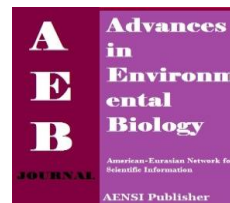




AENSI Journals

Advances in Environmental Biology

ISSN-1995-0756 EISSN-1998-1066

Journal home page: <http://www.aensiweb.com/aeb.html>

The designing and production a model to design the learning environment with motivational approach in speech dysfluency

¹Zahra Jamebozorg and ²Mohammad Salimi

¹PHD in Instructional Technology, Kermanshah University of Medical Sciences, Kermanshah, Iran

²Master of Speech Therapy, Kermanshah University of Medical Sciences, Kermanshah, Iran

ARTICLE INFO

Article history:

Received 15 April 2014

Received in revised form 22 May 2014

Accepted 25 May 2014

Available online 15 June 2014

Key words:

Design, Motivation, Learning Environment, Dysfluency, Intervention

ABSTRACT

The design of motivating and organized learning environment leads into meaningful and quality learning of the learners. The arrangement of suitable elements in learning environment can be a driving force to increase the learning excitement, self-arousal, self-recognition and intrinsic control. The design of learning environment with such characteristic to support people with special needs namely dysfluency is necessary. The lack of self-confidence, lack of motivation, mocking in educational environment, not enjoying the classroom, different learning styles and etc prevent the participation of these people in learning-teaching process. The current study aimed to present a model for designing the motivational learning environment to attract active participation in learning and eliminating the problems of these people. The current study was done qualitatively by investigating and translating the various resources and by the analysis of the existing models attempted to present a model to increase the motivation of the dysfluent patients and their participation in learning and eliminating their problems. The design of the interactive environment, guided the learners without motivation and with disorders from the margin to the center of learning. The learners with special needs are the ones their differences and deviations (e.g. sensory, mental and behavioral) from the moderate level are proved by the observations of the parents, teachers and various tests and to develop the potential talents require special services and education. The classification of the people is including intelligence deviation, sensory dysfunction, communication disorder, behavioral abnormalities and movement problems. Dysfluency is a set of communication disorders. It is a state in which a person speech is changed in terms of time speed and rhythm. The motivation in speech impaired people keep them interested to respond their needs and the learning attempt level increases more and when they are satisfied with their work, the disorder is improved. The challenge is finding special strategies to increase the motivation of the people and required instruments to keep the motivation. The therapists should analyze the motivation situation for creating the motivation and perform the motivation strategies based on the analysis. Keller in the summary of motivation studies presented an applied model to design the motivational learning environment. Attention, relevance, confidence and satisfaction are four dimensions of Keller model. This model presented suitable strategies for designing the motivational learning environment but they are not enough. To improve motivation skills in learning-teaching environment, we should performed design-based and applied researches. The design-based researches should be encouraged in various institutions to modify the new models of production and test and some attempts should be made to be informed of the important role of motivation in learning-teaching process namely special education.

© 2014 AENSI Publisher All rights reserved.

To Cite This Article: Zahra Jamebozorg and Mohammad Salimi, The designing and production a model to design the learning environment with motivational approach in speech dysfluency. *Adv. Environ. Biol.*, 8(9), 1007-1013, 2014

INTRODUCTION

Human being brain is obsessed with learning and its survival depends upon it. Application of learning-based structures in education and the design of learning environments based on thinking and motivation lead into meaningful and quality learning of the learners. The arrangement of suitable elements in learning environment can be a drive force to increasing the learning excitement, self-arousal, self-recognition and internal control [5]. Mourd showed that learning skills including sub-groups as communication, motivation, reinforcement, questioning, classroom management skills are raised. The teachers talk of the skills to facilitate learning, some skills to reinforce learning environment and other skills as good interaction between the learner and teacher. The skills improving the motivation of the learners and cause that they help in deep learning in a

Corresponding Author: Mohammad Salimi, Master of Speech Therapy, Kermanshah University of Medical Sciences, Kermanshah, Iran.
E-mail: mohamadsalimi@gmail.com

wide context of knowledge and exercise being obtained by the reinforcement of motivation levels of the learners [1]. This issue about learning conditions for human being with normal learning capabilities is considerable. When we discuss about the people with special needs, the design of motivational learning environment will have another meaning. The lack of self-confidence, the lack of motivation, mocking in educational environment, the lack of enjoyment of class rooms, different learning style, etc prevent the participation of the people in learning-teaching process. Thus, the design of motivational learning environment for people with special needs is necessary. The learners with special needs are the ones their differences and deviations (e.g. sensory, mental and behavioral) from the moderate level are proved by the observations of the parents, teachers and various tests and to develop the potential talents require special services and education. The classification of the people is including intelligence deviation, sensory dysfunction, communication disorder, behavioral abnormalities and movement problems. Dysfluency is a set of communication disorders. It is a state in which a person speech is changed in terms of time speed and rhythm. These people due to having problem in expressing the words can not communicate with others and the design of good learning environment consistent with their abilities and capacities and increasing the learning motivation to eliminate their problem is useful. The environment control, controlling serious periods, stability of fluency and final improvement are intervention stages to help the speech impaired people [10]. The design of motivational learning environment helps an individual mind to be distracted from stuttering during learning and creates a tension free morale for learning and practice and it reduces the dysfluency. The current study aimed to design a motivational learning environment for dysfluent people.

Speech and speech therapy:

The language for the development of reasoning, mental and emotional aspects of human being are necessary. Any damage to speech and language function prevents communication and fulfilling the emotional and physical needs. This creates behavioral abnormalities and the lack of consistency of an individual with the environment. Language is the set of orderly signs being applied for communication. Music, sign language, writing and speech are the examples. Speech is the state a person applies phones for communication. Speech therapy is the science being applied for evaluation, diagnosis and treatment of speech and language disorder. The important factors in the development of speech and language are intelligence, healthy hearing, gender, healthy environmental mechanism of speech (e.g. language, lip, gorge and palate), suitable speech environment, encouragement and motivation. A natural speech is consisting of five characteristics:

- Language: A natural speech should have mental support to be perceived by the audience.
- Articulation: The speech should be natural in terms of articulation and arrangement of the voices.
- Fluency: The natural speech is expressed fluently, it is expressed naturally in terms of the speed and time of articulation of the words and sentences and it is natural in terms of rhythm
- Voice: When a speech is good from the voice and consistent with the age and gender, the speech is natural.
- Prosody: A natural speech is suitable in terms of intonation, perception and tone.

When each of the give characteristics is faced with disorder, the speech and language disorder is occurred. There are various factors in these disorders as the most important ones are including:

- Physical and structural reasons including jaw and teeth abnormalities, palate cleft, etc
- Neural-motor reasons
- Neural-perception reasons
- Intelligence problems
- Hearing problems
- Environmental issues (hereditary environment)
- Emotional issue

The outcomes of speech and language disorder:

Based on the importance of speech and language in communication with others, it is obvious that a person with speech and language disorder is faced with various problems and the outcome of these disorders is inadequacy and problem of social consistency, emotional problems, etc. The most important disorders are explained later.

Language disorder: The language disorders are formed in four types of the lack of achievement, achievement with delay, achievement with the lack of skill and losing the speech. The first three cases are observed among mentally retarded, deaf people and individuals suffering from cerebral palsy and mental disorder of some children such as autism.

Losing speech is called aphasia and it is two types: developmental and non-developmental. The major reasons of aphasia are the damage to language region before, during and after the birth, brain tumors, and infection such as meningitis, encephalitis and coronary diseases.

Articulation disorder: Articulation is the trend in which the speech organs by blocking the air exit produce the voices. Some of the factors of articulation disorders are including physical and structural abnormalities such

as cleft palate, jaw and teeth abnormalities, etc, neurological disorder, mental retardation, hearing disorder and environmental disorder.

Articulation disorders are substitution (substituting a voice instead of another one as /k/ instead of articulating /k/ in the word book, /t/ is substituted /tetab/, omission of one voice or more as articulating adio instead of radio, such as saying /s/ labiodentals lisp, addition like adding one voice to a word.

Dysfluency: It is one of the most common speech problems in which the speech is changed in terms of speed, language and intonation in rhythm. One of them is stuttering being observed as repetition, extension, interruption of voice and pause. The stuttering person uses blinking eyes and moving the hands and legs during speaking. Stuttering is most seen during 3-8 years old. The reasons are superiority disorder, hereditary, environmental factor as the major reason of stuttering.

Dysphonia: A natural speech should be good in terms of phones and consistent with the age and gender. In dysphonia, a person voice is harsh or it is raised or fell unnaturally and the voice pitch is changed.

The reasons of dysphonia: Functional reasons, organic reasons changing the contact of vocal cords or the change of thickness of vocal cords.

Different kinds of dysphonia: vocal cord nodules and polyps, vocal cord thickening, larynx tumor, gland problems and vocal cord paralysis and etc.

In the past speech or language pathology or speech therapy were less common in the society and due to the low information of the families, the existing limitations in the society and limited access to speech therapy specialists, most of the people with speech and language disorder were not treated and they had many problems in adolescence and adulthood. Today, speech therapy specialists with the considerable progress had their role in improving the health level of the people and could eliminate the concerns of the people suffering from the disorder and their families. The current study recommended the design of motivational learning environment during the treatment with these people namely the dysfluent people.

Motivational learning:

Motivation is a person interest to do some tasks or the field in which a person is goal-oriented [2]. Motivation is two types: Intrinsic and extrinsic. The intrinsic motivation is internal reasoning and tendency to do a task while extrinsic motivation is the external reward a person receives for the task [3]. Motivation is an intrinsic process or self-suggesting, guiding condition for a special behavior. In other words, it is a goal-oriented proces guiding people to some behaviors. Any person has some motivations for his behaviors. The teachers before considering the motivation locus are concerned about the feeling that is the product of motivation in an individual. Because they are interested in learning and exact perception of learning drive factors in the learner. The benefit of motivation for learners is such that they enjoy their studies and it leads into continous learning and better remembering. Although via external factors as score, money and a paosition of learning, the learners are encouraged to learning, we need a holistic and effective education based on intrinsic motivation to improve the learning level [11]. The motivation of the learner is improved when he feels what is learnt is applied and of great importance and intrinsic rewards are created for learning in this way. The individuals with intrinsic motivation are involved not for external motivation factors but for the activity itself. The improvement of the motivation in people with special needs help them to be turned into continuous and self-regulating learners. The motivation in speech impaired people keep them interested to respond their needs and eliminate their problems and learning attempts are made more and when they are satisfied with their work, the speech is improved. Their learning behavior is reinforced by motivation. The great challenge is finding the special solutions to improve the motivation of these people and required tools to keep the motivation. The intervention experts should analyze the motivation situation to create effective motivation and present the related motivation strategies based on t eh analysis. The current study presented the solutions for design of controlled and motivation leaning environment.

The design of motivational learning environment:

According to constructivism, an active, goal-oriented, orderly learner achieves his personal knowledge via discovery and search in effective learning environment. In a learning environment, learning styles, learning goals, knowledge achievement process and learning of the learner are considered and learning control is dedicated to the learner himself [4]. Making the learner active is dedicated to considering motivation issues during the learning. Keller in the summary of motivation research presented an applied model to design learning environment. The mentioned model is a perspective model describing the work method briefly. ARCS motivational model is consisting of four factors. The first factor (A) is the first world of Attention, second factor (R) is the first word of Relevance, the third factor (C) is the first world of Confidence and the fourth factor (S) is the first world of Satisfaction [7]. This model is an organized, 10-stage approach to design motivation techniques in learning-teaching environment. At first, based on the initial analysis of the learner and existing conditions, the motivational needs are defined. In addition, it provides a guidance to select the motivational techniques. The motivation needs and the related techniques are based on motivational factors and dimensions.

These four aspects are including attention, relevance, confidence and satisfaction [7]. Each of the four factors is consisting of some subsets. The key questions are raised as following:

- ✓ Attention
 - Perceptual Arousal (A1): How the learner is getting interested?
 - Inquiry Arousal (A2): Research and discovery is aroused in the learner or how we can arouse the curiosity feeling of the learner to be involved in the research?
 - Variability (A3): How we can attract the attention of the learner and then improve it?
- ✓ Relevance
 - Goal orientation (R1): How the goals of the learner is defined and discovered, how his needs are met?
 - Motivation matching (R2): When and how the learner is prepared with the requirements, selection, responsibilities and effect on key points of learning process?
 - Familiarity (R3): How the experiences of the learner are related to the learning?
- ✓ Confidence
 - Learning requirements (C1): How the learner is encouraged to positive thinking to the success in work?
 - Success opportunities (C2): How the learning experience can support the belief of the learning to learning abilities?
 - Personal control (C3): How the students find that their success was due to their attempts and abilities?
- ✓ Satisfaction
 - Natural consequences (S1): How meaningful opportunities are provided for the learners that they use their new acquired knowledge?
 - Positive consequences (S2): What reinforces the success of the learners?
 - Equity (S3): How we can help the learner to have positive feeling to his successes?

Mayer believed that the learning in self-regulating learning environment have more intrinsic motivations compared to the teacher-regulating learning environment and have high self-confidence. According to Mayer, all the external inputs for creating motivation in learners pass the intrinsic and integration process and lead into the formation of intrinsically aroused learners. This point defines that any question raised or any solution taken in accordance with ARCS model should be self-oriented and it causes high level of intrinsic motivation [9].

Objectives:

General:

- 1- The design of a model for the design of learning environment with motivational approach in dysfluency
- 2- Producing a model to design learning environment with motivational approach in dysfluency

Specific:

- 1- The determination of a model design elements to design learning environment with motivational approach in dysfluency
- 2- The determination of a model production elements to design learning environment with motivational approach in dysfluency

Method:

The current study was a qualitative design. It was conducted in two phases: In the first phase, after the analysis of the need, the data was collected to design the model. By the survey of the models and theorist a local model in accordance with the existing need to induction method was designed to make a model for learning environment with motivational approach in dysfluency. In the second phase, production stage, by interview, comments of the experts were studied and were applied in the model. In this study, in the first phase by census method, all the existing educational design models were selected. In the second stage, 10 experts were selected randomly from the list of the names and their comments were considered in model modification.

Findings:

The recommended model: The design of motivational learning environment for dysfluency

In a learning environment, the reactions of learners to motivational behavior of the teacher were manifested by various forms and their control is difficult. If the learner is a dysfluent person, it is more difficult. These people due to the difficulty in speech have less participation motivation in learning and communication. Thus, to increase their motivation, we should make our approach based on the current condition of the learners' motivation and it is different from one person to another and from moment to another. After the identification of motivational situation of the learners, we should use suitable motivational behaviors and it is different from one person to another and from one moment to another. Finally, based on the results, we can apply strategic decisions and select motivational techniques and present in accordance with the need of each learner. Is it impossible? Applying ARCS model as the main factor of the design of such environment presents logical discipline to any learner and in accordance with the definite and controlled components take the required

measurements. ARCS model benefited the motivation function method in learning environment and performs it. Any learner to obtain skill in the design of learning environment for dysfluent people can improve the motivation skills among the learners in three stages. The first stage is acquiring knowledge about “what gives motivation to motivational learning variables of the learners in ARCS model”. The second stage is repetition and practice regarding “taking motivational behavior and motivational modeling in learners”. The third stage is the summary and conclusion” by review, discussion and feedback strategies”. To empower the learners, applying simulated computer environment is recommended.

Before any intervention, we should do the following:

- The learning environment should be identified.
- The learning environment should be analyzed in terms of weaknesses, strengths, opportunity and threats.
- The main problem should be defined.

If the learning problem is a motivational problem, the following model can be applied to increase the motivation level:

- *Stage 1: Collecting motivational information:* Collecting information about effective variables on the motivation of the learners is an important step in the initial stage. The previous data were including the general reports about the learner and the views of the experts being in touch already with the learner. The information of current condition was the result of the observation and the investigation of the learner in learning environment and talking with him. The information of observation, investigation and discussion were related, reliable and were taken into more attention.
- *Stage 2: The analysis of motivational situation:* The second step in the evaluation of the motivation of dysfluent people is the analysis of information. The most effective factors being analyzed by two methods should be defined: one analysis depth and another field. The analysis of the collected data via the writing of learners and view of the experts forming the previous data had better efficiency to determine the relevance, confidence and satisfaction but determining the attention of people mostly is based on the current exact time condition.
- *Stage 3- Determining the strategy in accordance with Keller model:* After the data collection and the data analysis, the motivation level of the learner is judged. It is recommended that the learners and designers of learning environment select motivational strategies and use them to keep an acceptable level of motivation in the learner and they should avoid extreme and wrong tasks as using extra or limited strategies (Keller, J. M., & Song, S. H). Arrangement as using a set of verbal and non-verbal behaviors to give motivation to people in ARCS framework. For example, a person at first should consider learning and teaching. Thus, the increase of attention (A) should be on the priority. To keep the attention level, a person should know the learning environment relevant (R). Therefore, the task of the teacher increases the confidence level (C) in learning environment and it has the general satisfaction of the learner (S).
- *Stage 4- The evaluation of motivational values:* The prevalent motivational values are evaluated. In this stage, the motivation level, the design techniques and their order and the effect of these stages on the motivation of a person are evaluated. When the teachers understand the reason of considerable factors during the analysis, the omission or reviews of these stages are necessary. Finally, the learners shouldn't do motivational practices only based on the current condition of motivation and practices and it should be based on learning content and learning environment atmosphere.
- *Stage 5- Feedback:* The response of a person to the techniques and strategies define the feedback of the attempt of the teacher for intervention in improving the motivational level of a person. Using the techniques, verbal and non-verbal behaviors are other key components. The therapists and teachers can provide a list of motivational behaviors and levels and select in communication with the learners and take a suitable behavior based on the motivational behavior level. These behaviors can change the motivation level of the learner and create different motivational level in a person to the current condition.
- *Stage 6- Motivational behavior:* The changed behavior of a person can include view line, appearance, sitting type and participation in discussion. The stages in this model are not adequate for graduate improvement of the motivation of dysfluent learners. After the initial behavior, the repetitive practices are started by motivational modeling and the new motivational situation is defined via the present changed information as the learner behavior and participation method in learning environment. The design of this motivational environment helps the learners to improve their performance and acquire new motivational skills.
- *Stage 7- Learning environment conditions:* The learning environment should be directive, supportive and encouraging otherwise the model is not in the environment without such conditions.

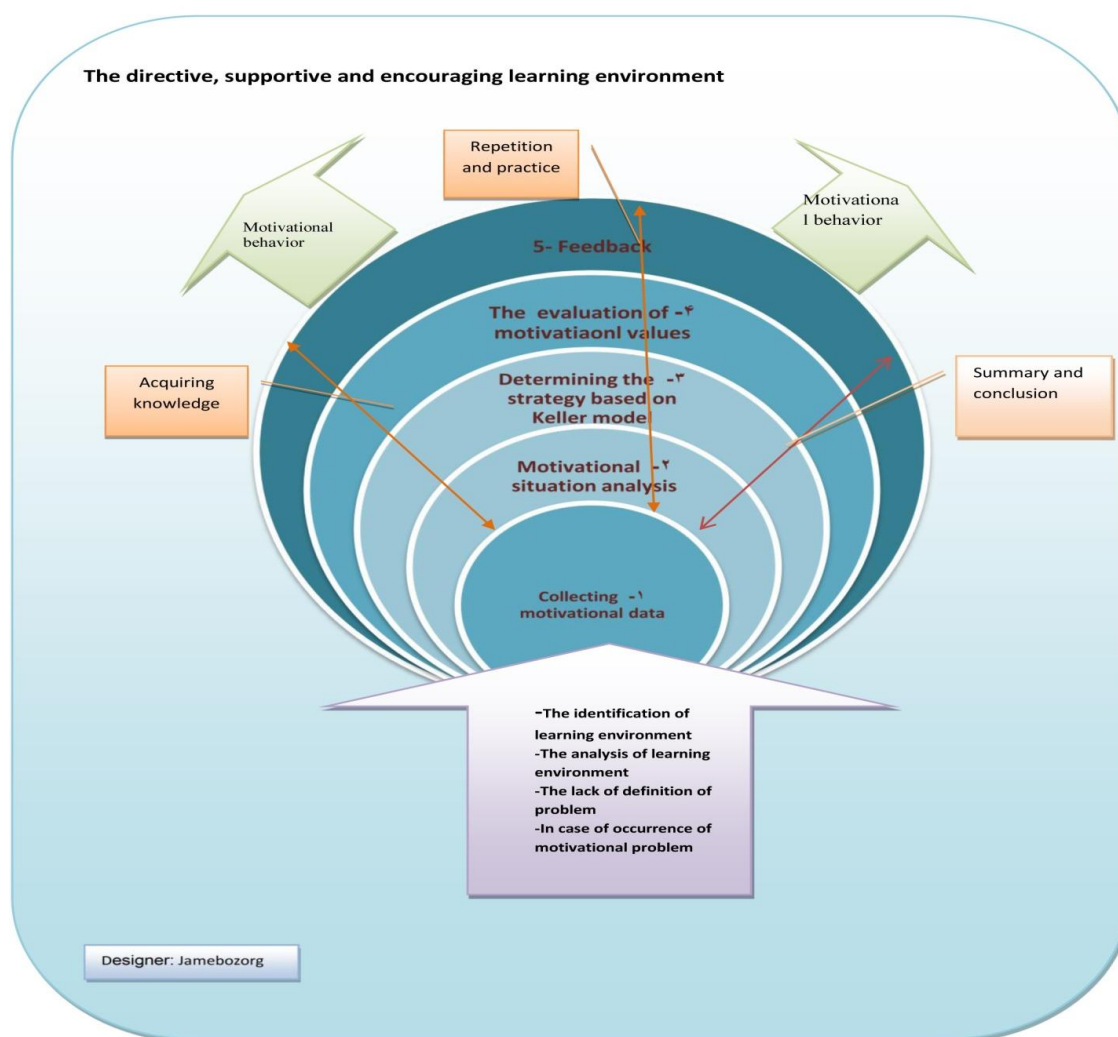


Fig. 1: The proposed model of the design of motivational learning environment based on Keller model.

Discussion and conclusion:

ARCS model as a framework defining the effective factors in keeping the motivation in learning and teaching process can be a basis to design the motivational learning environment. This model investigated the motivation in four aspects and then a systematic approach in motivation and integration of some important variables in a model is presented. Thus, the learning environment design based on the presented strategies and approaches can be applied for whole with motivational problems in learning such as dysfluent people. Its application and taking the definite strategies can increase the motivation of people during learning and provide their participation to eliminate their problems. This model is not a simple theory about the motivation for all the cause and effect relations of a learning environment and it can be an introduction to do various studies. This paper besides presenting this model recommended its application in the design of learning environments for the people with learning disorder in other fields. As creating motivation in speech impaired learners is a complex phenomenon and as it has a complex relation with learning environment, providing the computer simulated environments for practicing the teachers or therapists is useful in their efficiency in the design of motivational learning environments. Also, their motivational skills are improved. But at first the design-based researches should be conducted. The research priority should be encouraged in various institutions to produce, test and modify the new models.

REFERENCES

- [1] Cooper, J.M., 2003. "(Classroom teaching skills. "(7th ed). MA: Houghton Mifflin.
- [2] Deci, E.L., 1995. "Why we do what we do: Understanding self- motivation. "New York: Penguin Books.
- [3] Gage, N.L., D.C. Berliner, 1992. "Educational Psychology." Palo Alto, CA: Houghton Mifflin.

- [4] Garrison and Anderson, 2003. "E-learning in 21th century of theoretical and practical basics". Translated by: Esmael Zarei Zavaraki and Saeed Safayi Movahed. 2005. Tehran. Sciences and techniques publications.
- [5] Jensen, Eric, 2008. "Brain-Based Learning: The New Paradigm of Teaching [Kindle Edition] . Publisher: Corwin Press.
- [6] Keller, J.M., 1999. Motivation in cyber learning environments. International Journal of educational Technology, 1(1): 7-30.
- [7] Keller, J.M., 2012. "ARCS Model of Motivation" . Encyclopedia of the Sciences of Learning, Part 1, Pages 304-305 , available:SpringerLink DateMonday, January 09, 2012.
- [8] Keller, J.M., S.H. Song, 1999. " Attractive instructional design." Seoul: 7- KyoyukKwahaksa.
- [9] Ormrod, J.E., 2004. "Human learning" 4th ed.).Upper Saddle River, New Jersey: Pearson Education,Inc.
- [10] Warner, J., B.B. Brown, E. McCartney, 1985. Speech therapy : a clinical companion : notes on clinical practice for students and practitioners. Dover, N.H : Manchester University Press
- [11] Wlodkowski, R.J., 1999. "Motivation with a mission: Understanding motivation and culture in workshop design ." New Directions for Adult and Continuing Education, 76: 19-31.