



Original Article

Exploring the Impact of Cognitive Principles of Douglas Brown in ELT Classroom

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ABSTRACT

Effective learning is a unique function of teaching, which is a universal Phenomenon. Teaching results in the completion of the learning process. Among the many teaching techniques, a few cognitive concepts support the learning process and improve the efficiency of teaching English as a second or foreign language in English language classrooms. Thus, based on the cognitive concepts proposed by H. Douglas Brown, the current study attempts to explore a few teaching principles in English language classrooms. The study of language teaching and learning concepts is expanding, which has shed light on second language acquisition and teaching strategies. Effective learning is a unique function of teaching, which is a universal phenomenon. Teaching results in the completion of the learning process. Among the many teaching techniques, a few cognitive concepts support the learning process and improve the efficiency of teaching English as a second or foreign language in English language classrooms. Thus, based on the cognitive concepts proposed by H. Douglas Brown, the current study attempts to explore a few teaching principles in English language classrooms. The study of language teaching and learning concepts is expanding, which has shed light on second language acquisition and teaching strategies. A checklist is created and the non-participant observation technique is used to collect data. Additionally, an interpretive data analysis technique is employed for the data analysis. Regarding the results, the current study shows that cognitive principles have a major influence on the teaching and learning process in classrooms teaching English as a second or foreign language.

Introduction

Teaching is the work that a teacher does in helping students to learn, and has a special function to impart understanding and skill, teaching is seen as both a science and an art (Freeman, 1973). Similar to art, it highlights the creative and artistic abilities of the teacher in establishing a valuable learning environment for the students. It sheds light on the logical, technical, or procedural steps that need to be done as a science to guarantee successful goal achievement. Diverse instructors view the idea of teaching from diverse angles (Freeman, 1973). In order to enhance education, teaching is a close contact between a more mature personality and a less mature personality. Morrison and Dewey introduced the idea of teaching by equation in 1934.

Like in every classroom teacher is major role in this way in English classroom teacher plays a vital role. English is incredibly significant because it is an international language that is required for everyone to enter institutions or foreign companies (Watkins, 2005). Every educational system in the world uses English as its primary language of instruction (S.R., 2019). For the pupils, mastering the English language is essential for their future academic pursuits. English is the primary language of instruction in most schools, colleges, and universities. To understand the books, lectures, and homework, one must first become proficient in the English language (Muhammad, 2021). The implementation of a learning strategy is difficult due to the numerous aspects that influence it. Factors include level of intelligence; each person has a different level of concentration that varies depending on their age and the main thing is a classroom environment that supports the teaching and learning process. A good teacher is required to assist their students in improving their learning outcomes (Munna & Kalam, 2021). Therefore, in any group of teachers there are some principles which are used as well as some that are held by individual teachers. As teachers plan lesson and then teach they actually draw a teaching philosophy as well as their personal principles to help them direct and shape their teaching phenomenon (Bailey 1996, Richards 1998). The teacher plays a crucial role in classroom management, which includes setting rules to keep the class organized, organizing supplies and activities, and communicating rules and the consequences of misbehaving (Akbari & Bozorgmanesh, 2015). Moreover in controlling the class the teacher's function is critical in being able to impart knowledge to his students as well as being one source of student learning (Johnson, 2017). Among the many facets of the teacher role are those of communicator, class manager, supervisor, motivator, advisor, and assessor (Johnson, 2017). The instructor is a source of motivation and support for the growth of behavior and attitude. However there are many teachers who do not carry out their duties as qualified educators while professional professors reduced students' motivation to learn. Due to pupils' indolence and disregard for their assignments, the classroom becomes uncomfortable (Johnson, 2017; Munna & Kalam, 2021). In actuality, teachers still struggle to make their classes engaging and not dull, thus they need to be adept at spotting circumstances in the classroom to make their classes productive (Idamegawati, 2019). A skilled classroom manager should have also established an engaging learning

environment. However, a teacher must first determine the traits of each student. A teacher must be able to manage unforeseen circumstances, control student conduct, and identify efficient management techniques (Johnson, 2017). As teaching strategy and classroom management is interrelated in education. Teaching strategy aims to develop a learning plan that could increase the enthusiasm of students in order to focus on learning that it faces then the classroom management purposes. According to Joni (1989) in Mulyadi (2009:2), it refers to the various activities that generate and maintain maximum conditions during the learning process. This is the reason why teachers require principles as one of the most important components in their success as outstanding manager (Oruikor, Ewane, Durotoye, & Akomaye, 2023). For such purpose, there are some principles introduced by Henry Douglas Brown.

Cognitive principles, socio-affective principles, and linguistic principles are the three categories into which Henry Douglas Brown's ideas were separated. According to Dawn (2006), the first set of principles is cognitive, which has to do with mental and intellectual processes. Douglas's concepts were broken down into six categories: intrinsic motivation, anticipating rewards, meaningful learning, automaticity, and strategic motivation. A significant amount of emotional involvement was a defining feature of the second set of principles. The socio-affective principle focuses on how people feel about themselves, how they relate to other people in a learning community, and how language and culture are emotionally connected. It was separated into three sections: the language culture connection, the language ego, and the willingness to communicate. The third and final category of language learning and teaching concepts focuses on language and how students navigate these intricate linguistic structures. Three linguistic concepts are successful native language, inter-language, and communicative language (Brown, 2007).

There are some teachers who are successful in developing effective atmosphere in class with different tools and methods such as variations in media, conveying materials, providing jokes and familiarize them with English while teaching in classroom. However teachers still face some challenges by using principles to control the class because pupils have varied personalities, learning styles and motivation (Daar, 2020).

Present research is conducted at department of English at a public sector university in Sindh, Pakistan. However, research investigates impact of cognitive principles of Brown being applied in classroom settings to make their teaching learning process more effective. Following the problem statement, following research objectives are designed.

Research objectives

1. To explore the impact of cognitive principles in ELT classroom.

Research Question

Following the focus of the research objectives of the study, following research question is designed.

1. How cognitive principles impact in ELT classroom?

Literature Review

The universal phenomena of teaching serves the specific purpose of increasing the effectiveness of learning (Praetorius & Charalambous, 2023). The method of teaching is scientific, and its primary components include information, communication, and feedback. The instructional approach enhances student learning. There is always opportunity to change, develop, and create fresh teaching-learning strategies, and hence, the system is designed to be flexible (Praetorius & Charalambous, 2023). Strategies are intricate ways of instruction that typically include multiple teaching modalities and use a range of tactics for each mode (Boumová, 2008). To summarize, teaching in this sense, is a set of methods based on the same rules and with a common goal, such as encouraging students to use the language, involving students in the lesson, or explaining the language to students who must listen attentively (Boumová, 2008). Teaching is a relationship which keeps the child to develop all his powers (Freeman, 1973). Teaching is a stimulation guidance, direction and encouragement of learning, teachers rarely evaluate how pupils truly feel while learning process, teaching is an action that aims to assist guide or lead a person in acquiring, modifying, or developing skills, attitude, values, appreciations and information in certain ways (Biney, 2021). Teachers must work to modify their pupil's behaviors either directly or indirectly, it proves that the teacher should establish or set goals, the teacher's conception of learning determines the strategy, tactics, and procedures employed in the classroom. To put it another way, the idea of learning defines the idea of teaching (Biney, 2021). Teaching also motivates students to learn and regulates learning environments, the teacher's conception of learning determines the strategy, tactics, and procedures employed in the classroom. Stated differently, the idea of learning defines the idea of teaching (Hoar & Hoar, 1934). Because of this, teaching languages is a complicated topic that involves curriculum, educational elements, psycholinguistics, and socio-cultural linguistics.

Teaching Principles

Many teachers base their choices of language learning and teaching principles on well-established theories of language learning and instruction (That, Teachers, & Know, 2012). A method to teaching languages is based on 12 principles of second language learning, all of which overlap with linguistic, cognitive, auditory, and socio-affective principles (Brown, 2007).

Cognitive principles

The initial category of cognitive principles comprises concepts that facilitate mental and intellectual endeavors. The foundational ideas of cognitive apprenticeship, a method of assisting students in learning concepts and procedures under the guidance of an expert, such as a teacher, are found in Vygotsky's writings, particularly his theory of the proximal development region (Yilmaz, 2011). In order to foster cognitive development, he consequently advocated for more participatory activities (Municipality, Neba, Shey, & Bruno, 2021). Because it mostly pertains to mental and intellectual processes, the first set of principles is known as cognitive. It consists of five principles. These two theories of great researchers can be concluded in a way that teachers help students' mental and intellectual functions to understand concepts and procedures under the guidance of an expert. As a result, the teacher must apply the cognitive principle when teaching in class (Hennessy, 1993).

Automaticity

Automaticity is the capacity to do actions without devoting mental energy to the necessary low-level details, enabling them to develop into automatic response patterns or habits. Usually, learning, practice, and repetition lead to it (Baker & Cuevas, 2018). When students learn to coordinate different talents in increasingly complicated situations, the automaticity hypothesis of learning highlights the importance of training at the associate stage, full tasks that exhibit automaticity and reduce working memory overloads and mental processing pauses. Even though it takes a while, students will ultimately reach the point where they can provide the right kind of instruction. The effective application of theory requires patience (Wheatley & Wegner, 1997).

Automaticity is the capacity to perform difficult tasks with little conscious effort and concentration. Higher-order thinking, like proficient reading and writing, requires automaticity since important sub-skills must be performed accurately, quickly, and fluidly (Widyastuti, 2017). Schneider and Fisk (1983), describe skill development mechanisms by distinguishing between automatic and control modes of cognitive and memory processing. Automatic processing is a fast, parallel, and comparatively easy procedure that executes highly skilled activities without direct subject control and is not constrained by short-term memory capacity. Automatic processing takes place when people interact with the stimuli repeatedly over a significant number of trials. According to Widyastuti (2017), regulated processing is a lengthy, laborious, capacity-constrained, subject-controlled processing mode that must be employed when handling new or inconsistent data. However, young children pick up languages automatically and without even realizing it. Therefore, the ideal way to learn L2 is not to dwell over its forms and analyze it excessively (Brown, 2007).

Meaningful learning

The word meaningful Learning became popular in scientific education as a result of the work of educational psychologist David Ausubel, who used it in the 1960s to describe learning

that was not rote learning . At its essence, this usage implies that “rote learning is bad; meaningful learning is beneficial in most circumstances most of the time. Such usage has spread, so that meaningful learning now serves as a term for learning perceived to be valuable with a true purpose in a wide range of circumstances (Gunstone, 2015). David Ausubel says that a critical component of learning for in-class instruction is meaningful learning. Therefore, new knowledge that is relevant to what the learner currently knows and that is simple to remember and use is a necessary component of meaningful learning(Baker & Cuevas, 2018).

Anticipation of Reward

The expectation of reward is one of the teaching tenets that H. Douglass Brown promoted in language instruction, especially second language learning. The principle emphasizes the importance of rewarding learners for their progress in learning. The teacher's role here is to create some anticipation regarding the type of reward to be used in the classroom (Brown, 2007; Hennessy, 1993). The expectation of a reward is the most potent influence on behavior, according to B.F. Skinner. The fundamental tenet of Skinner's operant conditioning paradigm is that all people are motivated to act or behave. By the expectation that the conduct will result in some kind of reward, whether it is material or immaterial, immediate or long-term (Brown H.D, 2001). According to Brown, everyone acts the way they do because they expect to receive some kind of material or immaterial reward. Therefore, it is preferable to receive the best possible praise and encouragement in addition to suitable marks and scores (Brown, 2007).

Intrinsic Motivation

When someone is motivated by intrinsic pleasures rather than by external rewards, they are said to be motivated by intrinsic motivation. However, rewards that are intrinsically motivated in the learner are the most successful. Brown continues, as, activities that have no clear reward other than the activity itself are said to be intrinsically motivated. It seems that people engage in things for their own sake rather than in search of external rewards. The goal of intrinsically motivated action is to generate specific inwardly satisfying results, such a sense of competence and autonomy (Brown, 2007).

Strategic investment

Successful second language mastering will mostly depend on the learner's specific commitment of time, energy, and focus to the second language in the form of a customized set of techniques for understanding and using the language. Time should be wisely invested in activities that lead to true language acquisition when it comes to language learning. A clear set of learning objectives and an understanding of personal learning styles can help learners make better use of their language learning time(Brown, 2007; Johnson, 2017).

Socio- Affective Principles

This type of concept is distinguished by a greater level of emotional engagement. Emotional connections between language and culture, relationships within a learning community, and one's own feelings are all examined (Oruikor et al., 2023).

Language Ego

Humans who acquire a second language also acquire a second identity—a new way of feeling, thinking, and acting. Alexander Guiora originally described language ego as a condition in which a second language learner behaves and feels significantly differently when speaking the language (Guira & Action 1990). It is commonly known that language ego is a significant obstacle to learning a second language. For instance, linguistic ego has been linked to second language acquisition by Guiora (1994), Ehrman (1993), and Dornyei (2005), who recognized it as one of the main factors for second language learners to struggle with learning the language. Second language learners form an identity associated with their first language due to linguistic ego (Guiora, 1992). Thus, ego makes these students feel weak and protective toward the second language and increases their inhibitions against it. Zakerneh, Bilal (2018).

Willingness to communicate

Language learners typically take calculated risks in their attempts to produce and interpret language that is just a little bit beyond their absolute certainty because they believe in themselves and their ability to complete communicative tasks. Both output and input are produced for the learner as a function of their communication readiness. WTC, MacInryre et al. (1998) discovered that, there seem to be a number of reasons why some learners seek out second language conversation while others avoid it. Because they have confidence in their abilities to perform communicative tasks, when attempting to produce and interpret language that is just a little bit beyond their perfect certainty, language learners typically take calculated risks. Depending on the learner's communicative readiness, both input and output are generated for them. Many factors appear to affect whether a learner seeks out or avoids contact in a second language, according to WTC, MacInryre et al. (1998).

Language – Culture connection

Culture and language are closely related (Kramersch, 2023). A complex set of cultural practices, beliefs, and ways of feeling, thinking, and doing are all taught alongside language instruction (Moats, 2020). Discuss cross-cultural contrasts with your pupils, highlighting the fact that no culture is better than any other and that understanding different cultures is a crucial part of learning a language. Incorporate into your methods exercises and resources that illustrate the relationship between language and culture (Baydak, Scharioth, & Il'yashenko, 2015). Depending on the setting and learning goals, students will be impacted by the accuracy process in a second expectation of the relationship with language culture. In many second language learning contexts, including ESL in the US, students are confronted with the full-fledged reality of acculturating to living in a foreign country, complete with a range of emotions, after completing

steps of acculturation. Acculturation, social distance, and psychological changes are all things to consider in these circumstances (Baydak et al., 2015; Kramsch, 2023).

Linguistic principle: Native Language Effect

The native language effect principle emphasizes the value of the native language system. The learners' native tongue has a major impact on their capacity to learn the target language system (Yu, 2011). Language transfer has long been a topic of discussion among linguists, particularly in relation to the impact of native language on second language acquisition. Language transfer is unavoidable during second language acquisition and can be categorized as either positive or negative. While negative transfer will impede learning a second language, positive transfer will encourage learning a foreign language (Romero & Manjarres, 2017). Compared to reading and writing, spoken English instruction is more significant and intricate. Interlanguage. The target language system is strongly influenced by the learners' native tongue. Brown advises educators to give accurate feedback on mistakes and see them as crucial windows into their underlying system. Students can also decrease interference errors by thinking in the L2 instead of translating as they understand and generate language (Khalaf, 2023).

Inter-language

A linguistic method for learning a second language is called inter-language. Students acquire the target language when they attempt to communicate in it. The learner's native language affects inter-language communication because they utilize their ability in it to comprehend and structure the second language or to bridge knowledge gaps. The process by which L2 learners progress to complete competency in L2 follows a similar pattern to how toddlers systematically and gradually pick up their native tongue. For instance, this implies that even while a large portion of what an L2 learner says or comprehends makes sense logically, it is erroneous from the perspective of the native speaker's proficiency. Instructors ought to let pupils move through these sequential learning phases. Inter-language refers to an L2 learner's system's separation, which involves a structural status between the target and native languages (Brown, 1994). It illustrates the efforts made by L2 learners to build a linguistic system that progressively resembles the target language system (Fauziati, 2011).

Communicative Competence

The aim of a language classroom is communicative competence; instruction must focus on all aspects of this competency, including organizational, pragmatic, strategic, and psychomotor. The ideal way to accomplish communicative goals is to pay enough Fluency and not just correctness, realistic language and circumstances, attention to language use and not just usage, and the eventual need for students to apply what they have learned in the classroom to real-world situations that they haven't practiced yet Dell hymes (1972, 1967) a socio-linguistic who believed Chomsky's (1965) concept of competence was too narrow invented that term communicative competence. Communicative competence according to Hymes, is the component

of human competence that allows us to send and comprehend messages, as well as negotiate meanings interpersonally within certain circumstances. The cooperation of all parties involved is necessary for communicative competence, which is relative rather than absolute (Sayignon, 1983).

As for as some previous studies are concerned, Erya Karina (2016), conducted a descriptive analysis of teaching principles in English classroom management and concluded that the teachers use cognitive principles in their teaching in ELT classrooms. Teachers' teaching strategies and second language acquisition have been clarified by the growing body of research on language learning and teaching principles (Qing-xue & Jin-fang, 2007). Therefore, the purpose behind exploring these principles is to see the impact of cognitive principles as many aspects of language learning and teaching have changed with the passage of time. Moreover, as Brown's teaching principles and its use is concerned, there are various explanations of theory about concept of teaching cognitive principles.

Research Methodology

Qualitative researchers adopt a person-centered and holistic approach. (Blackwell, 2007). The researcher has chosen qualitative data research to investigate impact of cognitive principles of Douglas Brown in the context of ELT classroom. This study's research design is a descriptive qualitative study. The information acquired in a descriptive format detailing the issue's nature and extent. Data from qualitative descriptive research provide a subjective account of the "who, what, and where of events or experiences (Nassaji, 2015). Descriptive is a research conducted at the level of analysis study to reveal a phenomenon and situation as they are (Supardi, 2005). However, this research follows descriptive qualitative design, descriptive research seeks to describe a phenomenon and its characteristics (Gall, Gall, & Borg, 2007). Additionally, the goal of using the descriptive qualitative method methodology is to increase the likelihood of producing reliable results and conclusions while also providing the best understanding of the study problem (Nassaji, 2015).

Population

Present study is conducted at a public sector general university of Pakistan located in province Sindh.

Data Collection and Sampling

In this research study data is conducted by using observation as data collection technique. More specifically study uses non-participate observation in eight classes of English. Data is collected form three departments of the university, Department of English, Statistics and Business administration. One method of gathering information that can be utilized to get a

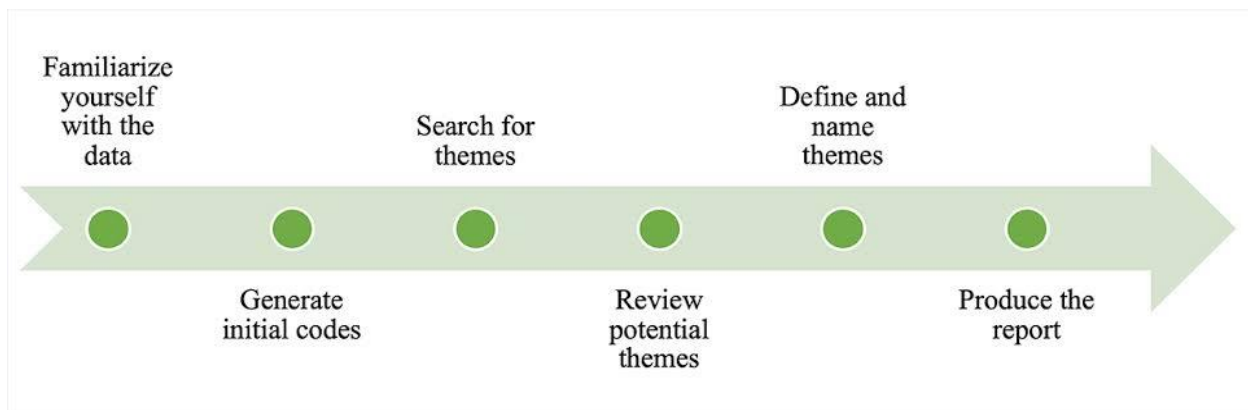
comprehensive picture of a situation is observation (Buchanan, 1981, 1981; Zevalkink, 2021). In non-participant observation, researcher does not participate and do not involve directly in the activity being observed(Zevalkink, 2021). Therefore, this study follows non-participant observation specifically.

Instrument

An observation checklist is developed following the cognitive principles given by Douglas Brown. However, a checklist is designed by the researcher in attempt of achieving the research interests properly. The items included in checklist applied during observation is based on ten questions. A list of items that an observer will consider when monitoring a class is called an observation checklist (Zevalkink, 2021).

Data Analysis Techniques

As for as data analysis is concerned, descriptive approach is applied, followed by thematic analysis. However, for the purpose of thematic data analysis Brown and Clark’s model (2006) of thematic analysis is applied.



Braun and Clarke (2006) Model

Thematic analysis is a technique for examining qualitative data that entails looking for, examining, and documenting recurring themes in a data collection (Braun and Clarke, 2006). Although it is a technique for distilling information, choosing codes and creating themes also require interpretation. The flexibility of thematic analysis to be applied to a wide range of study topics, formats, and sample sizes, as well as to a number of theoretical and epistemological frameworks, is one of its unique characteristics (Dawadi, 2020).

Data analysis

Data is analyzed following, the steps suggested by brown and Clarke (2006). According to the data analysis model of Brown & Clarke (2006), first step is familiarization of data, secondly initial codes are generated, and thirdly themes are searched. However, on fourth step potential themes are reviewed, on fifth step themes are defined and named. Moreover, on sixth step report of findings if produced.

Item No.	Checklist statement	Department	Cognitive principle	Thematic Analysis	Overall thematic analysis
01	Is English teacher using automaticity principle in English language classroom?	Department of Business Administration (DBBA) Department of Statistics (DST) Department of English (DENG)	Automaticity Principle (APE)	DBBA-T1: Situation is not supporting because of student interest. DST-T1: Teacher is trying to apply DENG-T1: Being used in a very good way	Somehow it is used in very good manner but not in all contexts.
02	Is Automaticity process really impactful for English language teaching?	=	=	DBBA- T1: Not preferring to use DST- T1: Somehow impactful but students' motivation is needed DENG- T1: Really impactful	At some level it is but not fully impactful.
03	Is teacher using Meaningful Learning process in English Language classroom?	=	Meaningful Learning (ML)	DBBA- T1: Not giving relatable examples. DST-T1: Yes teacher is making simplified situation. DENG-T1: Teacher is relating to deficiencies	Used at good average.

03	Is following only Meaningful learning process impactful for learning English as a second language?	=	=	DBBA-T1: Only this principle is not preferring to use. DST-T1: They need rote learning. DENG-TA: Only following this will be effective.	Need one more principle for effective results along with this
04	Are teachers using the principle “Anticipation of reward” in English language classroom?	=	ARE	DBBA-T1: Not seemed in applying. DST-T1: Not preferred by teacher, may be situation is not preferable. DENG-T1: Students learning better by this principle.	Very less and somehow preferred by situation.
05	Are students getting more interest in learning English language after using the principle “Anticipation of reward” by their teachers?		ARE	DBBA-T1: It is not seemed, if used than may be impactful. DST-T1: After using may be it will impactful. DENG-T1: Organized activity on marks based.	Used at some situations but results are significant.
06	Are teachers using Intrinsic “motivation principle” to make students interested for learning English language?		IME	DBBA-T1: No such situation observed DST-T1: Somehow by teacher it has seemed. DENG-T1: Teachers are seemed by using it.	It is being used at average level.
06	Is “Intrinsic motivation” principle is	=		DBBA-T1: It is needed for this class after maybe it will	Used at some situations but results are

	beneficial to use for English language teaching classroom?			effective. DST-T1: Needed for class environment. DENG-T1: Students get interest by this principle.	significant
07	Are teachers using the principle “strategic investment” in English language teaching classroom?		ESIP	DBBA-T1: After using may be impactful b/c it is needed. DST-T1: Needed for class environment after using results might be impactful DENG-T1: Students get interest by this principle.	Used in less average but where it has used the results are impactful.
08	Are students improving four language skills by learning in an environment where cognitive principles being used for teaching English as a second language?	=	CPE	DBBA-T1: Productive skills are not improved but only receptive skills are. DST-T1: Writing skill improved only b/c not five principles used appropriately. DENG-T1: Only three skills are improved.	Slightly better than average level but not all in all.

Description of cognitive principles

The thematic analysis results suggest that although the environment does not favor the automaticity principle, teachers have a positive attitude toward it. Because pupils did not accept the automaticity principle in their surroundings, despite English instructors' attempts to implement it in the classroom. Although the automaticity concept has been applied in all three domains, its impact has not been uniform across all levels due to the fact that students' views

vary depending on their respective subjects. Therefore, the principle of automaticity had some influence but was not entirely appropriate for the situations. By providing related examples and connecting them to various applicable circumstances, several educators have applied the meaningful learning principle to help students better understand. That institution's teachers apply the meaningful learning principle at a good to average level.

Although this approach has been applied, pupils have not responded favorably to it overall. They seem to desire some helpful strategies for putting that idea into practice. Therefore, the scenario favors both the meaningful learning principle and the supporting principle. The anticipation of reward concept appears to be used very infrequently, but teachers do favor it at some levels. The application of the "anticipation of reward" principle has several beneficial effects. But wherever it was applied, the outcomes appeared fantastic. The study found that pupils in English language instruction classes lack motivation, indicating the need for the "Intrinsic motivation" principle. The "Strategic investment principle" is applied at a low level, but when it was, the outcomes were exceptional. Although they do not address all four skills, cognitive concepts have an impact on teaching English as a second language.

Discussion

There are elements that are covered in the research findings, which are based on the findings that the researcher presented above. The components include the many cognitive ideas that English teachers at SBBU SBA apply while teaching English as a second language. Helping teachers apply cognitive principles during the teaching and learning process in the classroom is the significance of this research. The researcher used an observation checklist to make observations.

Without interfering with the teaching and learning process, the researcher pretended to be an observer in the classroom during the observation. Every step of the teaching process was watched by the researcher, who also looked at how instructors implemented cognitive principles in the classroom. After a week of the pilot study, the researcher used a real observation checklist. From the start of the lesson to its conclusion, the researcher watches, evaluates, and studies the instructor in the classroom. From what is obtained through observations, it is found that there were different results from different departments. In English department the students seemed more enthusiastic when teacher was using principles such as strategic investment, Meaningful learning, and intrinsic motivation, Anticipation of reward, and automaticity. They were seemed ready to participate and respond always in every task and classroom activity and they were giving efforts by their own to learn English. However the students of Business and statistics department had preferred controlled process. They were not allowing teachers to apply the cognitive principles. If teacher was using they were not responding and requiring the rote learning and other supportive processes.

The study's findings are also corroborated by scholars such as, Karina (2016), Augustine (2017), Halimah (2017), Mayza (2021). The four researchers have common perspectives allying with the present researcher. Karina (2016) suggests that, application of teaching principle by teacher is crucial to use, meanwhile, Augustine (2017), Halimah (2017), and Mayza (2021) have demonstrated cognitive similarities with the present study. From the results of the research on the use of it is acknowledged. The research niche of this study is the theoretical reference used is different based on research questions.

Findings suggest the existence of cognitive principles in the present study. It has found that, there are cognitive principles used but situation and conditions do not fully support the use of principals. According to Brown (2010), cognitive principles stimulate students' mental and psychological condition. In the discussion section, the research reflect that the teachers use the cognitive principles for better understanding of learners, however cognitive principals are not the preference. Therefore, the teaching learning process somehow reflects towards cognitive principals in the situation and condition of the classroom.

Conclusion

According to this study, the following concepts are included in teaching principles when cognitive principles are applied by the teacher, automaticity, intrinsic motivation, reward theory, meaningful learning, and strategic investment. This study suggests that cognitive principles can be applied to the teaching of the learning process, since they may support the teacher in delivering learning materials and managing students while they are learning. EFL learners and EFL teaching situation in particular classroom is supported by using these cognitive principles on the other hand there are some situations where cognitive principles are not fully supported. However, for adjustment of the circumstances that occur during teaching, the teachers apply these principles. In addition, as all twelve principles of language teaching and learning are essential to use in the English language classroom, however it is difficult to determine that cognitive principles are impacting on all four language skills. Based on the results it can be demonstrated that the teachers are not using the principles appropriately. Therefore, the results demonstrate the impact of cognitive principles on the EFL learners if applied in the classroom.

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