



Customizing Instructional Design Model For Constructivist Learning Of Second Language

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Abstract

Education sector has witnessed a paradigm shift in the pedagogical process across the globe during the Covid lockdown period as the regular classes came to a halt everywhere. The pandemic accelerated the digital transformation of learning; online education has become a critical pathway to building a more inclusive and accessible model.(Basu,2022). All the stakeholders of educational institutions were deeply worried about this adverse effect and were pining for ways and means for redeeming academic activities without disrupting the Covid protocol. At that juncture, Online education came as a boon; not only for conducting regular classes but also to organize seminars, conferences, vivavorce, refresher programmes, etc., The change is not just in the medium of teaching but also in the approach, curriculum design, implementation, and assessment as well.To achieve the desired outcome an efficient Instructional design is indispensable. This paper explores the efficacy of second language teaching by customizing Instructional Design Model for Constructivist learning. The study was conducted by selecting 300 final year Undergraduate students from various disciplines in a Higher Education Institution in South Tamilnadu. The analysis is developed based on the empirical data collected from the subjects of the study.

Keywords: Constructivism, Instructional design, Language acquisition, interactivity, Digital learning, Outcome based Education.

1. Introduction

There are so many approaches to learning English as a second language both in conventional physical classrooms as well as in Online Classes. It is an accepted fact that Online classes are gaining momentum among the current generation of learners due to various factors.Vandenbosch, as a chief content officer for Coursera, believes that the internet is accelerating a forward-thinking era of education, where learning is not limited to textbooks or confined to classrooms.(Basu, 2022). New Education policy promotes online courses and gives equal weightage to programmes offered by virtual universities. India's NEP 2020 is bolstering the

push for online education, but it is crucial for the Indian government, industry and educators to work in tandem and focus on accessibility. (Vandenbosch, 2022)

The Internet is a major technological advancement reshaping not only our society but also that of universities worldwide. (Volery, 2000) Online courses, unlike the conventional teaching, are expected to be well planned and outcome based. The Internet makes education easier and more convenient, fairer and flexible, cost effective and enjoyable. Instructional Design plays a crucial role in determining the success of the class or course. Need oriented and outcome based learning led to the development of ID. The growth of instructional design (ID) has occurred because of direct-needs, problems and goals from society.(Dijkstra,1997) Teaching is no more just an act of transacting content, but expected to bring desired behavioral changes. The discipline of instructional design is concerned primarily with prescribing optimal methods of instruction to bring about desired changes in student knowledge and skills.(Reigeluth, 1983)

2. Issues in Language Learning

The approach to second Language learning in schools in our country can be said almost as 'rote learning'. 'English' has been looked at as an alien language which has a completely different system of grammar and pronunciation. It has been learnt by repetition and not by comprehension. Bilingual approach to second language learning sometimes leads to confusion as the learners always try to comprehend things in the light of the first language. Online learning leads to direct learning and discovery learning. In this approach the learners explore and discover new ideas and concepts and learning becomes insightful. According to constructivist philosophy learners actively construct their own knowledge from their own reflections on current or past knowledge. The learners work independently and try to learn by their own efforts.

3. Instructional Design and suitable learning theory

Design of Instruction is always based on some learning theories according to the purpose and expected outcome. The practice of instructional design must be based on some concept of how people learn and what it means to learn, (Duffy, 1992) Of the various approaches to teach English as a second language, the Constructivist approach is more appropriate for Online language learning as this approach emphasizes learners' role in acquisition of skills and knowledge by the learners' themselves from their past knowledge and skills. A constructivist theory of discourse processes portrays readers and writers as building, shaping, and elaborating meanings when they understand or produce texts.(Duffy, 1992) This theory emphasizes learners' responsibility in knowledge construction. The theory of Constructivism describes knowledge as temporary, developmental, nonobjective, internally constructed, and socially and culturally mediated. (Fosnot, 1996, p. ix).

4. ID and Second Language Acquisition

First language acquisition is a natural unconscious process, but the second language acquisition is a deliberate, more conscious one, and always made in comparison with the knowledge of the first language. English. Second-language acquisition assumes knowledge in a first language and encompasses the process an individual goes through as he or she learns the elements of a new language, such as vocabulary, phonological components, grammatical structures, and writing systems. (Robertson & Karen Ford, 2008). Learners in India stick to the colonizers language even after several decades of political freedom because it has been the medium of instruction in schools and colleges and an official language as well. Most of the learners use translation methods or bilingual methods for learning

In spite of several years of learning English in schools and colleges, achieving communicative competence in the second language remains a major challenge to students in India due to various reasons. The learners use English as an intermediate language to gain their subject knowledge and always depend on the first language to support comprehension. The main advantage of Online learning is that it facilitates better acquisition. Interactivity and various modes of chats keep them engaged. There are various user-friendly tools and provisions which may help to overcome the hurdles and achieve the desired outcome. As far as language skills are concerned, Unlike teaching language in traditional classes, Online mode of learning is empowered with versatile multimedia materials and sophisticated software for practice and assessment. It pays way for independent and self learning. Constructivist learning with the help of well planned ID learning language becomes a fruitful and enriching experience. ADDIE is a popular ID model used for Instructional design. It has flexible guidelines that help the instructional designers in building an effective support tool in five (5) phases called Analysis, Design, Development, Implementation and Evaluation (Ahmed, 2013) In the proposed study ADDIE is used with small modification for achieving the desired outcome. The impact of the process is recorded and analyzed to find the effectiveness of the approach. Thus, a questionnaire was prepared to observe and analyze the opinions of the subjects to find the impact of online language learning using constructivist's approach.

5. Digital Equivity and Mobile Phone

One of the major complaints against Digital learning practices emerged after the ICT revolution is the digital divide. Countries like India are in the beginning phase of digital education and yet to develop adequate digital infrastructure to offer online education to the entire population. But during the Covid lockdown period all educational institutions made it indispensable to attend classes online. Mobile phones with android became an essential gadgetary for learning. Mobile devices such as laptops, personal digital assistants, and mobile phones have become a learning tool with great potential in both classrooms and outdoor learning.(Sung, 2016) This generation learners are more comfortable

with these devices. Even in economically backward areas learners possessed mobile phones and the government provided free data for some time for the purpose of attending online classes.

6. Method

Constructivism is considered as a fruitful approach for digital learning because learners are given scope to construct their own knowledge by actively participating in the learning process. . Constructivist learning occurs when learners actively create their own knowledge by trying to make sense out of material that is presented to them.(Reigeluth, 1999)In this study application of Constructionist's approach using FPDDE model for the Second language development was measured using survey questionnaire with the help of Likert scale in which the respondents can chose answers from a five point scale; strongly agree, Agree, Disagree, Strongly disagree and Neither agree nor disagree. The statements in the questionnaire pertain to different phasesof the FPDDE Model. The participants' responses reveal the impact of this model of instruction design.

7. ADDIE Model to FPDDE Model

The ADDIE model developed by Dick and Cary in 1978 and Russell Watson revised in 1981, and was considered essential in the development of educational and training programs . (Ganesan and Muruganantham, 2015). It is a popular model considered as fruitful in many instructional designs. In the present study, the model is customized as explained below for the purpose of teaching a second language using Learning Management System (LMS) both in synchronous and asynchronous mode.

1. Phase 1 F - **Finding** the knowledge gap and skill gap to achieve the desired goal. Focus of the Instructional Designer is on what actually the learners need and what is their present level of knowledge and skills. As this is constructivist learning, the learners themselves initiate interactions to reveal their need and to find what is lacking in them.
2. Phase 2 P – **Planning** is required for choice of appropriate material, mode of delivery and effective instructional strategy. Nothing is fixed here; if a content or method is not satisfactory, the learners can change them after discussion with the facilitator. As Digital sourcesprovide plenty of resources in various forms, the learners themselves choose content and verify its relevance and effectiveness with the facilitators.
3. Phase 3 D – **Delivering** content in flipped method using Constructivist's approachAcquisition of language skills by means of practice and interactions with fellow learners. Formative assessment facilitates verification while learning. The learners become aware of the knowledge gap and try all possible means to achieve the goal.
4. Phase 4 D – **Developing** knowledge from past experience and past knowledge compelled by contextual necessity and also by Discussions which promotes various levels of interactivity. more internalization of knowledge will take place at this phase
5. Phase 5 E –**Evaluation** with more scope for self evaluation and correction

8. Application of the ID and Outcome

FPDDE ID Model is applied for Second language learning. Based on the analysis of the target learners, content and its form is decided because it plays a crucial role in deciding the desired outcome. In Constructivism, content is not a fixed one, the learners must be instructed on requirements based on knowledge gaps. They have more options to choose or change content by ensuring the desired outcome. Learners are the first element we consider because the outcomes, activities, and assessments are designed for them. (Cennamo, 2018) The learners must be provided with situations to find what is lacking in them what should be their desired goal

S. No.	Statement	Strongly agree	Agree	Disagree	Strongly Disagree	Neither Agree nor Disagree
1.	Content is not fixed and learners have choice and freedom to select in order to achieve the course outcome.	212	58	0	0	30
2.	Diagnostic testshelp me toknow my strengths and weaknesses.	220	50	0	0	30
3.	Learners are aware of the outcome of their learning	230	56	0	0	14
4.	Learners understand the knowledge gap and also know the efforts needed their side to achieve them	215	60	0	0	25

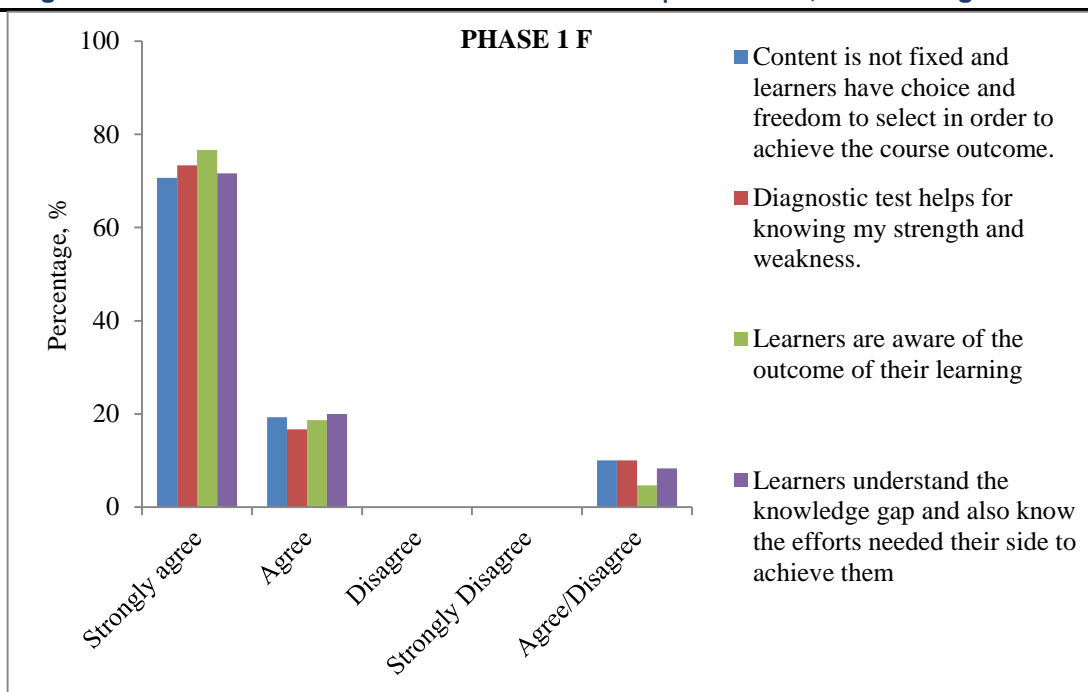


Fig.1

Learners' responses from Phase 1 of the ID Model confirm the application of constructivism in the language acquisition process. Learners have freedom in choosing learning resources. there is no fixed text or medium. Learners were made aware of their knowledge gap in this phase and also their objective of the learning was clear to them. very few responses were vague in the above said aspects.

After becoming aware of the knowledge gap, with the help of the content specifications the learners search for content on the internet. Learners with a first language medium background have problems in comprehending content in the target language. Their preference is for a bilingual medium. They are capable of searching and finding such content in the beginning to cope with the learning process. knowledge level and learners experiences are not the same to all the learners. Knowledge can be built according to their interest and need.

Phase 2

Planning Pedagogical process, Choice of appropriate material, mode of delivery and effective instructional strategy

S. No.	Statement	Strongly agree	Agree	Disagree	Strongly Disagree	Neither Agree nor Disagree
1.	The Internet provides plenty of content and in different modes, for ex. Audio, graphics, video, text etc.,	180	51	20	9	40
2.	The Internet provides access to language skills development materials anytime, anywhere and at one's own pace.	20	160	10	12	98
3.	Non-linear content promotes extensive and intensive reading .	200	60	5	7	28
4.	Content is flexible and prepared with students' involvement.	130	130	5	6	29

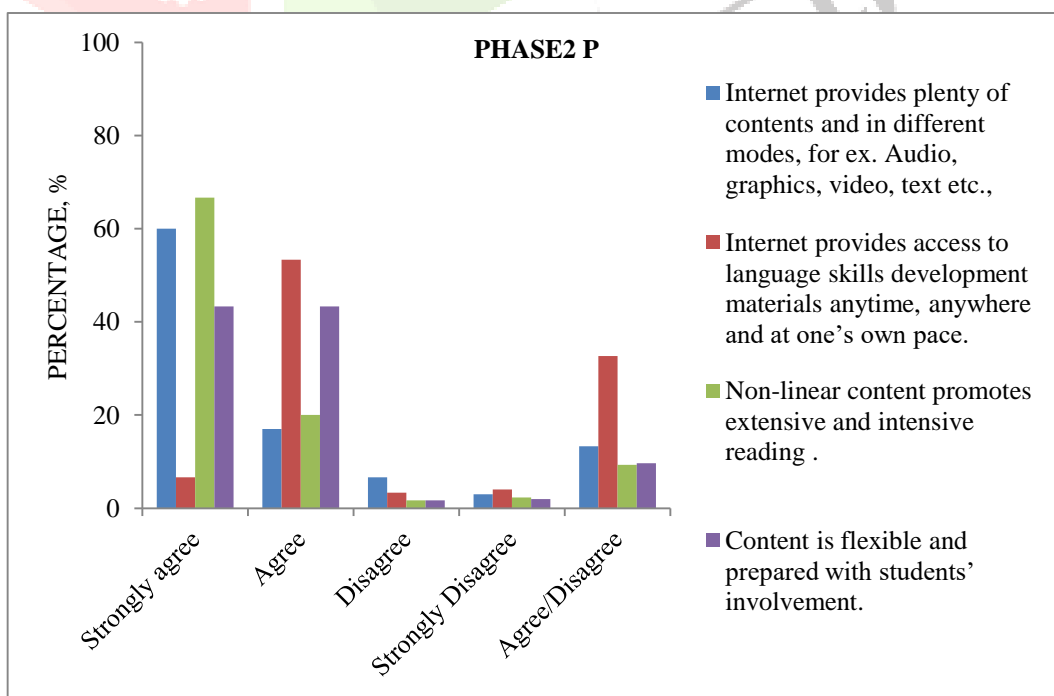


Fig.2

Nonlinear content provides flexi material and facilitates dynamism of learning resources. Learners agreed that they could access them from anywhere and at their convenient time. In conventional learning the text and lectures were monotonous resources, whereas in digital learning multimedia contents are more appealing. But nonlinear content has the problem of fixing time limits. learners sometimes get diverted from their actual purpose. Thus, managing resources is a major challenge for the digital learners.

Phase D – Delivering content is not a one way task in flipped method using Constructivist’s approach. Interactivity at the level of Teacher- learners, among peer group, material and learners, material and material etc., lead to the enrichment of learning tasks. In the process the learners construct their own knowledge. The learners do not depend on digital content completely but on their past knowledge and experience and they build knowledge by themselves.

S. No.	Statement	Strongly agree	Agree	Disagree	Strongly Disagree	Agree / Disagree
1.	Online content and flipped method promote interactivity	20	160	10	12	98
2.	Multimedia learning facilitates for Constructivist’s approach to learn the second language	200	60	5	7	28
3.	Learners construct their knowledge using flipped method	130	130	5	6	29
4.	Learning becomes learners’ centric with interactivities at different levels	120	110	20	10	40

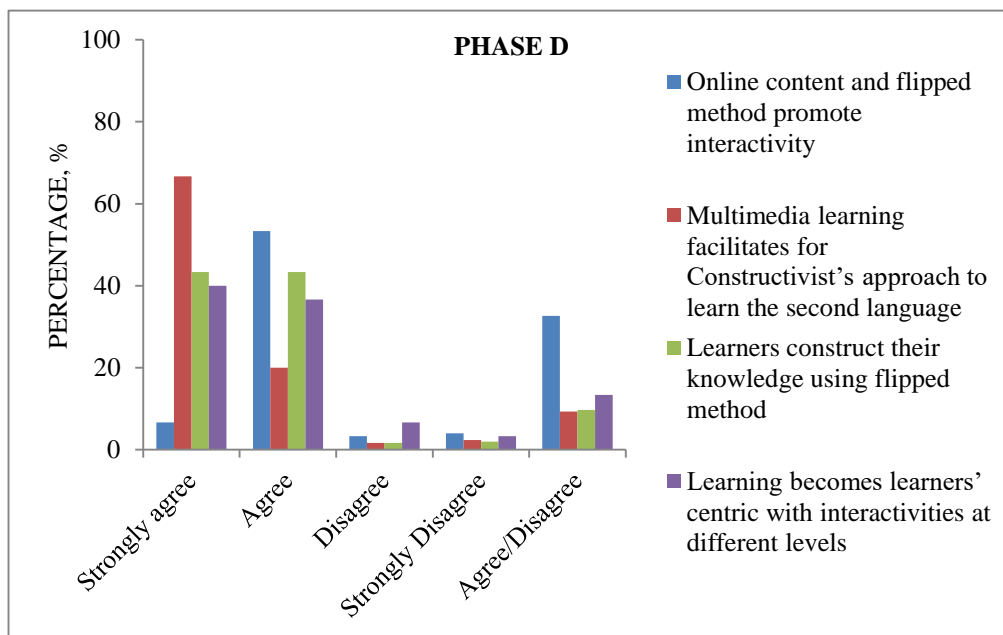


Fig. 3

4. Phase D – Developing knowledge from past experience and past knowledge compelled by contextual necessity and also by Discussions which promotes various levels of interactivity.

S. No.	Statement	Strongly agree	Agree	Disagree	Strongly Disagree	Neither Agree nor Disagree
1.	Interactivity is the source of knowledge development	220	60	5	5	10
2.	Teachers facilitate learning by understanding students better.	180	80	4	6	30
3.	Multimedia provides non-linear content which enhances interactivity and engagement.	160	120	4	4	12
4.	Learning becomes authentic as it is from learners' past experience	120	140	5	5	30

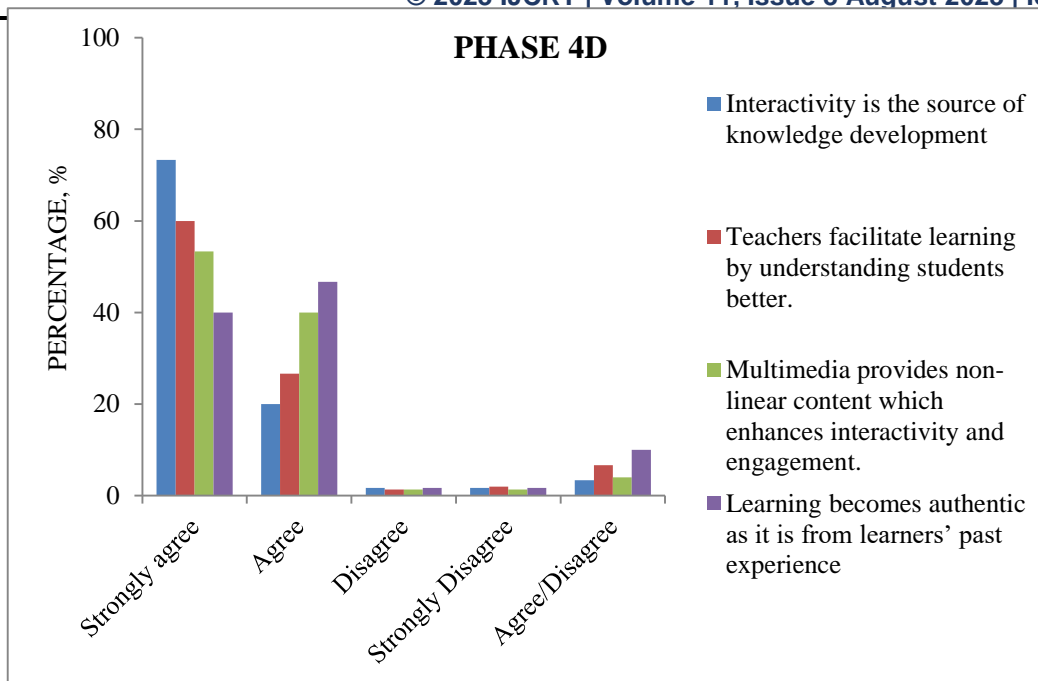


Fig. 4

Most of the participants agreed that digital learning provides scope for interactivity and the breadth and the depth of the subject increased by interactivity.

5. Phase E –Evaluation with more scope for self evaluation and correction. Formative assessment can be conducted during delivering content in order to verify the effectiveness of the programme and summative assessment is conducted at the end of the programme. Evaluation is not conducted to measure the knowledge potential of the learners but it is an exercise of self correction and improvement. The respondents mostly agreed that this kind of evaluation increases learners' accountability; instead of passing judgment on their performance. When the learners become aware of their weakness, they try to overcome it with great involvement and committment.

S. No.	Statement	Strongly agree	Agree	Disagree	Strongly Disagree	Neither Agree nor Disagree
1.	Self evaluation, which is encouraged in this approach, increases learners' accountability.	160	125	3	3	9
2.	In this approach, Learners themselves identify their weakness and are able to correct them	170	115	5	1	9
3.	Online learning promotes collaborative learning.	190	80	5	5	20
4.	Constructionists' approach to thesecond language acquisition is fruitful.	180	99	6	5	10

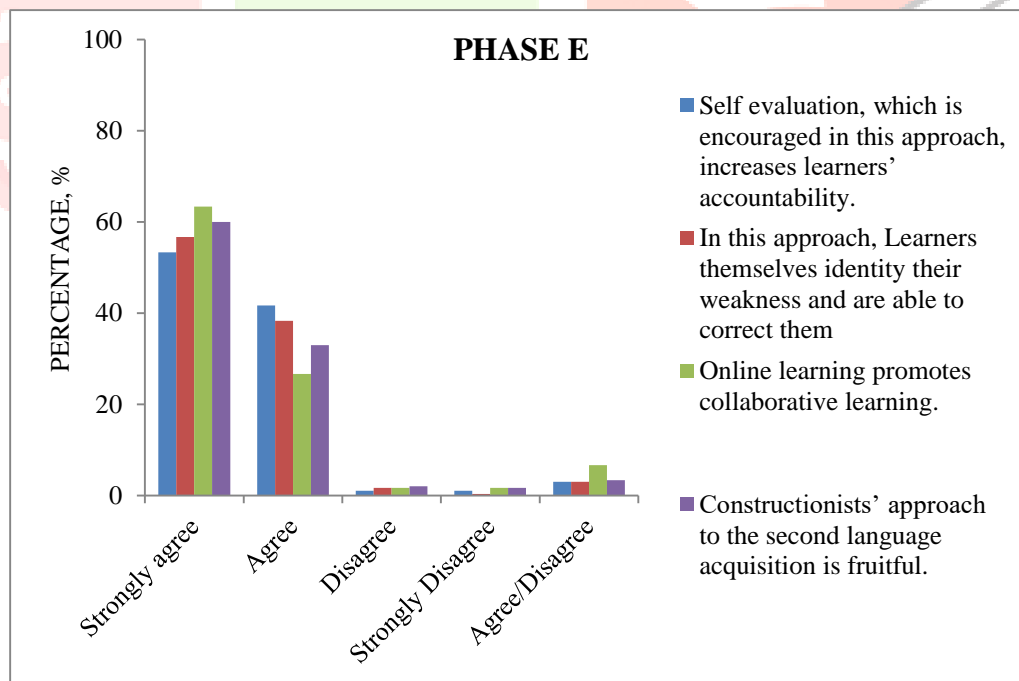


Fig. 5

Learners were subjected to six stages of language acquisition as per Robertson's model using constructivist's approach. Activities in every stage are integrated with the constructionist's approach. It was noted that there could not be a fixed duration for achieving the total outcome of the study. It depends on various factors like learners 'involvement, instructional design, learning environment and infrastructure, etc., Jim Cummins, Catherine Snow, Lily Wong Fillmore and Stephen Krashen have studied this topic in a variety of ways for many years. The general consensus is that it takes between five to seven years for an individual to achieve advanced fluency. This generally applies to individuals who have strong first language and literacy skills. (Robertson & Karen Ford, 2008).

Summation

It is revealed from the survey that Constructivist-based approach prompts learners to identify their own need and to choose the content themselves from the internet according to their interest and competency level with teachers as facilitators. In this approach, the learners' decide the outcome by allowing individualized practicing of the language skills using various internet tools. In this study the outcome of Constructionist approach using FCDDE model for the Second language development was measured using survey questionnaire.

Thus, the advent of online teaching and learning has made education learner centric and brought tremendous changes in the outcome based desired skills and knowledge acquisition process of the learners. Especially in learning English as a second language, Multimedia widens the scope of enhancement of LSRW skills with innovative internet tools and enhanced learners' independence. Scope for various modes of interactivity in online learning breaks the communication barriers and learners' inhibition and promotes authentic participation in the learning process. Language skills pertains more to psychomotor domain as language operation involves physical movement, coordination between spoken, written and physical movement which can be covered in video conferencing and online classes as well. The above tested ID model facilitates learners ' learning dynamism and enables them to achieve the desired outcome.

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