



HAL
open science

A Small Scale Study on the Instructional Method Preferences of Thai University Students

Alan White

► **To cite this version:**

Alan White. A Small Scale Study on the Instructional Method Preferences of Thai University Students. 2019. hal-01976363

HAL Id: hal-01976363

<https://hal.science/hal-01976363>

Preprint submitted on 10 Jan 2019

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

A Small Scale Study on the Instructional Method Preferences of Thai University Students

Alan Robert White

Rajamangala University of Technology Krungthep, Bangkok, Thailand *E-mail:
alan.w@mail.rmutk.ac.th

Abstract Various learning theories were developed during the twentieth century. These theories are largely based on teaching approaches that are split into passive learning where knowledge is fed to the learner and active learning that requires interaction from the learner. This paper briefly discusses behaviourist, cognitivist and constructivist approaches to learning and teaching. Data from a small scale survey has been provided on Thai students' instructional method preferences.

Keywords: behaviourism, cognitivism, constructivism, instructional methods

Introduction

Teaching is a planned sequence of events that are designed to change a learner's level of ability. The instructor uses a teaching method that best achieves their goals. The teaching methods are based on theory and generally can be classified into two broad groups. These groups are known as conditioning theories (behaviourist family) and interactionist theories (cognitive family). In the behaviourist approach the learner is generally seen as being a passive being. The cognitivist and more so the constructivist approach views the learner as a more active participant in the learning process. Behaviourism is seen as a teacher centred approach while the cognitivist and constructivist approaches are viewed as more learner centred. All of the different approaches propose methods of teaching and teaching roles that are based on learning, educational and psychological theories (Ellis, 2009; Santrock, 2012). The following paper briefly examines the main learning theories and provides limited data on students' learning preferences.

Literature Review

Many behaviourists believe that learning is a mechanical process that associates stimulus with response which in turn produces a new behaviour. In general, behaviourists do not focus on the learner's thoughts, feelings, beliefs and free will. The learner is seen as passive and begins as a tabula rasa (clean slate). Behaviour is shaped by reinforcement with positive and negative reinforcement increasing the probability that the learner will repeat the behaviour (Twomey Fosnot, 2005). Historically, the publication of 'The Behavioral Learning Theory' by John B. Watson in 1913 helped pave the way for the adoption of behaviourism in the classroom. As a basis for his work, Watson used Ivan Pavlov's findings on animal responses. For example, Pavlov would ring a bell when it was time for his dog to be fed. Every time Pavlov's dog heard the bell the dog would begin to salivate and thus a change in behaviour was noted. Behaviourists performed experiments using animals because they

believed the study of animals could help partly explain human behaviour. In response, Watson conditioned a young child to fear a white rabbit by pairing it with the loud clang of a metal bar. Although now viewed as unethical, the child developed a fear of white furry objects and thus demonstrated the stimuli and response in humans (Pavlov, 1927; Santrock, 2012; Skinner, 1938; Thomas, 1997; Watson & Rayner, 1920; Weegar & Pacis, 2014).

Cognitivism, refers to the study of the mind and how it perceives, remembers, processes, obtains and stores information and solves problems. Cognitivist theories developed from Gestalt psychology which was established in early 20th century Germany. Cognitive theories were developed as a response to behaviourism. Unlike behaviourism, learning is viewed as an active process that occurs within and can be influenced by the learner. Cognitivists believe that the human mind functions like a computer which processes information to be stored away and retrieved at a later date. New ideas are built on current and past knowledge and information is presented in an organized manner. Cognitivism is suited to problem solving as ideas and concepts from problems are linked to prior knowledge, which in turn helps the learner develop a stronger understanding. The major cognitive psychologists include Noam Chomsky, David Ausubel and Jerome Bruner who introduced the educational concept of ‘scaffolding’ (Novak, 1993; Stavredes, 2011; Santrock, 2012).

Constructivism explains how people might acquire knowledge and learn. The theory has had a significant impact on teaching and learning. Notable constructivism theorists include Lev Vygotsky who introduced social constructivism and the concept of Zone of Proximal Development, Jean Piaget who introduced cognitive constructivism and Robert Gagne (Stavredes, 2011; Vernon, 2012; Vygosky, 1978; Weegar, & Pacis, 2014). Constructivists believe that a learner is not just a passive receiver of knowledge and that learners are active participants in the learning process. The instructor acts as a facilitator and instruction starts with a problem to be solved rather than content that needs to be learnt (White-Clark, DiCarlo, & Gilchrist, 2008). The theory maintains that people construct their own understanding and knowledge, through experience and reflection. The learner asks questions, explores, and assesses what they know. Through this process, changes in what was previously believed may occur. Constructivism is best applied in problem based learning (Stavredes, 2011; Twomey Fosnot, 2005).

Method

The study surveyed forty mixed gender, undergraduate students studying at a public Thai university on their learning preferences. The study used a mixed method utilizing a questionnaire survey and informal group interviews. Data were collected through a 5 point Likert scale questionnaire using level of agreement (Strongly agree=5, Agree=4, Neutral=3, Disagree=2 and Strongly disagree=1). The questionnaire data was analysed through descriptive statistics.

Results

The following section provides the results from the questionnaire survey (see Table 1) and the informal interview.

Table 1. The results showing percentages related to the students' level of agreement (Strongly agree=5, Agree=4, Neutral=3, Disagree=2 and Strongly disagree=1).

Statement	5	4	3	2	1
I like the teacher to provide the answer.	37.5%	40%	12.5%	5%	5%
I learn by memorizing knowledge.	35%	40%	22.5%	2.5%	0%
I like to learn by doing.	37.5%	52.5%	10%	0%	0%
I like to work out the answer to a question.	15%	30%	45%	5%	5%
I enjoy solving problems.	22.5%	27.5%	47.5%	2.5%	0%
I need critical thinking skills.	17.5%	57.5%	20%	2.5%	2.5%

The survey data was mixed with a large number of students indicating that they memorize knowledge but also many suggesting that they enjoy solving problems and working out answers to questions. The interviews provided some clarity with many students commenting that they recognise the need for critical thinking and problem solving skills but also believe it is important that the instructor teaches basic knowledge that can be memorized and applied when needed.

Discussion and Conclusion

Behaviourist approach to learning is easy to apply, the learning progress is easily measurable and the method generally guarantees specific outcomes. On the other hand, it struggles to explain the development of language and the effect of the learner's environment is not taken into account. A more advanced level student could find the instruction boring and uninspiring. Reactions to stimuli and reinforcements cannot account for all behaviour. In this respect, animal behaviour is not always the best predictor for human behaviour (Chomsky, 1967; Keefe, & Jenkins, 1997). The cognitivist approach brings structure to learning. Problems can be processed in small parts and learner progress is generally easy to assess and the learning is more student centred. Unfortunately, as learning is very structured, it may become more difficult to adapt to changes in what has been previously processed and learnt. Constructivist based classroom activities are generally real-world based and therefore seen as more relevant to the learner. Learners can construct knowledge and meaning as information can be related to their own attitudes, experiences and beliefs. A specific outcome though may not always be achieved when different people are faced with the same problem. Progress is therefore more difficult to assess.

There are many factors to be considered when deciding which theory is the more valid and appropriate. These include curriculum, subject, resources, assessment, previous knowledge, age, culture, and students learning styles. It is therefore difficult to conclude that one theory is more appropriate than another. Basic knowledge is generally needed before the constructivist theory can be applied. The behaviourist approach may produce a reaction to a stimulant even though deeper understanding is absent. In general a balanced combination and blending of theories and methods would appear to be the best approach. In summary, no one theory appears to be superior over another. All of the main learning theories have their differences and similarities and also their strengths and weaknesses. The results from this small scale study suggest the students recognise both the importance of background knowledge and critical thinking and problem solving skills.

References

- Chomsky, N. (1967). A Review of B. F. Skinner's *Verbal Behavior*. In Leon A. Jakobovits and Murray S. Miron (eds.), *Readings in the Psychology of Language*, New Jersey, USA: Prentice-Hall.
- Ellis, V. (2009). *Learning and Teaching in Secondary Schools*. Exeter, UK: Learning Matters,
- Keefe, J.W., & Jenkins, J. M. (1997). *Instruction and the Learning Environment*. Larchmont, USA: Eye on Education
- Novak, J.D. (1993). A View on the Current Status of Ausubel's Assimilation Theory of Learning, *The Proceedings of the Third International Seminar on Misconceptions and Educational Strategies in Science and Mathematics, Misconceptions Trust*.
- Pavlov, I.P. (1927). *Conditioned reflexes*. London, UK: Oxford University Press.
- Santrock, J.W (2012). *Educational Psychology* (5th ed.). New York, USA: McGraw-Hill International Limited
- Skinner, B. F. (1938). *The behavior of organisms*. New York, USA: Appleton-Century-Crofts.
- Stavredes, T. (2011). *Effective Online Teaching: Foundations and Strategies for Student Success* Hoboken, USA: John Wiley & Sons, Jossey-Bass higher and adult education series
- Thomas, R. K. (1997). Correcting some Pavlovian regarding "Pavlov's bell" and Pavlov's "mugging." *American Journal of Psychology*, 110, 115-125
- Twomey Fosnot, C. (2005). *Constructivism : theory, perspectives, and practice* (2nd ed). New York, USA: Teachers College Press
- Vernon, J. (2012) Reflections on e-Learning: Constructivism and social constructivism for learning. *Open University Personal Blog (online)*.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychology process*. Cambridge, USA: Harvard University Press.
- Watson, J. B., & Rayner, R. (1920). Conditioned emotional responses. *Journal of Experimental Psychology*, 3, 1-14
- White-Clark, R., DiCarlo, M., & Gilchrist, N. (2008). "Guide on the side": An instructional approach to meet mathematics standards. *The High School Journal*, 91(4), 40-45
- Weegar, M.A., & Pacis, D. (2014) A Comparison of Two Theories of Learning -- Behaviorism and Constructivism as applied to Face-to-Face and Online Learning, *E-Leader Conference Proceedings*.