform. The work of Chastain (1971) renders a detailed description of this method.

Cognitive learning theory delineates the distraction between declarative and procedural knowledge. Knowledge of a language 'knowing that' is declarative. The automated knowledge that is the knowledge involving 'knowing how' is procedural. The progression of learning takes place from declarative to procedural knowledge of the language.

Cognitive theory assigns lack of procedural knowledge as the cause for errors. This is in striking contrast to the behaviorist approach of assigning the errors to the interference of the first language. This theory stresses on the creation of appropriate learning environment and the practical use of knowledge in the authentic communicative situations to reduce the errors.

In its approach to error analysis and viewing of language learning as the internal mental processing rather than as the consequence of a set of repetitive linguistic features, cognitive theory of learning is more convincing than the audio lingual learning theory.

However, the holistic acceptance of this theory is impossible. As Rod Ellis (1990) points out that this theory is problematic in a number of respects. Attempts by applied linguists such as Chastian to equate an understanding of grammatical rules with competence and speaking with performance made no sense. Language instruction cannot be primarily concerned with competence, as the learners should also know how to perform successfully.

 Another problem is related with the ordering and sequencing of linguistic items. This theory is of the view that the second language learning takes place by the incremental process of learning the linguistic items. However, it fails to offer the rationale for ordering and sequencing of the items to be learnt.

 Communicative use of language gaining prominence

Down the time, the claims made for the role of 'communication' in language teaching and learning are diverse. The late 1970's witnessed two different claims in SLA research. The first claim is that enabling acquisition of communication skill in a language would be the objective of teaching that language. It is based on the theory laid down by Stephen D. Krashen based on his research conducted among Hispanic learners of English as a second language in southern California. Whereas the second claim is based on theory laid down by N.S. Prabhu backed up by his school- based project in South India.

Both of them came up with the language teaching proposals; however, they had split opinions in this regard. Prabhu's model proclaims communication as a necessary condition for language acquisition. He   stressed on the student's participation in effecting successful learning. In a more limited sense, Krashen also implies for communication as a means for acquisition and insisted on the role of comprehension in the language acquisition.(A.P.R.Howazatt ,H.G.Widdowson 2004)

The role of Language laboratory in enhancing communicative use of English

Post World War II saw many worldwide changes and new beginnings. One such beginning, the origin of language laboratory, happened in United States of America, (A.P.R. Howatt, H.G. Widdowson. 2004,62). Prior to this period, audio recording and playing equipment was not used in the language teaching. 1950s saw the use of tape recorders in language classroom. But the use of tape recorders in language classroom was not liked and appreciated for several reasons. The primary reason being its heaviness, inaudibility, and mental block the learners had in talking to a machine in the target language, a language they are less proficient in front of other students.

The problem got resolved when each student was given a machine and all the machines of the class were connected up to a teacher's console. Added advantages like the provision of providing a wide range of voices which a teacher couldn't provide all by himself/herself ; the scope of learners listening to their speeches turned the computer as an effecting tool for enhancing listening and speaking skills

1960s marked the origin of language laboratories in Britain. In five years of time that is by 1965, schools and colleges impelled by the newness of machines teaching language, started to install language laboratories. The budget involved in language laboratories installation was huge and efforts were made to justify the money invested in it. Attempts of delineating the laboratories as tools of Audio-Lingual Method were made. Audiolingualism with habit formation theories as the baseline spotted language laboratory as a suitable tool for cultivating pattern practice. Subsequently the intriguing newness and the machine generated excessive drills reduced the appeal of language laboratories and interest in using it. (A.P.R. Howart and H.G. Widdowson 2004)

Language laboratories had a new life when its scope of ability of storing and retrieving learning materials was realized. Along with its library-like features, the use of light weight machines for

recording; easy handling of the equipment; possibility of students using it individually made it popular. Learning materials shifted from practice drills to dialogues and listening tasks.(Julian Dakin,1973)

In continuation of language laboratories turning out to be a meaningful resource of teaching, teachers currently utilize computer as an aid to effect learning. Students have started to utilize computers to hone up their metacognitive, cognitive, and affective learning strategies(Bickel and Truscello, 1996).

However language labs faced criticism for its heavy reliance on specific pre-requisites (Strevens, 1977). The skeptics argued that effective teaching is not dependent on computers. Advocates of computer aided teaching equated computers and internet with a course book, a black-board and declared it as an effective teaching tool that added a new dimension to teaching   (Strevens, 1977).

New facets of computer aided teaching

Dr. Valérie Gauthier has projected in the following lines the utilization of Information Technology in providing a wide range of opportunities to practice the language, particularly English, in real life and cross-cultural settings:

> "….open up to new pedagogical approaches to teaching languages which would include educational technologies not as a substitute to classroom teaching but as a complement to a then more qualitative face to face teaching."

Computer aided teaching is flourishing with the ongoing theoretical and practical research in computational linguistics. Linguistically competent computers with the aid of Machine translation have framed recent knowledge acquisition methods like *hand-coding*, *knowledge extraction from text corpora*, or *crowd sourcing.* Evaluation too has imprints of computer technology; Language testing using computational indices; Document retrieval and clustering applications; Natural language user interfaces; Text-based question answering; Database front-ends; Inferential (knowledge-based) question answering have rendered a new dimension to machine supported language learning

Computational linguistics is widening with the inclusion of diverse subfields of computational

methods like knowledge extraction and summarization methods; sentiment analysis; Chatbots and companionable dialogue agents; emergence of virtual worlds, games and interactive fiction.

The emerging cyber infrastructure for linguistics includes basic corpus manipulation tools; basic database querying techniques; voice-based web services and assistants; collaborative problem solvers and intelligent tutors; and language enabled robots.

Conclusion

It has been realized that teaching with textbook alone would provide the knowledge of target language, but not necessarily the ability to use it for communicative purposes. The need for a new approach to redeem the inadequacy of traditional approaches had initiated the development of a new set of procedures for curriculum framing and classroom pedagogy that include computer technology. In the new approach, the teacher supported by technology evolves as an instigator of language activity, informant and motivator. The current era of pandemic has reinstated the indelible role of computers and internet based devices not only in language teaching but also teaching in general.

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