Research Article

The Application of Mnemonic Keyword Method on Learners' Comprehension and Knowledge Retention

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Abstract: *The Mnemonic Keyword Method offers the most potential for use in classroom teaching and learning activities. It encodes the information so that it can be more easily retrieved, and the sentences are transformed into catchy and simple formulas. The method typically involves relating the term to other words or grouping the words according to similar themes or synonyms. The world's phonological or spelling forms are used to construct equations or formulas. The factual component of the knowledge dimension can contain the fundamental concepts that students need to understand to become familiar with any subject. They will also be expected to tackle challenges in the learning process. This method has been successfully increased students' comprehension levels and their capacity to retain the main details of the reading materials they are exposed to learning the Fundamentals of Entrepreneurship (ENT300). The guidelines and directory of keyword offer commercialization potential. The creation of a website with applications to transform the sentences into keywords would be able to generate income via subscriptions. The potential customers are the education providers and students.*

Keywords: learning styles, teaching strategies, brain dominance, mnemonic keyword approach, encoding and decoding.

1.   BACKGROUND

Education's main purpose is to maximise learning transfer. The keyword mnemonic is the most researched mnemonic, excessively used to teach vocabulary and meaning in foreign and native languages. The mnemonic keywords method is a versatile methodical procedure for improving memory and learning. The keyword method aims to improve the learning process and retain memory by aiding information encoding so that it may be recalled more quickly. The encoding might be improved by transforming keywords into formulas to make it easier to remember the simplicity. The approach usually entails linking the term to other words or categorising the words into groups like synonyms or common themes. Furthermore, words' phonological or spelling forms can be employed as a mnemonic approach to aid in remembering new information.

The major goal of education is to provide optimal transfer of learning. This keyword method could enhance students learning, particularly in unfamiliar, difficult and complicated content with jargon and terminologies, especially when they learn the non-core, alternative or university subjects. It

increases the memory capacity, and understanding level towards the subject taught. By applying this method, lecturers are able to train students in monitoring their own learning and selecting the appropriate key words, especially on the technical terms or terminologies or jargons or wordy statements.

2.   THE MNEMONIC KEYWORD METHOD

This approach exploits the educational potential of mnemonic techniques or systematic procedures for enhancing learning and memory. One associative mnemonic technique that has proven to be extremely versatile is known as the "keyword method" (Atkinson, 1975; Atkinson & Raugh, 1975; Pressley et al., 1982). The keyword method attempts to enhance learning and memory by facilitating the encoding of information so that it can be more easily retrieved. The keyword mnemonic, which Atkinson first formalised in 1975, is the most researched mnemonic and has the most potential for adaptability in a variety of learning contexts. The majority of the keyword mnemonic approach is directly applicable to the instruction of local and foreign language vocabulary and meaning. The term mnemonic in foreign language learning entails creating a phonetic and visual link between a foreign word and its native tongue. The learner connects all or a portion of the foreign word with an English word that has a similar sound. The meaning of the foreign word is then connected to the keyword, creating a mental image of it. Pressley et al. (1982), who conducted a thorough evaluation of the literature on the use of the mnemonic keyword approach, came to the resounding conclusion that using the keyword method to help students remember vocabulary meanings significantly improved their academic performance.

Extensive empirical studies on the mnemonic keywords method of teaching have been carried out on language learning related to vocabulary aspects. Only a limited research work focuses its application on learning other subjects, particularly non-technical or theoretical-based subjects. In addition, many studies have been conducted to verify the effect of learner characteristics and motivation in the traditional classroom, face-to-face classroom teaching, but very few are found in online learning research. Despite the fact that numerous research studies have been conducted to verify the effect of learner characteristics and motivation on learning performance in traditional learning environments, where few empirical studies have been conducted to assess the application of the keyword method on learners' performance to comprehend the contents of the subject learned (Lim and Kim, 2003; Song, Singleton, Hill & Koh (2004); Shapiro & Waters (2005); Siriganjanavong, V. (2013); Wyra, Lawson & Hungi (2007). A keyword approach is a great tool for both technical and non-technical (i.e. left and right-brainers) students who are analysing ideas and converting non-meaningful, nonsensical, "crazy" information into concrete, meaningful proxies in order to improve learning transfer.

3.   THE APPLICATION OF THE MNEMONIC KEYWORD APPROACH

Numerous more educational applications are being looked upon, especially for teaching reading courses with voluminous amounts of content to absorb and comprehend. The Mnemonic Keyword Method has the greatest potential for application in teaching and learning situations in the classroom. In order to improve students' comprehension levels and their capacity to retain the essential points of the reading topics they learned, the keyword mnemonic method was employed in the learning process of the university code, the Fundamental of Entrepreneurship subject (ENT300).

The samples of formulation of keywords generated are illustrated below. These are the formulation stages to construct the most simplified formulas. The terms link to other words or categorize the words into groups like synonyms or common themes. The phonological or spelling form

of words can be employed as well as combining alphabet letters with numbers or counting its repetitiveness as the mnemonic approaches to aid in remembering new information.

3.1 Keyword Formulation 1

Motivation = The Need for Achievement (n Ach) + The Need for Power (n Pow) + The Need for Affiliation (n Aff)

Mo = n (Ach + Pow + Aff)

Mo = n (Ac+P +Af)

In order to make it simpler, formulate it into

Mo = n (APA)

3.2 Keyword Formulation 2

Formulating the definition of ENTREPRENEURSHIP

1)   Richard Cantillon = C to do a job (Ctdj @ Co3)
2)   Adam Smith = Agent (Word of Adam = Agent @ AdAg)
3)   Jean Baptiste Say = Shift Resources (Words of Say = Shift)
4)   John Stuart Mill = Prime Mover (Words of Mill = Mover @ MiMo)
5)   Carl Menger = Economic Agent (Words of Menger = Agent @ GerGent)
6)   Ibnu Khaldun = Knowledgeable Person (Words of Khaldun= Knowledge @ KhKn)
7)   Joseph Aloysius Schumpeter = Innovator (Words of Peter = Innovator @ TerTor)
8)   Alfred Marshall = Business Incremental Development = Marshall = Incremental @ ShallTal)
9)   David McClelland - High need for achievement (Words of Cle = AChieve @ CAC)

Formulation Stage 1

Cantillon (do a job), Adam (Agent), Baptiste Say (Shift Resources), Menger (Economic Agent), Mill (Mover), Khaldun (Knowledgeable), Schumpeter (Innovator), Marshall (Biz Incremental), McClelland (achievement)

Formulation Stage 2

ENT Defn = Co3 + AdAg + SShift + GerGent + KhKn + GrGt + MiMo +TerTor+ SllT+ CCOM

Formulation Stage 3

ENT Defn = Co3 + A(d+g) + SSh + K(h+n) + G(r+t) + M(i+o) +T(e+o) + LL+CC

Simplified Formulation Stage 4

ENT = CASShKGMT 2L2C

3.3 Keyword Formulation 3

Operation Management Definition

The process of marshalling business input to transform them into output in the form of products and services

OM = Input Transform Output

OM = ITO

3.4 Keyword Formulation 4

Operations Layout (OPL)
There are three types of layouts:
  i.   Layout based on process (Ps)
  ii.   Layout based on product (Pt)
  iii. Layout based on marketing (Mkt)

$$OPL = Ps + Pt + Mkt$$
$$OPL = Ps + Pt + Mt$$
$$OPL = P(st)M$$

3.5 Keyword Formulation 5

SWOT
Strength (S); What are we good at?), Weakness (W); What are we bad at?, Opportunity (O); What to Improve? Which one to choose?, Threat (T); What Obstacles Do You Face? ; Present and Possible Future

StreWeak = Int (Internal) ; OppThre = Ext (External)

SW (GoodBad) Int
OT (ImproveObstacles) Ext
Int[SW(GB) = Ext[OT(IOb)

Or

Int SW = Ext OT
SW Int = OT Ext
SWi=OTe

3.6 Keyword Formulation 6

Environmental Scanning
Important environmental forces to observe include:
  i.   Economic forces
  ii.   Social forces
  iii. Technological advances

ES = F (EST) Or ES = F (TES)

4.   DISCUSSION

The application of the Mnemonic Keyword Method in the teaching and learning activities is to increase students' retention of information shared and assist them in dealing with an excessive information. The present experiment was designed to explore the memory retention underlying the effectiveness of the method.   Subjects learned were provided with the keywords and instructions on strategies and techniques for the formulation of the keywords. Retention was tested in both immediate

and delayed post-tests by applying technology-based instructional tools such as google form, wordwall, quizizz, etc. Results revealed a strong effect of knowledge retention and the teaching tools based on the SUFO evaluation. Results indicate that the method is effective because it provides a meaningful formula in terms of coding and abbreviation formulas generation. The Mnemonic Keyword Method application effectiveness is tested by analysing the students' feedback or SUFO (Students Online Feedback) for item evaluation no. 19 (Challenging Method of Lectures), constituting about 85.42% and item evaluation no. 21 (Lectures Assist Students in Comprehending the Subject Contents) accounting for 91.67%. The overall performance indicator has shown the "Excellent" category with a percentage of 90.31%.

By creating a key words directory to convert long statements into formulas, the Mnemonic Keyword Method has great potential for commercialization. The development of websites with programmes that convert speech into keywords and catchy formulas could earn income from subscribers. Students and education providers are possible clients.

5.   CONCLUSION

In either an online learning environment or a face-to-face learning setting where proactive education is encouraged, an effective learning process is crucial to ensuring that learning is transferred. The Mnemonic Keyword Approach can be used to monitor student's learning progress, memory retention, and degree of subject matter comprehension. The cognitive process component of learning includes the learning processes that entail keeping pertinent knowledge, such as memorising the vocabulary or key concepts of each subject learned. The keyword method of education is crucial in this regard since it clarifies the subject matter by highlighting its core ideas, concepts, or words.

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