

CHAPTER I

PROBLEM AND ITS SETTING

This chapter presents the Background of the Study, Statement of the Problem, Hypothesis, Conceptual Framework, Scope and Delimitation of the Study, Significance of the Study, Definition of Terms that are related to the study

BACKGROUND OF THE STUDY

In our research, we discovered a positive effect of convergence, such as how it helps students' education and how convergence helps humans in daily life. But as we were investigating, we discovered a positive aspect of convergence. It has improved access to educational resources and communication and made our lives easier. Information is now more accessible because of technology. We have the power to look up almost anything by using a computer or a phone. We have quick access to everything we want or need on the internet pretty much everywhere, whether when driving or even simply lying in bed.

Technology advancements have had a positive impact on students by providing them with greater access to educational resources, personalized and interactive learning experiences, and new opportunities for collaboration and engagement. With technology, students can now access information, communicate with their peers and teachers, and complete assignments from anywhere, at any time. Personalized learning experiences and interactive learning tools, such as virtual reality and simulation-based learning, have increased student engagement and motivation to learn.

Technology has improved accessibility for students with disabilities and has helped automate repetitive tasks, allowing students to focus on activities that require human attention and creativity. Furthermore, it has allowed flexibility to learn at their own pace and schedule. Overall, technology

advancements have empowered students to take control of their own learning, leading to a more efficient and effective education experience.

In the Philippines, technology plays a vital role in our lives. Technology has a major impact on education. Although many schools across the world are taking advantage of technology, others are not. Because of poverty, they can't provide gadgets such as smartphones, telephones, and the internet. Therefore, Manila Mayor Francisco 'Isko Moreno' Domagoso and DCS-Manila Superintendent Maria Magdalena Lim lead the ceremonial have been turned over to the Division of City Schools (DCS) free laptops, tablets, pocket wifi, and sim cards for use by teachers and students enrolled in different public schools with a total of 110,700 pieces of Cherry Mobile tablets, 286,000 pieces of Globe sim cards, 11,000 pieces of Avita laptops, and 11,000 pieces of pocket wifi being signed by Domagoso and Lim. According to Corcoran et al. (2020), a technology gap currently exists in schools in the Philippines that is preventing their students from enjoying the advantages provided by technology in the classroom.

In Montalban rizal Schools and other educational institutions are one of the most affected sectors or unit due to COVID-19 pandemic. Frontiers in several government decided to close schools for several weeks in spring 2020 due to the COVID-19 outbreak, Then Technology advancements have played a crucial role in facilitating online distance learning by providing students and teachers with the tools and resources needed to continue learning remotely. Online learning platforms, such as Learning Management Systems (LMS) and Virtual Learning Environments (VLE), have made it possible for students to access educational resources, assignments, and assessments from anywhere, at any time. Video conferencing tools, such as Zoom, Google Meet, and Microsoft Teams, have enabled real-time interactions and collaborations between students and teachers, allowing for synchronous learning.

Additionally, online communication tools, such as messaging and discussion boards, have made it possible for students and teachers to communicate and collaborate asynchronously. Access to educational resources, such as textbooks, articles, and videos, has been greatly facilitated by technology. Additionally, automation of mundane tasks such as grading, providing feedback, and tracking student progress, has allowed teachers to focus more on teaching. Furthermore, technology enables the adaptability to changing situations, such as school closures and social distancing measures, providing continuity of learning. Overall, technology advancements have been vital in making online distance learning a viable and effective option during times when in-person learning is not possible.

The researcher choose This study because we want you to know how convergence helps Students on AICS Montalban. We believe that now is a great opportunity to study it since it has proven to be very useful in today's time, as it has surpassed what we are experiencing in today's pandemic.

The researcher expect this study will be a good outcome and will assist the future Senior High student by giving important information and share some knowledge need about Technology advancement

STATEMENT OF THE PROBLEM

This study generally aims to determine how convergence helps students in San isidro Senior High School montalban Rizal. It aims to show how technology advancement helps both academic and well-being performance.

Specifically, this sought answer to the following questions:

1. How convergence helps students during quarantine?
2. Is there a significant relationship between convergence and Grade 12 Senior high School students?
3. what is the impact of Convergence on students' academic performance?
4. how does convergence help Students with their academic performance in terms of:
 - 4.1 Convergence makes it easier for students to find information quickly and accurately.
 - 4.2 Technology advancement gives students the opportunity to learn anywhere and at any time.
 - 4.3 Because of convergence, many students can attend their online classes during a pandemic.
 - 4.4 Students can improve their learning and cognitive skills, which helps them improve both their academic performance and mental health.
5. What is the demographic profile of the student respondents in terms of:
 - 5.a Age
 - 5.b Sex
 - 5.c Year section
 - 5.d Course

HYPOTHESIS

There is no significant relationship between profile of respondents and their challenges on Technology advancement.

CONCEPTUAL FRAMEWORK

The researcher adopted the input process output (IPO) model. It includes all of the materials and the information that are required in the process. The specific details of the process itself, and the guide on evaluation of The impact of technology advancement of student. The concept model, as shown in the Figure 1. it shows what is the process on determining of what are the Impact of technology advancement, also how technology advancement help students

For input, it consists of the respondents profile and question where researcher going to ask related to this study. Usually, all the details specified in the statement of the problems are stipulated here.

For process, it includes questionnaires that were utilized, the observations that were made. The statistical analysis of data and determining the challenge and how technology advancement help students

For output it shows how technology advancement help student with or without pandemic

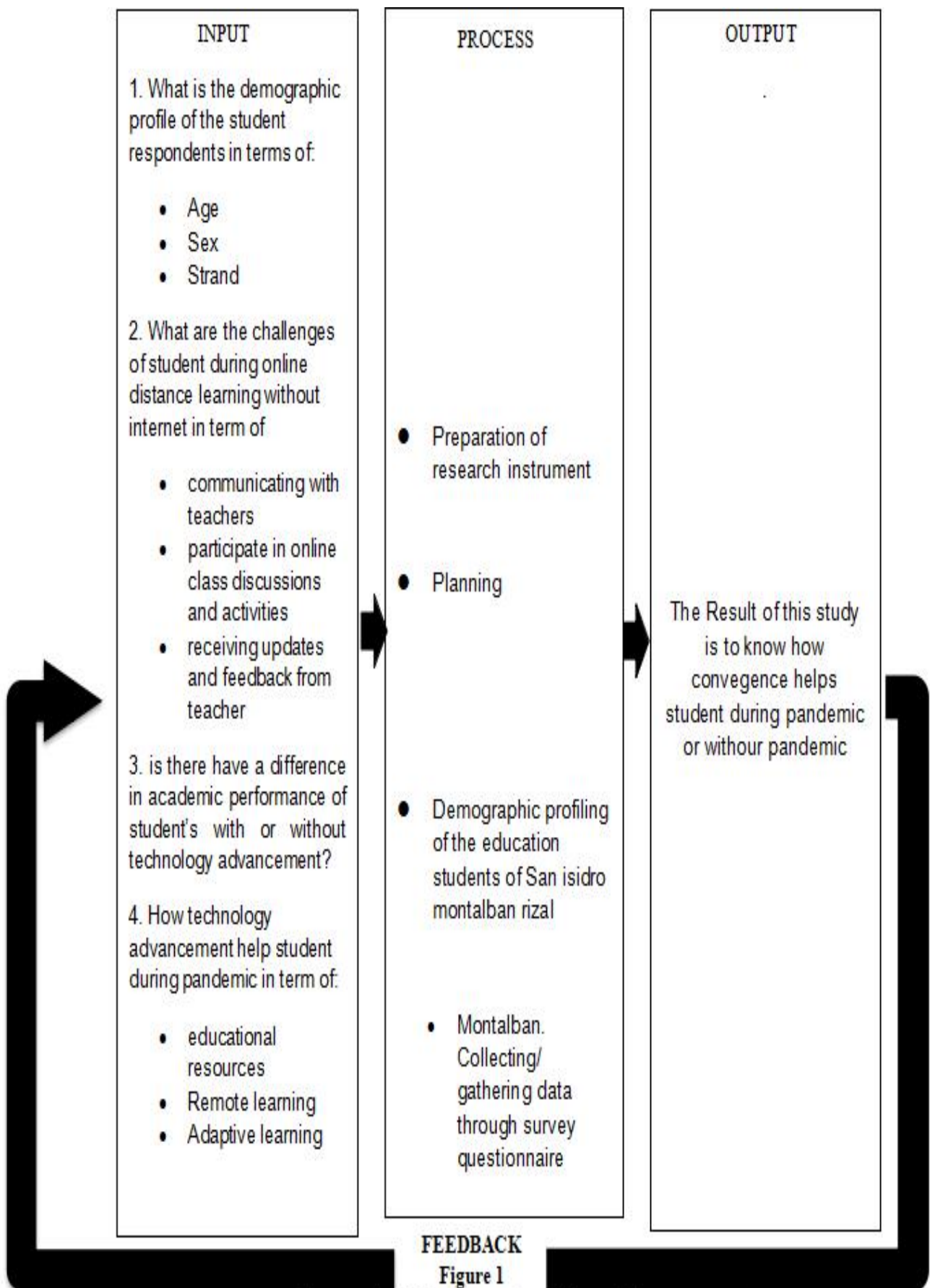


Figure 1

Conceptual Framework of the study

SCOPE AND DELIMITATION

The study will focus on how convergence helps grade-12 students in San isidro National High School. the respondents of this research consist of grade-12 students in San isidro National High School. however, there are some examples of convergence that will be addressed, and what is the reason why we use it nowadays in the school of San isidro montalban Rizal.

The boundaries of the study only focuses at the grade-12 students in San isidro montalban rizal to determine how the use of convergence can be significant in our daily task. This study will not extend factors such as the convergence in other countries, which is why our country has poor or slow progress in technology than others.

SIGNIFICANCE OF THE STUDY

The result of this study would be beneficial to the following:

Students: this study helped students of San isidro Montalban rizal to maintain of using technology and how our daily task can be easier using of it.

Professor/Instructor: This research can be the best benefit to our professor/instructor, especially nowadays to enlighten more lessons to the students.

Parents: This research can help parents to make a communication with their children at school or make an update.

Future Researchers: This would be beneficial to future researchers, it may serve this as their guidance to gather necessary information or useful reference related to this study

School: The result of this study help them determine challenges among their students, it will also help what specific needs they should focus more and futher enhance the learning achievement of the students.

DEFINITION OF TERMS

For further understanding of the study, the following terms were conceptually and operationally defined.

Convergence. According to Wikipedia the evolution of things as a whole, refers to the gradual development and improvement of technology over time. It encompasses the invention of new technologies, as well as the refinement and expansion of existing technologies.

Technology. According to Cambridge Dictionary Technology refers to the tools, methods, and processes that are created by humans to solve problems and achieve specific goals. This can include a wide range of things such as machines, hardware, software, and systems. Technology can also refer to the knowledge and expertise that is used to create and operate these tools and systems.

Education. According to Wikipedia Education is the process of acquiring knowledge, skills, values, beliefs, and habits. It involves the development of the intellect and the ability to think critically and creatively

Advancement. According to Wikipedia Advancement can refer to the process of making progress or moving forward. It can refer to the development or improvement of something, such as technology, education, or society.

Information. According to wikipedia Information refers to knowledge or data that is conveyed or represented in a particular form, such as through words, numbers, images, or sounds. Information can be true or false, and it can be used to describe, explain, or understand a wide range of phenomena, from physical systems to social and cultural practices.

Pandemic. According to wikipedia A pandemic is an outbreak of a disease that occurs over a wide geographic area and affects an exceptionally high proportion of the population. A pandemic is different from an epidemic, which is a sudden outbreak of a disease in a particular area.

Quarantine. According to Wikipedia Quarantine refers to the isolation of individuals or groups of people who have been exposed to a contagious disease, in order to prevent the spread of the disease to others.

Demographic. According to Wikipedia Demographics refers to the statistical characteristics of a population, such as age, gender, race, income, education level, and occupation. These characteristics can be used to group and understand different segments of a population, and to identify patterns and trends within a population.

Constructivism. According to Wikipedia Constructivism is a theory of learning that emphasizes the active role of the learner in the learning process. The theory posits that individuals construct their own understanding of the world through their experiences and interactions with it.

Psychosocial. According to Wikipedia Psychosocial refers to the interaction between an individual's psychological and social experiences and how they influence each other. It is a perspective that takes into account the impact of social and cultural factors on an individual's mental and emotional well-being.

Proficiency. According to Wikipedia Proficiency refers to the level of skill or expertise in a particular area or task. It can refer to the ability to perform a task or activity at a high level, and it is often used to describe language proficiency, meaning the ability to speak, read, write and understand a language.

Utilization. According to Wikipedia Utilization refers to the act of using or making use of something, such as a resource, service, or facility. It can refer to the extent to which something is used or the degree to which its potential is realized. Utilization is often used in the context

NOTES

MANILA – The free laptops, tablets, pocket wifi, and sim cards for use by teachers and students enrolled in different public schools in Manila have been turned over to the Division of City Schools (DCS) Monday.

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State of the World's Development of technology advancement all over the world

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Coronavirus disease (COVID-19) in the Philippines ... Chances are someone in your family is infected with hepatitis virus, but might not be aware of it.

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CHAPTER II

REVIEW OF RELATED LITERATURE AND STUDIES

This Chapter Consists of the review of related literature and studies both foreign and local, and the similarities and differences of these researcher were established in relation to present study

Local Literature

According to Dela Pena-Bandalaria, M. (2014) The influence of Convergence Technology advancement in open and distance learning (ODL) in a developing country, the Philippines, is critically evaluated. They examines how Technologies have influenced or shaped the development of ODL in this country. Also examined are the different stages or generations of distance education (DE) in the Philippines, which are characterized mainly by the dominant technology used for the delivery of instructional content and student support services. technology-driven system of teaching and learning, which includes, among others, the employment of the 'quality circle approach' in the development of courses and learning packages, and the provision of appropriate technologies to perform academic processes and achieve institutional goals.

According to Melinda (2014) Because of the pandemic Technology Advancement (Convergence) helps student's in the Philippines in terms of the "Online registration system", The online registration system allows the student to enroll in courses at their own convenience, typically during the prescribed registration period. "registration system" is also available for those who do not have access to the Internet or do not own a cell phone. Online submission of grades the online grades submission system enables instructors to submit students' grades online. Online access to official student enrolment lists is also available, where instructors can post students' interim and final grades for immediate release to students "Digitization of student records" Many universities are now using digital student records. Indeed, a typical student accumulates a variety of records over his or her academic life. Clearly, the

storage of physical records not only takes up a lot of space, but it can also take a lot of time and effort, not to mention lead to nightmares as one seeks to retrieve archived student

According to (Kurt, 2013). Technology Advancement help both Teacher and students in the Philippines. The most commonly used for instructional purposes is Power Point (Ruggiero & Mong, 2015) which appears to be an extension of traditional teaching strategy. When examined based on the perspective of the students, teachers allow them to use technology in their class in the form of smartphones in making notes, revising and information gathering (Sormunen, Lavonen & Juuti, 2014).

According to Parker, (2014) A more sophisticated type of technology advancement is now being used in the classroom by both teachers and students. This is known as cloudbased technology where Google ocs serves as a good example. According to Zheng, Lawrence & Warschauer (2015), the use of Google Docs aided the students in activities such as collaborative writing and editing, and improved interactions between writers and readers. Game-based applications have found to improve the motivation and engagement of students in classroom lessons. According to Wang (2015), game-based applications like Kahoot! brought dynamic experiences to students. It boosts their engagement, motivation and learning

According to (Riley, 2013). The introduction of mobile device and tablets in schools shifted how the students learn. According to Thomson, Bridgstock & Willems (2014), it has led to the polarization of teachers who use technology. There are those classified as innovative teachers who shifted from teacher-centered approach to learner-centered approach. Thomson and his colleagues stated that these teachers transformed their lessons in accordance to the advantages that tablet computers can offer, that part of Technology advancement. But there are also those regarded as instrumental teachers who seem to use the device as a book behind the glass. Social media networking had been utilized as well for instructional purposes in the

classroom. It has been used by teachers to promote teacher-students and students-students interaction (Aydin, 2014).

According to (Taylor & Hogenbirk, 2012) education in general has been transformed by the use of ICT. Experts are now talking about the 'School of the Future' which must grapple with the ever changing needs of Filipinos' increasingly inter-connected, globalized, information-based society. ICT is instrumental in facilitating the shift from "learning as a personal achievement to learning as a result of a global social process"

Foreign Literature

This literature review has provided substantial evidence of the effects of ICT on attainment. However, a longer literature review, which would enable the researchers to categorize groups of studies in relation to the types of ICT uses more comprehensively, would provide more substantial evidence of specific uses of ICT and pupils' learning. For example, the review could be extended to include research studies into the effects of modeling with and without ICT on pupils' learning in science. There are many curriculum areas where the evidence is less extensive, eg art, music, and religious education.

A larger review would enable the researchers to study more of the US and Australian literature and foreign language literature (eg French and German research) which would enhance the evidence provided in this report. There are many individual Ph.D. theses that could not be accessed in the time available, which provide detailed well-researched evidence of ICT and attainment, and also describe innovative methods. These could also be included in a longer more extensive review of the field. The ICT environment is changing, and so are knowledge and the representations of knowledge.

Therefore a review of the literature relating to psychology and artificial intelligence would provide a solid foundation for the work reported in this study. Finally, this literature review describes a large range of research studies that show a varied but positive effect of ICT on pupils' attainment, but it also shows that positive outcomes are usually determined by the

pedagogical reasoning and knowledge of the teacher. These effects are also influenced by the types of ICT uses, which are forever changing. Therefore further research in this area should be a very high priority in order to capture the best and most effective uses of ICT in education.

Local Studies

According to Carbonilla Gorra, V., & Bhati, S. S. (2016). Technology and digital tools help prepare students for their future careers. The internet has become such a platform where you can find information and learn about anything you want to. Through the internet, the students in the country can acquire and learn key skills like coding that are in demand globally. After learning skills like coding students can build programs like Scrabble Word Finder and add them to their portfolios. These skills that one learns through the internet are advanced and technical skills that can be exercised in real life. Based on these skills, students can land jobs for themselves. Technology is now being used by students in the Philippines to learn and acquire different computer and IT-related skills through which they can find jobs themselves in different fields such as agriculture, IT, art, health, food, research, etc.. because computer work is needed everywhere.

According to Shyamlee, S. D., & Phil, M. (2012). Technology is evolving rapidly in the past two decades. Many are familiar with technology and gradually becoming digital natives. In this technological era, the application of technology has eased our ways in various fields of work particularly in the education field. Technology has also proven its effectiveness in language teaching which includes as a source of motivation and provides room for authentic learning. However, there are still disadvantages in using technology to teach. Students may get easily distracted and might misuse the technology. Other than that, frequent use of technology can limit students thinking potential. Hence, this paper reviews the highlights and challenges of using technology in language teaching. This paper could be a source of reference

by teachers who are planning to integrate technology in ESL classroom. Future research can look into how technology affects students' attitude.

According to Toquero, C. M. D., & Talidong, K. J. B. (2021). Socio-educational implications of technology use during COVID-19. Digital technology has served people for educative purposes and formation of virtual social connections for the co-existence of human relationships amid the COVID-19 pandemic. This article presents the socio-educational implications of the newly-formed virtual relations made possible through technology. It explores the use of emerging technologies and the effect of these technologies to fulfill the social and educational needs of the stakeholders in times of a crisis or emergency. The use of emerging technologies paved the way for the stakeholders to establish virtual relationships with a common goal to rid quarantine boredom, provide relief efforts, and educate the virtual community relative to COVID-19 while maintaining a safe environment.

Foreign Studies

According to (Andersen and Becker 2013) Technology advancement aids student expression. Present what they have learned. They can use software to make presentations and projects. This makes them more interested in the subject and leads to better retention of information. With technological aids, they can make easy-to-remember notes and a creative presentation of the information they have acquired. It won't be wrong to say that the application of technology has made a student's life easy.

According to (Andersen and Becker 2013) It's easier for students to carry a PDA than carrying big fat books to school. An iPad is less bulky than a pile of notebooks or an eBook reader much lighter than a book.

According to (Harris Interactive, 2014) Due to the rapid expansiveness of technology and its wide array of uses, the incorporation of technology in learning has become a viable and inexpensive option. Almost three-quarters

of Americans, 73% believe that investing in innovation and advanced technology sciences in education is the key to the country's long-term success

Based on Freeman Dyson, 2013 he stated that "Technology advancement is a teaching aid: Computers offer an interactive audio-visual medium. PowerPoint presentations and animation software can be used to present information in an interactive way. Owing to the audio-visual effects, this way of teaching invites greater interest from students. The method is equally helpful for teachers. Projectors and screens facilitate simultaneous viewing of information by a large number of students. Addressing systems using microphones and speakers make it possible for teachers to reach larger number of students simultaneously. These teaching aids have led to improvements in student attendance and their attentiveness in class. Interactive media have proven to be useful in increasing students' concentration levels." It only means that through using those technological devices the students may improve their learning performance.

According to (Muir-Herzig, 2015) E-Reader devices like the iPad are in demand in our current society. The ability to gather textual information with a single touch on a screen makes e-reader devices highly valued. The pad has the advantages of the book without its drawbacks -the bulk, the limitations on how much text can be made to fit into a single volume, and the problem that annotating a paper book means, in some ways, ruining it

According to (Ragen, 2013). it is important to realize that failure to present multimedia technology in an appropriate form can lead to negative results. According to (Mayer, Griffith, Jurkowitz, & Rothman, 2016). The perception of display on a multimedia application is of significant importance in terms of transfer learning. In fact, too much multimedia stimulation can interfere with the deeper cognitive processing that is critical to learning

According to (Parsad and Jones, 2014) It is easier to store information: Computers enable better and more robust storage of information. Compact memory devices have replaced notebooks and a keyboard and computer mouse are the new writing devices.

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