

"Engaging Minds: A Survey of Successful Approaches in Multimedia-Based Education"

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Abstract:

The point of view taken in this paper is that innovation is an incredible asset for supporting college guidance yet not as an end in itself. Subsequently, organizations can utilize it to engage and lock in understudies for scholarly, profound, social and financial turn of events. The paper presents the consequences of a concentrate on the effect of reproductions and computer generated reality on college understudies' accomplishment and their disposition. These are then talked about with regards to explicit media qualities. The scientist utilized a blended technique plan and inspected speculations for impact as well as dissected subjective information for expressed suspicions. The basic hypothesis for the review is that reenactments and computer generated reality might rejuvenate instructing by making a nonexistent life experiential learning. Typically, these kinds of media don't just have

illustrations, sound, video, text, and embellishments that improve the general allure of educating, they additionally permit understudies to encounter genuine circumstances vicariously. Understudies can insight previous occasions, current patterns, and future prospects and furthermore cooperate with one another. Through intelligent support by the understudies, sight and sound programming allowed legitimate reasoning, critical thinking, speculation testing, derivation and numerous exercises of higher request thinking. Virtual experiences introduced potential to make perplexing and testing understudy exercises. On the other hand, computer generated reality can possibly transport the personalities of understudies into a given arrangement of encounters. Understudies felt that they were in fact in the experience they were watching on the screen. Augmented reality experience brought about

learning that interfaces the understudy with their feelings, mental abilities, and actual sensations. Such experience advanced memory of content learned. This study tried to explore the effect of sight and sound on creating and accomplishing examination and appraisal abilities and disposition of formative brain research understudies at the College of Botswana. Expanding on hypothesis, a virtual brain research lab was made to prepare understudies to recognize human improvement issues and learn methodologies for critical thinking. Understudies were subsequently analyzed for further developed learning, obtaining of abilities, information and demeanor. The outcomes show that there are various advantages for locking in mixed media in educating. The paper reasons that there is a requirement for changing instructing strategies to engage understudies by embracing innovation.

Keywords: Multimedia-Based Education, Virtual Reality, Simulations, Higher Order Thinking, Experiential Learning, Educational Technology, Student Engagement, Academic Development

I. Introduction

Sight and sound is a blend of more than one media type like text (alphabetic or numeric), images, pictures, sound, video, and movements typically with the guide of innovation with the end goal of improving comprehension or retention (Guan et al., 2018).

It improves expression and comprehension by utilizing static and dynamic images in the form of visualization technology to support verbal instruction (Alemdag and Cagiltay, 2018; Chen and Liu, 2008). The equipment and programming utilized for making and running of media applications is known as interactive media innovation (Kapi et al., 2017). Mixed media innovation has a few qualities like joining, variety, and cooperation that empower individuals to impart data or thoughts with computerized furthermore, print components. The advanced and print components in this setting allude to sight and sound based applications or instruments utilized to convey data to individuals for better comprehension of ideas. Without a doubt, different parts of human undertakings, particularly the instructive area, are being changed by the coming of Data and Correspondence Innovation (ICT). ICT includes the utilization of equipment and programming to gather, handling, putting away, introducing, furthermore, sharing of data for the most part I computerized structures. Information can be digitally represented and presented using a variety of media, including text, audio, and video, in the field of multimedia technology (Guan et al.,2018). It includes the blend of a few advancements give data in the most ideal configurations, bundles, and sizes. Be that as it may, when utilized in the study hall or for instructive purposes, the plan quality and refinement of sight and sound application should be high enough to consolidate the various components of the mental cycles so as

to accomplish the best imitating of the instructor. There are various kinds of media applications accessible in the market today. These applications have been conveyed for various instructive purposes, for example, the works conveyed for Math classes, Sociologies, Sciences, etc. The focal issue, in any case, continues as before. That is, the issue of figuring out how to use the applications to give students a stimulating experience by giving them information that helps them understand concepts better. While it is vital to foster different applications for powerful showing conveyance, every one of these applications has its own concentration region, quirks, target age, benefits and negative marks. Accordingly, the scientific classification what's more, part blend for the advancement of the mixed media application should be broadly explored as these would influence the showing conveyance, learning and more extensive appropriateness. A portion of the mixed media arrangements have been sent, tried and recorded critical achievement, while some didn't record negligible achievement. The examples of overcoming adversity additionally fluctuate with area, target age and arrangement purposes. Hence, the point of this paper is to give an orderly survey of the logical distributed examinations that inspected different media devices in the educating and growing experience with a view to recognizing the current interactive media based apparatuses, understanding their use, application regions and effects on schooling system. All together words,

the review, through an orderly survey of writing, focuses on distinguishing the current mixed media based apparatuses for instructing and learning; grasping their utilization and restricting variables, application regions, assessment techniques, innovation parts combination and influences on schooling system.

To this end, the review is directed by the accompanying exploration questions:

- (1) What are the current sight and sound devices in educating and learning?
- (2) What sort of mixed media part fits a group of people?
- (3) What sorts of sight and sound parts are embraced in the current instruments?
- (4) What assessment approaches are helpful for effective result?
- (5) What variables help achievement or disappointment in the utilization of media devices for instructing and learning?

The result of this study is pointed toward filling in as an aide for educators also, training directors while choosing sight and sound devices and applications for showing in schools. Thus, in this review, the scientific categorization and part blend of some broadly referred to media applications are given. Different contextual investigations and results are inspected. Besides, hindrances restricting the use of ICT and media in educating and learning are distinguished; also, a few unsettled cases and

future exploration choices are framed. The resulting portions of this paper incorporate Segment 2, which is the writing audit that analyzes sight and sound innovation and its place in educating and learning; The research methodology, section 3; Segment 4, show of results; Area 5, conversation of the discoveries; what's more, Area 6, the end, proposals and ideas for future work.

II. Literature Review

In HCI, client connection has been broadly concentrated on in view of mental results be that as it may, hardly concerning the job of feelings (Yan et al., 2008). In any case, NEW Survey OF HYPERMEDIA AND Mixed media 3 studies have shown a critical connection among HCI and feelings (Gratch, Marsella, and Petta, 2009) and have called for investigating this relationship to more readily comprehend clients' experience on the web (Harper, Rodden, Rogers, and Sellen, 2008). There are three prime areas of profound exploration in processing; full of feeling registering, emotional collaboration and innovation as experience (Höök, 2013). This study underlines on "innovation as experience" as it centers around plan issues connected with style and clients' insight. Hypothetically, feelings could be incited in light of the appeal of the visual plan (Um, Plass, Hayward, and Homer, 2011) and via cautious determination of emotional quality (profound worth) of the sight and sound components (Knautz, 2012; Zhang, 2007). Likewise, profound plan (Norman, 2004) additionally

portrays style (instinctive) as critical in impacting discernment, discernment and plan of utilizing an item. As style is the underlying experience, the reception of an item and its effective execution really relies on how the clients are interest and later happy with their collaboration. Be that as it may, what is delightful is emotional, subsequently planning for it is likewise abstract. Through and through, planning for feel is moreover planning for feelings (Idler, 2012) and it is attainable by the amicable utilization of varieties (Höök, 2013), Gestalt impacts (Sutcliffe, 2009), emotional pictures, liveliness, sound, video, and furthermore through text/textual style (Dong, 2007, 2010). As per Doorman (2017), the utilization of style in training isn't tied in with changing the contents, planning new sort of craftsmanship or supplanting center informative plan models like ADDIE, however to be a free perspective to the opportunity for growth that makes connecting with association. For that reason, we really want to investigate client experience and how clients relate and see a learning instrument. In this way, learning devices are seen as an item and not exclusively a device that is utilized to move items to the clients. Profound plan gives a model that acclimatizes intriguing and important components that inspire learning (Uzun and Yıldırım, 2018) and it depends on item plan hypotheses that feature similar close to home associations like figuring out fulfillment furthermore, inspiration. Therefore, this additionally implies that teachers and planners

are looked by a test that requires the replication profound communications between an educator and an understudy like commitment, inspiration and fulfillment to be likewise imitated in a web based learning stage (Nurminen, Leppänen, Väättäjä, and Ihantola, 2017).

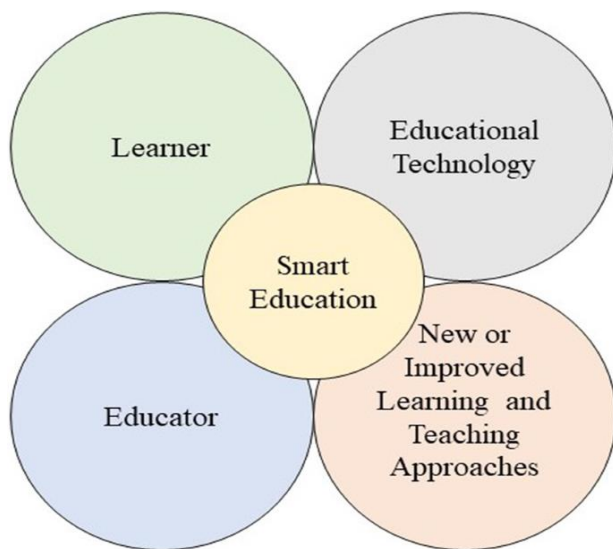


Image.1.1 Smart Education.

2.1. Planning feeling for media learning One of the strategies usually utilized for planning feelings in web based learning is by applying tempting media subtleties to make commitment. Nonetheless, studies have shown that these tempting subtleties might not have really improved the opportunity for growth (Uzun and Yıldırım, 2018) as there is no harmonization with mental hypotheses of learning (Heidig, Müller, and Reichelt, 2015; Mayer and Estrella, 2014). In view of earlier examinations on profound plan in sight and sound 4 J. A. KUMAR ET AL. learning, the attention has been on planning for positive feelings which are marked as certain plans and contrasting it with nonpartisan plans. Media components that reflect positive feelings, like bliss and satisfaction, are portrayed by utilizing splendid

warm varieties (Dong, 2010; Plass, Heidig, Hayward, Homer, & Um, 2013), explicit textual styles (Shaikh, Chaparro, and Fox, 2006), positive emotional pictures and recordings (Knautz, Neal, Schmidt, Siebenlist, and Stock, 2011). A nonpartisan plan, then again, is characterized as a plan that is neither positive nor negative (Plass et al., 2013). In any case, plan that is characterized as "negative" is understudied and we question the impacts of such bad plans in the learning climate. It was hypothesized that to plan for gloomy feelings is to configuration in light of the portrayals of gloomy feelings like misery and outrage and simultaneously something contrary to positive plan. Moreover, planning for gloomy feelings could sound ludicrous and against plan standards. In any case, just to affirm, negative plan doesn't mean negative convenience. Here we perceive negative plan here as something contrary to positive plan. In this manner, when positive feelings are intended to depict satisfaction, the inverse that is by applying dull tones that hypothetically depict misery. Regardless, we addressed assuming that dull varieties were really adverse to learning and if the inclination might be pertinent to individual attributes. Also, negative feelings have additionally been viewed as advantageous to learning (Knautz et al., 2011; Um et al., 2011). Consequently, an examination hole was obvious in investigating negative feelings in plan (Dong, 2007; Unmistakable et al., 2018) like the impacts of pessimistic visual style (Tractinsky, 2013). Then, as per Mayer and Estrella (2014)

and Plass, Homer, and Kinzer (2014), one of the primary jobs of profound plan in sight and sound learning is to further examine how it connects with the Mental and Full of feeling Hypothesis of Learning with Media (CATLM). Sight and sound based models, like The Coordinated Model of Mixed media Intuitiveness (Associate) (Domagk, Schwartz, and Plass, 2010) and Coordinated Mental Full of feeling Model of Learning with Interactive media (ICALM) (Plass and Kaplan, 2015), have featured the need to comprehend the qualities of students in view of metacognitive intercession and person contrasts. In this review, we investigated the interceding job of the capacity to understand anyone on a profound level (EI) on learning results in close to home planned mixed media based learning climate. This is in accordance with research centering in grasping how innovation can assist with creating the ability to appreciate people on a profound level (EI) (Furger, 2014; Pappas, 2015) and how non-mental states (nervousness, transparency and reliability) connect with the utilization of mixed media components (Leutner, 2014) in a learning device.

2.2. Significant investigations on mixed media prompted feeling in e-learning frameworks As per Uzun and Yıldırım (2018), research on profound plan in media advancing generally centered around utilizing varieties, humanoid attribution and babyNEW Audit OF HYPERMEDIA AND Sight and sound 5 face inclination which were intended to address positive feelings which were then, at that point, contrasted with nonpartisan plans. Regarding

the examinations around here, the most generally concentrated on mixed media point of interaction depends on the first concentrate by Um (2008) on "How vaccination works". It is a 7-minute mixed media based illustration that is intended to instigate positive inclination in light of warm variety and humanoid attribution. The control variable, which is the nonpartisan plan, was planned in dark scale without humanoid attribution. It was viewed that as sure configuration was more gainful than impartial plan as to learning accomplishment, inherent inspiration and the general view of learning. Utilizing the same media example with variety in variety and shape, Um et al. (2011) found that a genuinely planned framework impacts learning result regardless of mental exertion or inspiration and doesn't increment mental burden. A comparative report found that tone alone didn't impact understudies' inclination (Plass et al., 2013) and close to home plan just better learning inspiration also, not fulfillment nor learning accomplishment. Utilizing a similar plan (colors furthermore, humanoid attribution) with eye following innovation, it was seen that as close to home plan (with humanoid attribution) and understudies' personal state impacted learning results intellectually and emotionally (Park, Knörzer, Plass, and Brünken, 2015). What's more, humanoid attribution was found to have a positive influence on commitment (eye following) however didn't prompt positive feelings while learning. In a similar report, it was likewise revealed that style and ease of use

impacted learning results and characteristic inspiration. In another review, Uzun and Yildirim (2018) investigated how close to home plan in sight and sound learning affected center school understudies' feelings, mental exertion also, learning accomplishment through the variety of four distinct plans; brilliant, nonpartisan, humanoid attribution, and humanoid attribution with sound. It was observed that more mental exertion was required for the vivid plan in contrast with any remaining plans. Also, there was no distinction as to learning move; nonetheless, understudies who associated with the beautiful plan showed improved results than understudies utilizing different plans. Haaranen et al. (2015), then again, tracked down that with regards to applying profound plan in programming learning contents, understudies who were presented to human illustrations invest less energy on the learning material in contrast with those presented to extract designs. Respondents presented to human illustrations tracked down the learning material as less coherent and appealing, yet all the same no contrasts in understanding were seen between the two gatherings. Mayer and Estrella (2014) then again explored the impacts of genuinely planned media learning framework named "How Cold Infection Goes after the Body" and found that close to home plan further develops cognizance, propels understudies to set forth more energy, and was found to be gainful assuming that there is no time limit. Dong (2007) detailed that by utilizing a 4-minute interactive media learning

framework titled "How lightning structures" tracked down that tastefully planned framework (positive) had constructive outcome on client feelings contrasted with the impartial plans. It was

6 J. A. KUMAR ET AL. detailed that the positive plan further developed critical thinking abilities and both plans didn't influence review test. Heidig et al. (2015) examined how style (traditional versus expressive style) impacted learning result and found student's emot

III. Previous Research

Accordingly founded on the main examination question; does sincerely planned interactive media learning framework impact learning results? It was found that sincerely planned framework (PosD and NegD) further developed learning accomplishment in contrast with the NeuD framework. Comparative result was likewise announced in view of studies. Connection between configuration type and levels of EI on saw fulfillment. 16 J. A. KUMAR ET AL. done on an e-learning framework EWLearning (Ghali and Frasson, 2010) and emotionality in text (Obvious et al., 2018), where both positive and pessimistic plans helpfully affected accomplishment. In any case, this likewise goes against the discoveries from different investigations (Chaffar and Frasson, 2005; Khairudin, Givi, Wan Shahrazad, Nasir, and Halim, 2011) that tracked down bad plans as unfavorable. Concentrates on zeroing in on looking at positive and nonpartisan plan (Dong, 2007; Mayer and Estrella, 2014; Park et al., 2015) likewise announced tremendous

distinction in learning accomplishment between these two plans (positive and impartial); in any case, no examination was finished on the impacts of negative plans. In this manner, this persuaded this review. Looking at a vivid plan towards an impartial one ignores the idea of the present innovation insightful clients who are continually presented to style through client graphical communication. Unbiased plans which apply greyscale colors have been viewed as demotivating in on the web learning and adversely affect review test and learning accomplishment (Uzun and Yildirim, 2018). Notwithstanding, there was improvement in learning accomplishment for the nonpartisan plan and we contemplated this result as an impact of utilizing a PC based learning medium as opposed to their customary learning climate. On the other hand, the discoveries of this study recommend that negative and positive plans share comparative advantages on learning accomplishment regardless of whether the respondents performed somewhat better in the negative plan (not huge). We accept that this is ascribed towards designing understudies' self observer character that has been connected to inclination of the space specialized look as depicted in the negative plan (Kirkham et al., 2006). Comparative variety inclinations for elearning connection point were likewise revealed by Saleeb and Dafoulas (2011) in a review done on planning 3D virtual learning space for designing understudies. Also, the close to home plan urges understudies to invest more energy in learning

(Um et al., 2011) as it impacts generative handling (Mayer and Estrella, 2014). This I connected with the comprehension part of learning. In this study, tremendous contrasts between plans were just tracked down on learning accomplishment (mental) and not really for saw fulfillment and inborn inspiration (full of feeling). Likewise, Plass et al. (2013) and Um et al. (2011) detailed tremendous contrast in learning accomplishment and not in inspiration when they Figure 3. Graphical portrayal for the distinction of each plan bunch against various levels of EI. NEW Survey OF HYPERMEDIA AND Mixed media 17 looked at positive and impartial plans. We speculated that the oddity of the courseware regardless of the plan type was a tremendous overhaul from the conventional PowerPoint slides understudies are familiar with. The courseware too may have taken special care of their free learning style and decision of discipline (Jailani, Wan Mohd Rashid, and Ahmad Rizal, 2007), thus an addition in learning accomplishment. Consequently, Speculation 1 was dismissed as there were critical contrasts between sincerely planned media courseware (positive what's more, negative) with the nonpartisan plan.

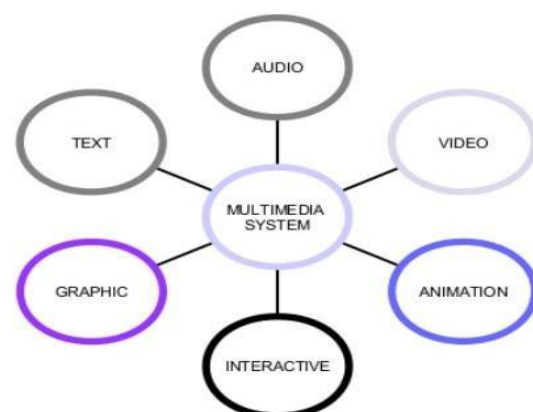


Fig.1.2 Multimedia System.

For the subsequent exploration question; does the ability to understand individuals on a profound level (EI) impact learning results when understudies are presented to media learning framework? In this review, it very well may be presumed that according to how close to home plan impacts the mental part of learning, the capacity to understand individuals on a deeper level influences the close to home viewpoint which is the inherent inspiration and fulfillment. High impact size gotten for both these results conveyed that independent of the plan type, EI impacts understudy's expectation of utilizing a learning framework and their level of fulfillment. Earlier investigations guarantee that EI impacts how clients adjust to e-advancing inwardly (Behnke and Greenan, 2011) yet littly affects their learning accomplishment (Lendi, 2011). EI has been found to likewise work on scholarly accomplishment as it impacts the feelings connected with taking care of instructive stress (Fayombo, 2012; Park and Lim, 2007; Stamatopoulou, Kargakou, Konstantarogianni, and Prezerakos, 2015); nonetheless, it doesn't intervene their learning accomplishment for a particular undertaking, action or course (Lee, Park, Ryu, Goodness, and Jan, 2012). Generally speaking, a better than expected mean score for the two degrees of EI showed that the two gatherings (HEI and LEI) saw that they have further developed in the wake of utilizing the learning device (Eow, Wan Zah, Roselan, and Rosnaini, 2010; Youn et al., 2010). We contemplated the massive contrasts tracked

down between the two gatherings as due to the characters of HEI understudies having low PC tension (Zare and Nouri, 2013) and were accounted for to by and large be more happy with e-learning instruments in contrast with LEI understudies whom lean toward conventional study hall setting (Kang, Kim, and Chong, 2011). In this way, Theory 2 was additionally dismissed as huge contrasts were found for profound learning results (characteristic inspiration and fulfillment) however not really for mental learning result (learning accomplishment) with respect to various degrees of EI. At long last, for the third examination question, is there a collaboration impact between profound plan and EI on the learning results? In this review, the main cooperation impact found between profound plan and EI depends on apparent fulfillment. HEI understudies will quite often lean toward plans that were sincerely planned, while LEI understudies showed inclination for impartial plans. As more mental exertion is required for profound plan (Mayer and Estrella, 2014), it suits the reasoning style and innovativeness of HEI understudies (Murphy and Janeke, 2009; Olatoye, Akintunde, and Yakasai, 2010) subsequently more significant levels of fulfillment. Furthermore, feel are likewise saw as animating for HEI people (Pappas, 2015) and they are ready to distinguish unequivocally with feelings depicted by media components 18 J. A. KUMAR ET AL. (Brackett, Streams, and Salovey, 2011). LEI understudies, then again, are not very OK towards feel (Carr, 2011) in this

manner recognizing better with nonpartisan plan. Thusly, Speculation 3 was additionally dismissed as tremendous contrasts were found between fulfillment, profound plan and EI and not for different factors.

IV. Conclusion

This study reasons that close to home plan is a valuable device in further developing understudies' learning results; notwithstanding, the student individual qualities addressed as their capacity to understand people on a deeper level were likewise observed to be urgent in understudies' adaption of plan and innovation. Moreover, we additionally explored the expected advantages of negative plan and found that it has comparable advantages with positive plan. We support the discoveries by (Obvious et al., 2018) as we too see that both positive and negative plans are more compelling in learning than a nonpartisan plan. Be that as it may, incorporating EI into this study has been a stunner because of feelings in this specific situation. EI has been viewed as a significant perspective in adaption to vague figuring innovation in e-learning and it is evident when we discuss planning feelings we ought to consider the effect of individual trademark that impact feelings like EI. We see that EI was a superior indicator of profound learning results (inborn inspiration and fulfillment) than close to home plan. Notwithstanding, we viewed as an cooperation impact among EI and profound plan for fulfillment which reflected how various levels were happy with each plan type. We noticed that understudies with low degrees of EI

were more happy with impartial plan in correlation with profound planned courseware. In this manner, we would likewise like new Survey of hypermedia and Interactive media 21 to add the significance of independence and versatility that are reflected through EI as a significant perspective to particularly be investigated as to internet learning through style.

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