

Integrating Neurodidactics Stimulation Into Blended Learning In Accomodating Students English Learning In EFL Setting

Rukminingsih, STKIP PGRI Jombang, Indonesia

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Abstract

The article reports a research on integrating neurodidactics stimulation into blended learning in accommodating students' learning foreign language. The most important principles of neurodidactics and brain-based teaching are involved in motivation, emotion, learning, and memory. The learners' emotion about language affects their desires to learn a language. This study aims to examine (1) how can neurodidactic process of blended learning be applied to stimulate students learning in EFL setting (2) to what extent the integration of neurodidactics stimulation into blended learning stimulates students' emotion and motivation in acquiring English in EFL setting. The participants are 30 students of English Department of STKIP PGRI Jombang . They learn English as a foreign language Using qualitative data from observation and students' journal to provide the process of blended learning stimulated by neurodidactics and students' emotion and motivation in acquiring foreign language. The findings show that neurodidactics stimulation supports students' positive emotion and motivation to learn a foreign language. Based on this study, considering on students' brain work in teaching English as EFL setting is suggested.

Keywords: Neurodidactics; Blended Learning; Learning English as EFL Setting.

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Introduction

English as foreign language means a language which is not spoken generally in the surrounding community and environment. Scholarly inquiry into the acquisition of a non-native language includes the disciplines of psychology, linguistics, language pedagogy, education, neurobiology, sociology, and anthropology. Inquiries of learning and teaching innovations have provided new insights into successful language learning strategies and environments designed to increase language achievement and proficiency. English is one of foreign languages which is applied in Indonesia as a compulsory subject in a school from junior high school until university level. English has become increasingly important as a first foreign language in Indonesia. Many other related problems are encountered in implementation in Indonesian classrooms in junior, senior high schools and colleges or higher education levels. When learning process becomes central to English Foreign Language (EFL) learning, teaching preparation including teaching aids is fundamental for class success such as authentic materials, large class with mixed ability, teaching techniques, and teacher roles.

The progress in mastering the language acquisition is individual. No brain is able to process the information immediately. Every mind influenced by one's own experience and anatomic peculiarities processes and evaluates the information in a different way. Learning is a very complex process that cannot be influenced directly (Roth 2009, cited in Sabitzer 2011), but only through circumstances, teachers cannot change biological facts, such as gender-specific differences in brain structure and development or the hormone status which may have an effect on aptitudes and performance. Many teachers complain about the passive and unmotivated attitude of their students as well as the high noise level in the classroom where effective learning is not possible. However, they can take the students in consideration and try to understand the difficulties in learning and concentrating of our students in their adolescence.

The teacher should stimulate the students' emotion and motivation to support their learning process in acquiring English as a foreign language by activating their positive emotion, motivation, and cognitive. However teachers often neglect the emotional brain of their students in the teaching and learning process. Some teaching-learning processes make students in high psychological tension. In contrast, the students need to have comfortable, joy and save situation in order to lead their concentration. In learning learners need some psychological and artistic tools (Stevick, 1980). The psychological tools include liveliness, joy and cheerfulness in the learning environment

Many studies have been conducted to prove that teaching language by using blended learning which can bring innovation on traditional educational instruction. Teachers and technologists are searching for new and innovative ways to design learner-centered learning environments effectively, trying to engage learners more in the learning process. This blended learning method integrates several neurodidactical principles so it can stimulate the learning success in EFL setting. Some studies have provided evidence that technology can be used to enhance language learning effectively through the requirement of high-quality input. Zhao (2003) stated that the

use of technology seems to not only widen the perspective for learning a second language but also have positive implications for both the acquisition process.

Furthermore, teachers' experiences in integrating technology in their class are encouraging the supporters of technology in language learning. Technology has been considered as a beneficial resource for increasing comprehensible input, improving interaction, making learning authentic and creating encouraging learning environment (Byrom, 2005). Nevertheless, there is controversy related to technology and language learning. Recent studies find that students' social and spatial awareness is more developed in the face-to-face classroom rather than in the virtual class (Wuensch, 2008). A study carried out by Hui et al. in Diaz (2009) shows that virtual learning environment is better for vocabulary development but less effective in developing listening comprehension skills which are more successful in the face-to-face interaction.

Based on some studies above, teacher should choose appropriate method of teaching different types of students, to cultivate students' motivation, and to increase students' memorizing ability. Neurodidactics applied in foreign language teaching leads students into excitement of learning through inspiring and innovative strategies that reveal the amazing power of the brain and the hidden energy of the human spirit (Botwania, R & Saniewska, 2016). One possibility to increase learning success is to use some unconscious memory processes that support the function of sensory and working memory like the modality or multimedia effect in learning (Sabitzer, 2011). In this study, the concept is integrated to stimulate students' neurodidactics by employing virtual learning and face to face as a blended learning. It will be put into practice with the implementation of blended learning in English class as in EFL setting. It tends to merge traditional classes with elements of virtual education together (Finn and Bucci, 2004).

This study aims at examining on how neurodidactics can be applied to stimulate students in EFL setting and to what extent the integration of neurodidactics stimulation into blended learning stimulates students' emotion and motivation in acquiring English in EFL setting. Therefore the research questions are (1) how can neurodidactic process of blended learning be applied to stimulate students learning in EFL setting? (2) To what extent do the integration of neurodidactics stimulation into blended learning stimulate students' emotion and motivation in acquiring English in EFL setting?

Happiness and learning are identical things to our brain. feelings, emotions help in memorizing rules. Unfortunately, the teachers often neglect on the key to effective learning and a good long-term memory which are very essential in the process learning. It means that the teacher has to give some attention on opening mind, style of learning, concentrating and focusing on the learning process. The brain has a many ways how to store information for feelings the emotional memory. Teaching needs to keep alive to desire to learn. The curiosity for meaningful experiences is innate. Emotional involvement improves cognitive performance. By implementing blended learning, the learning process can encourage students' learning in foreign language because they get something new and challenging when they have to learn through virtual learning and face to face. They do not feel bored and feel happy since they do

not only study face to face with their teacher but also they study by virtual learning which the new technology may make them inspired and challenged.

New information that we perceive as unconsciously is checked immediately by the limbic system the evaluation system of our brain, that supports the learning of things that are new, good and important for us and rejects information that creates bad feelings (Roth,2009 cited in Sabitzer, 2011) Necessary information is first stored in the sensory memory and then elaborated and encoded in the working memory, if it is changed in a format that can be stored in the long-term memory. (Sabitzer, 2011). The limbic system itself is central in the control of emotional responses.

The limbic system supports a variety of functions including emotion, behavior, motivation and long-term memory. Emotional life is largely housed in the limbic system, and it has a great deal to do with the formation of memories. (Thompson, R.F. 2000).

The limbic system of the brain is a group of structures which govern emotions and behavior. One of the basic requirements of neurodidactics is an individual emotion . Based on the discovered capability of an individual, a teacher can develop a student's personality, emotion and motivation to learn foreign language.

For some teachers, blended learning is describing what they've been doing successfully for years. that is, using a range of resources and activities to provide individualised, student-centred learning experiences for their students. The term Blended Learning (BL) has become very familiar to English language training providers over the last decade. Blended Learning is used to describe all manner of training situations but in general can be described as combining "face-to-face instruction with computer-mediated instruction"(Graham 2007

1. Methodology

Research Design

This design is qualitative study with case study to describe what happened and explain why something happened by looking at a process of into blended learning stimulates students' emotion and motivation in acquiring English in EFL setting. This case study was implemented to answer the research questions (1) how is the process of neurodidactics stimulation into blended learning in EFL setting, (2) The integration of neurodidactics stimulation into blended learning stimulate students' emotion and motivation in acquiring English in EFL setting. Furthermore, case studies provide an in-depth description of a single unit. The "unit" can be an individual, a group, a site, a class, a policy, a program, a process, an institution, or a community. "Case studies can answer descriptive questions (what happened) or attempt to explain why something happened by looking at a process".(Ary, 2010)

Setting and Participants

This research was conducted in "STKIP PGRI", Jombang, East Java, Indonesia, The participants in a case study were taken from English Department of STKIP PGRI Jombang in the fifth semester. The number of the students was 30 students. They

learn English as a foreign language. The Students at this institution were from both rural and urban backgrounds with the mixed ability students. Most of the students are from medium and low level abilities.

Data Collection and Analysis

Observations and reflective students' journal were used to collect the data which captured the process of neurodidactics stimulation into blended learning applied learning English in EFL setting and students' Journals were used to capture students' emotion and motivation in acquiring English as a foreign language. The students were given a format to capture the process of learning and teaching in the classroom and the students emotion and motivation experiences during their class through the result of students' journal to capture their emotions and motivation which influence their long term memory.. Students were advised to write as many journal entries as desired per meeting in order to keep a map of their emotional and motivation experiences. Students were not be limited in terms of the type (negative or positive) of emotion and motivation to report, or in the number of journal entries to write per meeting. Every week students has responsible to submit their journal entries to the researcher.

In the journal entries, students become observers of their own emotional and motivational experiences and asked to record these honestly consisting introspective and reflections on their own experience. At the end of four meetings, 60 journals entries are on the study file. The data set was analyzed in two stages due to extensiveness. The first stage of analysis includes general reading after the students submitted their journals every meeting. A quick read allowed the researcher to have information about their emotion and motivation experienced. The second stage consisted of a detail reading in which specifics emotion and motivation experienced were highlighted and their source were identified.

Findings And Discussion

The neurodidactics process of implementing blended learning to stimulate students' learning in English foreign language setting

Various models have been adopted by the lecturers in implementing blended learning for enhancing students' learning outcomes. Lecturer combines virtual and face to face interaction with students. It relates to the concept of Blended learning which integrate face-to-face and virtual learning environment(Marsh, 2012).In this case, lecturer varies her teaching techniques in accordance with the discussed topic. Referring to the result of observation and interview, the steps in implementing blended learning is in the following:

Steps	Effects of Learning
Do brainstorming related to the topic	To dig up students' schemata
View the result of group discussion / individual summary which are posted on certain platform schoology a day or a week before the offline class.	to improve achievement of learning objectives by employing the appropriate use of technologies to match various learning styles
Ask students to respond their friends' posting virtual .	Cooperative work, task assignment ,social interaction, motivation among the

	mixed ability learners
Give comment virtual done by teachers and the other students	Give positive feedback
Ask each group or individual to present their work in front of the class with the help of media (poster, power point program)	Student exchange information, social interaction, output after learning and student centre approach.
Ask the audience to give comment and suggestion as well as ask questions	Active learning, social interaction , student centre approach.
Review and give feedback the result of presentation and discussion and quizzes	Students have positive washback.

The implementation of blended learning in English Grammar class tends to merge traditional classes with elements of virtual education together (Finn and Bucci, 2004), such as students are given space for expressing idea virtual through Schoology as well as presenting and discussing certain topics by face to face interaction.

Based on the result of observation on the process of neurodidactics stimulation in English foreign language setting by implementing blended learning. Learning can be done into the following steps:

a. Preparation

In preparation step, the lesson plan must be designed well including the a) instructional objectives b) the material c) teaching technique d) teaching media e) teaching and learning activities and f) assessment. The lesson plan is different in every meeting, it must be appropriate to the topic discussed.

The result of the first observation reveals that when the topic is about the adjective clause The teaching technique applied is grammar in pattern drills and communicative ways. The material prepared is about adjective clauses the instructional media used schoology. The students should do the instruction from the lecturer written in schoology. The Assessment form applied is on going assessment in writing context.

The result of the second observation reveals that when the topic is about the noun clause The teaching technique applied is grammar in pattern drills and communicative ways. The material prepared is about adjective clauses the instructional media used schoology. The students should do the instruction from the lecturer written in schoology. . The Assessment form applied is on going assessment in writing context.

The result of the third observation reveals that when the topic is about the participial. The teaching technique applied is grammar in pattern drills and communicative ways. The material prepared is about adjective clauses the instructional media used schoology. The students should do the instruction from the lecturer written in schoology. . The Assessment form applied is on going assessment in writing context.

b. Implementation

Pre-Activity

Pre-activity is dealing with brainstorming activity. The teacher activated the students' background knowledge in accordance with the topic discussed.

Whilst-Activity

Whilst-Activity refers to the main activity that divided into:

Pre Task stage in which the teacher explores the topic with the class and helps students to understand the task instructions by asking the students to create schoology for virtual learning and making a group for face to face learning. During Task which is combined between virtual learning and face to to face learning.

In virtual learning the students perform the task in small groups discussion which are posted on certain platform schoology two days before the offline class. Then ask them to respond their friends' posting virtual. The last, the lecture gives comment by virtual.

In face to face, the students in a group should present their work in front of the class with the help of media (poster, LCD). Then the other students or audience should give comment and suggestion as well as ask questions. the last, the lecture gives feedback the result of presentation and discussion and quizzes.

Post-Activity

The lecturer asks the students to make reinforcement and reflection on the grammar class that day.

Based on the observation which has been conducted three times, it can be seen that the students may share or ask something confusing about the lesson to the lecturer and they can work alone, in pairs or small groups and try to solve problems in cooperation with their classmates (*cooperative learning, learning by teaching, re-encoding*). The lecturer only helps and supports the students if needed in their Schoology. Class Schoology provides great forums for students to practice their grammar in writing context. One of the most reason why students find schoology appealing that it is more authentic grammar activities both in pattern drills and in writing context as a wider audience has access to read posted entries which means students tend to put more effort into their schoology. The lecture can provide commentary to give some feedback furthermore the students can give comment, questions and feedback to their other friends' . So there is an interaction among students and teachers. Schoology also provides good opportunities for family members to see what their children are working on in class.

The brain has a many ways how to store information for feelings and the emotional memory. Teaching needs to keep alive to desire to learn. By implementing blended learning, virtual learning and face to face can stimulate students' s curiosity for meaningful experiences. Emotional involvement improves cognitive performance . "New information that we perceive as unconsciously is checked immediately by the limbic system the evaluation system of our brain, that supports the learning of things

that are new, good and important for us and rejects information that creates bad feelings” (Roth,2009 cited in Sabitzer, 2011)

The integration of neurodidactics stimulation into blended learning stimulate students’ emotion and motivation in acquiring English in EFL setting

Most students experience different emotions during their daily learning classes. It is useful to keep a record of the students different feelings, emotion and motivation. Students’ emotional and motivational experience journals involves five questions. (1) what emotions have you felt this week in your Grammar class?, (2) which of the emotions you have noted did you feel the most strongly (3) can you explain what happened and how you came to feel this way?, (4) What effects did you have on your motivation to learn English? (5) what did you do about it ?

Phase 1 : week 1

Students reported feeling more positive than negative emotion during four – week period. Students experiences positive emotion which are mostly provoked by motivating learning activities that caused feelings of self efficacy, thus re-energizing their motivational energy. Students can follow their lecture notes, do additional readings and get some feedback from their lecture by face to face while maintaining a positive attitude towards learning. This finding is supported by Lupshenyuk and Adams (2009) who indicate that blended learning has a positive impact on workplace learners' motivation to learn. These results are also supported by Al-Saleem et al. (2010) who report that a blended learning context provides students with opportunities to think and rethink, get prompt feedback, decreases peer-pressure, and increases self-esteem.

While a few students experiences a little negative emotion in the first phase because they feel lack of experience in virtual learning especially in Schoology application. They feel difficulty to for the first time they have to follow the instruction from the lecturer to do their task in schoology so it also influences their motivation to follow the class.

Phase 2 : week 2

This period is more positive dominated by positive emotions. Positive emotions are present after a class activity stirring up their interest in learning English because they can connect to a community anytime, and anywhere while they are learning by virtual learning. It is supported that blended learning Enables learners to be “together and apart—and to be connected to a community of learners anytime and anywhere, without being time, place orsituation bound” (Garrison & Kanuka, 2004). Students continues feeling good after learning by virtual through schoology program they may have small group in face to face learning to make it clear what they think about their idea on the materials discussed.

While in the second phase, students who do not have experience to do with schoology have learned how to learn and do the task through schoology so they can do the same way with their other friends. They have been motivated well than in the first phase.

Phase 3 : week 3

Emotion during this period is mostly originated by exams because it is time for midterms. Positive emotions are experienced due to class activities that students considers fun. Some students also experiences feeling more confidence in doing their exams because the exam should do in schoology so they can do anytime and anywhere before the deadline of submission. Some report realizing that they are learning by doing. It means that they can exchange information , share their difficulty in virtual way and other friends and the lecture will help and give feedback on their difficulty on the material being discussed and tasks.

Respecting this result of students' emotional and motivational experience journals supposes the following condition:

1. The motivational level must fit the dimension of a well-era didactic activity which can generate beneficial learning experience.
2. The teacher's instruction for students must be clear and simple so it is understandable.
3. A blended learning classroom, in which students can access both instruction and content in the classroom and virtual supports a student's ability to follow their curiosity, recognize and evaluate possible learning pathways, collaborate freely, and interact directly with content and peer sets all impact the confidence, curiosity, and motivation of a learner.

The result shows that foreign language students experience an array of negative and positive emotion during classroom instruction. Negative emotions are experienced during the grammar class in one semester. These emotions are caused by difficulty to use ICT especially Schoology program because the students feel that that program are the new one for them . Positive emotions are also experienced during the grammar class in one excitement, satisfaction and relaxation. These emotions come from learning activities that students get motivating, the way teacher teaches , the positive and innovative learning environment developed by the teacher. In line with Garret and Young (2009) said that emotions have been revealed as strongly impacting on foreign language learners' motivation not only in classroom instruction.

The findings of this study also show that current teachers should not ignore on educational neurodidactics to design an innovative and challenging model in order to stimulate students in accommodating learning language in EFL setting. To know how the brain works through neurodidactics stimulation certainly enhances the quality of teaching as well as encourage both teachers and students to employ in the process learning of foreign language. In this regard, teachers are encouraged to utilize the neurodidactive through blended learning. Moreover, this implies that by emphasizing the development of attention, working memory, and mood it will be possible to enhance students' ability to embed their knowledge in the long-term memory

Conclusion

Based on the finding, it is immediately obvious that blended learning is able to meet the learning objectives by employing the appropriate use of technologies to match various learning styles at the precise time. Another important aspect is technological advanced and the need for the students development of the media competence. It implied that blended learning is able to improve achievement of learning objectives by employing the appropriate use of technologies to match various learning styles at the precise time. Moreover, I mixed the use of virtual and face to face interaction in the teaching and learning process. It relates to the concept of Blended learning which integrate face-to-face and virtual learning environment. Students are given opportunity to convey their idea virtual through schoology program as well as communicating and discussing particular issues by face to face interaction with their classmates and lecturer. Language learning is a process replete with negative and positive emotions. Thus appropriate stimulation students' emotions is important for language teachers to enable them to help their students to make their emotions work for them and not against them.

The brain is generated to drive new connections by discovery and challenged. Paradoxically, the role of lecturer is as a facilitator. It means that a teacher is not to transmit information but help students find information and select the most essential bits of it. The second element is emotional aspect in the educational aspects. The middle part of the brain is considered the center of emotions. Memory and motivation are interrelated with emotions. They color humans' lives, strengthen our memories and they also function as strong motivators. The last finding has shown that emotions are a particular driving force in stimulating learning.

MacIntyre (2002) highlighted that the motivational properties of emotion have been severely underestimated in the language learning literature". Along the same lines, Dewaele (2005, cited in Lopez, 2011) calls for more research focus on affect and emotion in order to pay increased attention to the communication of emotion and the development of socio cultural competence in a second language. Schumann's (1998) neurobiology theory considers feelings and emotions as crucial to the understanding of second language achievement. According to him, learning a second or foreign language is manipulated by our emotions, and emotions shape behavior and perhaps all cognition.

Neurodidactics research has got a lot of attention in the world recently, the finding of neurodidactics research tells that teacher needs to realize the so called "brain adequate learning". Teachers should employ neurodidactics to stimulate students' learning in foreign language learning through strategies that reveal the amazing power of the brain and hidden energy of the human' spirit. The teacher should consider how the brain works because the more we know about how brain and memory work, the better we can enhance the techniques of the teaching and learning process. The teacher must not ignore the innovative and challenge class atmosphere to create students' positive emotion and great motivation in learning process. Then blended learning is one of methods that can fulfill the students who are brought up in the digital age and who expect to learn with the latest technologies.

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