

## **Mediacology: A Model to Information Reception and Knowledge Creation Learning**

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### **Abstract**

Humans have acquired and processed information for existence by means of different sagacity. Hence, the exploit of different astuteness for information collection, remembering is something, which our brain can recount very well. The process of translating the information into knowledge, referencing and utilizing it, is carried out within the personal mind-based 'mediasphere' structure of the human brain. The human mind can create the most sophisticated animatronics and mediasphere as it can select different thought-based "visual" and "audio" special effects as well as "actors". In other words, the human mind has admittance to unconstrained amount resources for designing the thought-based mediasphere structures. Regrettably, we are not able to express the information and knowledge in our mind directly to other people or resource. This may become possible in the future. This article explores the use of postmodernists' advancement to aid teaching methods, which utilizes different mode and sagacity for the purpose of leaning enhancement. Finally, it compares the learning outcome and preferences of a model of Universities/Colleges of education selected students using a mediasphere structure, which attempts to cross the erudition barriers in learning.

**Keywords:** Mediacology; Mediasphere; Learning style preferences; Learning by association

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### **I. INTRODUCTION**

We discern that the trains of manifestation scamper comparably in our mind. With the mind's eye we envision an image of an idea. This image consists of a number of subimages, which are linked to each other. If we could, come what may, transmit these images to another person in their original configuration then a great deal of time and effort would be saved. Regrettably we cannot transfer our thinking directly to other sources or people without the use of intermediate (converter) translations. Using postmodernist's advancement modus operandi, one day we may be able to navigate and negotiate the transfer of large amounts of information (statistics), and the indispensable mental and physical dexterousness to another person directly.

A culture predominant mode of literacy depends on the technology and media-sphere it embraces (Sinatra, 1986; Ahmed, 2017). In education's continuing mission of meeting the needs of the learner's, an apparent shift from (orthodox methods) the longstanding process of reading, writing, counting, and text memorization skills that may have been appropriate for the medieval clerks, are giving to skills of analysis, correct current approach that are considered desirable in today's modern culture (West, 1997; Ahmed & Watila, 2019). The most sophisticated animatronics' and mediasphere can be created in our thoughts as we can select different types of thought-based "visual" and "audio" effects as well as "actors". In other words, we have unconstrained amounts of materials to choose from to design our thought-based mediasphere structure

Currently, we do not have the knowledge for any direct interface and transfers of ideas between humans and technology and we rely profoundly on the use of text for information transfer and storage. One day, it will be possible to fashion the most sophisticated animatronics and mediasphere in our thought; and then utilizes the technology to capture and store them directly. Therefore, the technology will play a significant role in the conveying our knowledge and ideas onto storage gadget for future reference and other people's use.

The employing of different sagacity's for information anthology, analysis and remembering is somewhat which our brain can dispatch too very well. It should be stress that images and sound do not always have to be actual; they can also be virtual. Virtual images and sound can be "seen" and "heard" in our mind. Perchance the virtual-visual features of our mind are the most active part in creating thoughts. When there are no images thinking is not possible, (Aristotle as cited in Ahmed, 2017) he was probably referring to virtual images created in the human mind. We can with the human eye, visualize images of ideas. The exploit of the early graphical-based writing is also an exhibition of the early human beings close association with images for

transfer and recording purposes. The exploit of images and symbols in this fashion led to growth of hieroglyphics.

The symbolic writing progressively evolved into the alphabetic depiction of the various phonemes exploit in the language and for centuries language (spoken and written words) has been the most popular method of communiqué. It has been demonstrated by many columnists and lyricists over the centuries that text (language) based information can also create and print the dramatic images of events, actions and situations in our mind.

### **‘Mediacology’ and Scholarship**

There is no doubt that a dedicated, dexterous and knowledgeable teacher who uses verbalization, illustrations, textuality, and processes quietude and keenness to repeat and network with students is perhaps the ideal learning facilitator. This form of learning is almost certainly the most effective type of “mediasphere” learning too. It is rather hard to beat this kind of face-to-face learning. In addition to have visuality, acousticity, textuality and other types of learning style preferences, in a face-to-face situation we even utilize body language to buttress the style.

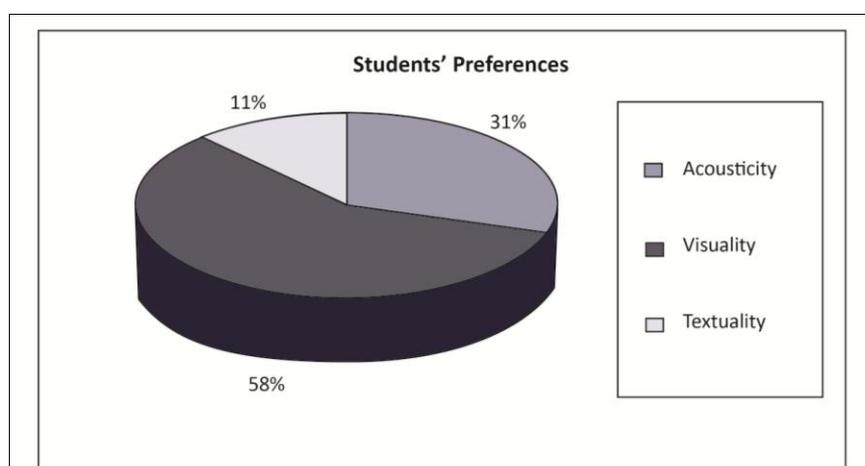
A fleeting look at the audience (learners) and interpreting their facial expressions to assess whether they fully decode is only possible in orthodox way of teaching. Hence if we can use reading /lecture notes and teach a subject in face-to-face mode, then why do we need to replicate that process by creating computer based ‘mediasphere (Hirmilton, 1999, Lowe, 2001)’ The purpose is to motivate (not necessary emulate) the pedagogical atmosphere and make it available for those who are unable to attend lectures and tutorials (face-to-face session) due to distance or enrolment mode. They can then have the openings of re-creating the classroom situation to suit preferences.

‘Mediacology’ teaching resources can provide further backing for the learners in terms creating the indispensable images and sounds during their learning. It also enables them to have more control in learning process. A less language dependent approach in teaching/learning resources may allow us to cross the language hurdles and make a noteworthy contribution towards globalization of learning. For paradigm, we may negotiate and encourage the use of more non-text based materials ‘in the form of model maps and (hilarious) computer graphics.

The postmodernist advancement (technology) is changing and new ideas are being introduced all the time. For case in point, speech recognition will almost certainly make a significant contribution in transforming the means of dealings with computers. Other technologies such as virtual reality will allow the learner to be a part of the learning resources and play imperative role in the future ‘mediasphere’ structure. The medium of body language however is probably less likely to be a part of any near-future computer based mediasphere structure. Who know, in a not too distance future; we may be able to achieve that too.

### **Effective Computer-based Mediacology**

Based on an appraisal conducted on senior secondary students (SSS1) in Maiduguri metropolis, Nigeria (2019) it was confirmed that a significant percentage of the students had a preference for visuals (graphics, images and diagrams) see Figure 1.



**Figure 1-Senior Secondary School Student’s learning style preferences**

In addition to catering for different learning style preferences such as ‘visuality’, ‘acousticity’ and ‘textuality’, teaching resources, despite the medium or mode, should also be based on established learning

theory and ideology. For paradigm, heartening the learner to build on what they already know is an effective teaching approach. This may be carried out by making available to learner a reference point or base and then guide them to expand their comprehension. The analogy would be similar to given the student the skeleton and then helping them to put the flesh on it.

Interesting approach has been put forward by well known language scholars Thomas, 2000, Slowell, 1991. They espouse a less formal but very effective approach, which places an emphasis on understanding rather than memorizing. With this method, the learners do not need to take any notes, read from a book or even do any homework. The scholars did encourage the learners to construct their own learning material based on what they already know. The same or similar approach may be applied to a variety of discipline areas.

Erudition by association is another effective teaching and learning *modus operandi*. As suggested by (Gruenberg, 1994, Nelson, 2000), the learning by Association approach has been in existence since the ancient times. Ancient Greeks measured this method an efficient way of learning and remembering. Concepts and information can be allied to images or other easily remembered situations. These prompters are just memory grips which help the learner to remember and recall. These features should, when appropriate, be incorporated into a 'mediacological' resource.

Designing mediasphere resources; we should also consider the fact that different sagacity's invoke different part of the brain (Ahmed & Watila, 2018). For paradigm, the right-brain (Hemispheroid) is the creative, innovative part and the left-brain (Hemispheroid) is more sequential and diagnostic. So, balancing the process of information reception using different sagacity's will allow us to exploit the full set of the brain. Although, we may label ourselves as having a preference for either 'textuality' 'visuality' or 'acousticity', we exploit all of them. Text based information may not appear to represent images and sounds. But it can create the most flamboyant visuals in our mind. After all, writing originates from the mind-based images, sound and actions. This has been demonstrated by columnists and lyricists for centuries.

As declared earlier the text-based information should be able to create effectual and sophisticated virtual mediasphere in our mind. Hence, we do not have to convert every piece of information into real images and sounds (mediasphere). Firstly, we have to pay attention to cognitive loading. As suggested by Liih-juan 1997; Mayer & Moreno 2003; C lark & Lyons 2004, the use of more than two modes can cause cognitive loading in the learners. Cognitive Load Theory put forward that when large amounts of information are presented at one time the learner can experience cognitive overload in working memory, as working memory has a restricted capacity. In effect the learner becomes harassed with what is being presented, resulting in a loss of direction and focus

## **II. MATERIAL AND METHODS**

### **Web Enhanced Mediasphere Learning Pedagogy**

WEMPLP for project organization is based on the replication of the way project organization is taught within an undergraduate course at university of Maiduguri (UNIMAID). It assimilates established didactical concepts and the most modern in web-based mediasphere design.

In display to avoid or at least curtail cognitive overload, teaching resources are presented in a sequential and stepwise manner in WEMPLP. WEMPLP achieves this by firstly, scaffolding the learning and secondly, by given more systematize of the presentation to the learner. By breaking down a presentation into a number of learner systematized, step-by-step segments, rather than being one unremitting presentation, learners can decipher a large number of different concepts (Schnotz, 2002, Hollister & McGahey, 2001). A fitting analogy would be the way Dynamic Programming approaches solving reasonably complex challenges by breaking down to a number of sub-challenges, solving these smaller challenges and then finally putting the sub-solutions together to produce the main solution,(Maddox 1997,Nooriafshar, 2002). However, it should be re-emphasized that a mediasphere presentation containing too many imbedded controls, also discussed above, might limit the effectiveness and efficiency of the learning event, actively retarding assimilation (Miller 1956; Lai, 2000). The next phase presents the findings of how WEMPLP was exploited as an instrument to determine student's preferences for learning in a multi-sense manner.

### **Appraising a mediasphere's learning Method for Users' Learning Outcomes**

An appraisal of 100 Economic education students from University of Maiduguri (UNIMAID) and Borno College of education, Maiduguri (BOCOLES) were chosen to partake in the analysis. The objective was to identify the learning effectiveness of the same system (WEMPLP) on these users (learners) and determine the learners' learning style preferences. These students were given the chance to use the structure on their private certainty and then complete the online analysis questionnaire.

### III. RESULT AND DISCUSSION

A large fraction of the students who use the system indicated an encouraging experience with the mediasphere's way of learning. See Figure 2

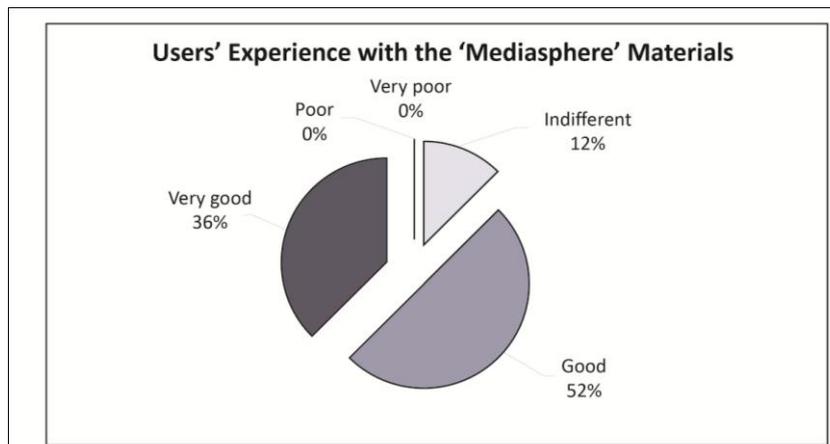


Figure 2-Users' Experience with the media-sphere teaching materials

Whilst the statistics was further analyzed it was found out that the preference for learning by exploiting different sagacity's ('visuality' 'acousticity' 'textuality') was certainly high amongst the users.

Figure 3 typifies the students' learning modal preference with regard to the WEMLP media-sphere structure. Visual features and interaction with the system appear to be most popular amongst the users.

Almost every user who favored the system's interactive (iconographic) tools suggested that minimalism of understanding was the *raison d'être*. A very high level of preference for all types of approach clearly indicates that there is a desire for using a number of sagacity's in didactical media-spheres. It should be cited that giving choice for enabling /disabling mediasphere features to users is important. In addition to curtailing the cognitive loading challenges, the ability to choose gives the students a feeling of being in control.

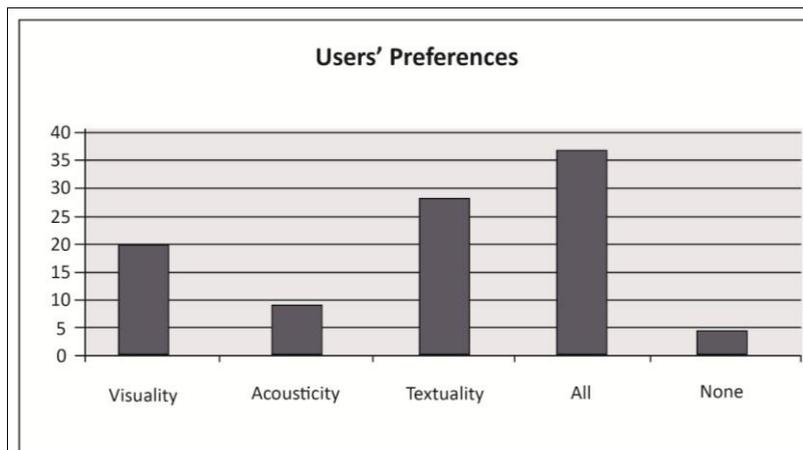


Figure 3: Users' learning style preference

Figure 4 designates that students found the mediasphere materials less time overwhelming compared with the text-based materials. As shown in Figure 5, the majority (above 80%) of the students have reported either very positive or positive influence on their understanding by the mediasphere materials.

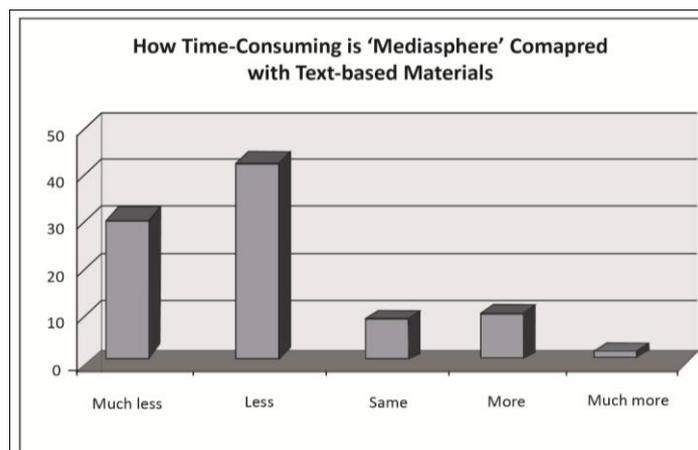


Figure 4: Comparison of time spent on mediasphere with the text-based materials

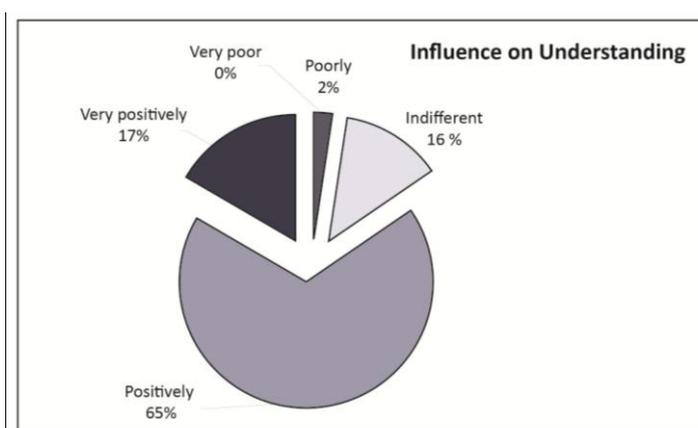


Figure 5: The way that mediasphere influenced the user's understanding

It is noteworthy to cite that closer breakdown has specified that approximately 83% of the students who regarded the mediasphere way of learning highly effective (standing of 10 on a 1-to-10 scores) had specified that they had a great deal of experience with computers and Internet related technologies. About 74% of the same students have also signified their very high level of delight in using mediasphere materials most especially it iconographies.

This finding would perhaps suggest that a belief and active interest in the postmodernist advancement associated with computing are certainly causative dynamics in successful exploitation of mediacological products. As was cited earlier, human beings' preference for knowledge acquisition and processing has its roots very deeply established in the use of a number sense's. Hence, computer based mediasphere products can play a very important role in providing the additional backing for achieving the mediacological approach to learning.

#### IV. CONCLUSIONS

The 'mediacology' for learning was found to be very effective modus operandi according to the students who participated in the scholarship. The preponderance of the students who regarded mediasphere an effective method of learning also had a very active interest in the use of computers and the Internet related knowledge. The scholarship found that students, who enjoy using computers and related technologies, also enjoy and benefit from a mediasphere learning pedagogy.

This exhibits that a background and an exposure to postmodernist's advancement would certainly help students in the use of mediacological products, it is reasonable to predict that this will not be a challenge or an issue in a few years time as the latest generations of students have been growing up with computer and computer technology interconnected products around them.

*It can be concluded that the majority of the learners represented by samples of this scholarship (Snowball sampling technique from University of Maiduguri and Born college education Maiduguri, Nigeria) have a preference for utilizing a number senses for knowledge acquisition ('visuality' 'acousticity' and 'textuality'). This finding is compatible with the human beings' well established desire and preferences for information collection, processing and storage using sagacity's.*

## REFERENCES

- [1]. Ahmed, O. A. & Watila, M.M. (2018). Implication of Hemispheric task for Effective Art teaching Skills. *The Artist Journal. (TAJ) A Journal of Faculty of Environmental Studies*. University of Uyo, Volume, 2 No.3 pages, 31-40
- [2]. Ahmed, O.A (2017) Effectiveness of Talking Drawing and Conventional Science Teaching Methods Teaching Basic Technology in junior secondary schools. Med in curriculum and instruction submitted to the Department of Education University of Maiduguri April 2017. Unpublished.
- [3]. Clark, R. C. & Lyons, C. (2004). *Graphics for learning; Proven guidelines for planning, designing, and evaluating visuals in training materials*. San Francisco ; John Wiley & Sons.
- [4]. Hamilton, J.(1999), "The Virtual Tutorial Gallery: Dialogic Approach to Multimedia and Art History Education "Computer and the History of Art 8(2), 19-24.y
- [5]. Lai, Shu-Ling, (2001). 'Controlling the display of Animation for Better Understanding' *Journal of Research on Technology in Education*, 33(5), Summer
- [6]. Lih-Juan, C.(1997), The Effects of Verbal Elaboration and Visual Elaboration on Student Learning. *International Journal of Instructional Media*, 24(4), 333-40.
- [7]. Lowe, R. (2001), "Understanding Information Presented by complex Animated Diagrams." In *Multimedia Learning: Cognitive and Instructional issues*. Edited by J. Rouet, J. Levonen and Biareau. London: Elsevier Science.
- [8]. Mayer, R. E. & Moreno, R. (2003). Animation as an aid to multi media learning. *Educational Psychology Review*, 314,87-99.
- [9]. Maddox, J. (1997), "Web-based Distance learning" Paper delivered at College Art Association Annual Meeting. Available at <http://www.personal.psu.edu/faculty/j/x/jxm22/CAA/JMCAApaper.html>. & McGahey, L. (2001
- [10]. Mehotra, C., Hollister, C. & McGahey, L.(2001). *Distance Learning Principles for effective design, delivery, and evaluation*. Thousand Oaks, CA: Saga Publications.
- [11]. Nelson, R. (2000). "The Slide Lecture, or The Work of art in Age of Mechanical Reproduction" *Critical Inquiry* 26, 414-434.
- [12]. Nooriafshar, (2002). "Use of Web-Based Multimedia Technology in teaching and learning Mathematical Programming", *Journal of Computer in Mathematics and Science Teaching* 21(4), 333-349. [Online]. Available: <http://www.aace.org/dl/index.cfm/fuseaction/View/paperID/10628>
- [13]. Schnotz, W.(2002). 'Enabling, Facilitating, and Inhibiting Effects in Learning from Animated Pictures', In R. Ploetzner (Ed.). *International Workshop on Dynamic visualizations and Learning*, Tubingen, Germany: Knowledge Media Research Center
- [14]. Sowell, J (1991). "Learning cycles in art History." *College Teaching* 39:1. 14-19.
- [15]. Sinatra, R. 91986). *Visual Litteracy Connections to Thinking, biding and writing*. Spring field. IL Charles C. Thomas.
- [16]. Thomas M. (2000), *Spanish with Michel Thomas (Introductory Course CD)*, Hodder & Stoughton Educational Division.
- [17]. UNESCO (1999). *The Revival of the Ancient Library of Alexandria*, (1999), Retrieved 16 May 2018 from <http://www.uneso.org/webworld/alexandria-new/historical.html>.
- [18]. West, T. G.(1997). *In the mind eye*. Anherts, Nyi Prometheus Books 8.

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