

Aided instruction in c# programming language essay



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Educational expansion and constraint over the last decade form the backdrop of any examination of the role of technology. One of these educational expansions is the computer-aided Instrument or sometimes abbreviated as CIA which refers to a computer or computer system. It is also known as “ computer assisted instruction” which pertains to a diverse and rapidly expanding spectrum of computer technologies that assist the teaching and learning process. ([http://incarnates. Com/](http://incarnates.com/)) Computer aided Instruction can be used effectively to address academic and communication/language skills.

It can dramatically Increase students access to information. The program can adapt to the abilities and preferences of the individual student and increase the amount of personalized instruction a student receives. Many students benefit from the Immediate responsiveness of computer Interactions and appreciate the self-paced and private learning environment. Moreover, computer-learning experience often engages the interest of students, motivating education. ([http://www. Imam. Mum. Due/-? Arnold/papers/CIA. UDF](http://www.Imam.Mum.Due/-?Arnold/papers/CIA.UDF)) Being well-informed and active participant in our society, the students need to be elf-directed learners, able to identify issues, pose questions, synthesize ideas, determine solutions to problems and develop capabilities and confidence within a range of technologies. (whimsically. Educe. News. AU) Computer-aided instrument is case which either instruction is presented through a computer program to a passive student or the computer is the platform for an interactive and personalized learning environment.

One topic which can be discussed through CIA is the C# Programming language, which is very essential to the first, second and third year

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Computer Education student in the College of Industrial Education.

Statement of the Problem This study aims to determine the correlation of the computer-aided instruction in teaching C# programming language to the first, second and third year students of Computer Education students of the College of Industrial Education. More especially, this research seeks to answer the following questions: 1 . What is the demographic profile of the respondents in terms of: a.

Course, Year and Section b. Age c. Sex d. Grades on Computer Laboratory course of the previous semester 2. How effective is the relationship of using CIA in teaching C# in terms of: a. Teachers' attitude a. 1 Teaching Style b. Exponents' attitude b. L Interest towards CIA 3. How do the Computer Education students perceive in the following school-related factors: Facilities; 3. 1 Laptops/Computer set Digital Laser Projector (DEL) smart TV 4. Do the students, teachers and school factors significantly affect the correlation of using CIA in C# programming language?

Significance of the Study Primarily, this research aims to benefit the following: Students C# in computer-aided instruction provides one to one indication with them, as well as instantaneous response to their answers elicited. It also allows students to proceed at their own pace.

Educators/Teachers It is critical in assisting the teachers to see more fruitful ways in teaching. It also allows the teachers to measure progress in an environment that is often more structured than the typical classroom, limiting stress and allowing the focus of non- technical elements of pedagogy.

Parents It allows the parents to facilitate on their child's learning development and monitor them. Faculty/School Administration It will permit the school administration to acquire the fastest way of preparing international materials for the delivery of student services if it is computerized and facilitated accurately. It will also enhance the institution's quality education and teaching. CHAPTER 2 Review on Related Literature This chapter presents the review of related literature, both foreign and local studies, which are found to have bearing on the present study.

Computer-Aided Instruction Computer-aided instruction (CAI), commonly known as "computer-assisted instruction" is one of the instructional media we could use in discussing different lessons. CIA brings with it several potential benefits as a teaching/learning medium. These include self-paced learning, self-directed learning, the exercising of various senses and the ability to represent content in a variety of media. As these topics will be explored in greater detail throughout this document, only a brief overview will be given here.

Although CIA has not been studied in the EL community situation, many of the benefits in the general CIA context should also be available in the EL one. With self-paced learning, learners can move as slowly or as quickly as they like they can do so as many times as they choose. The program will not tire or complain about repetitions. Learners can skip over a topic if information is already known, making the learning process more efficient. With self-directed learning, learners can decide what they want to learn and in what order. A key question is why CIA may be more effective than traditional classroom teaching, on average.

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Some classroom research suggests computers can offer highly individualized instruction and allow students to learn at their own pace (e. G. Leper and Grunter 1989, Means Other forms of self-paced instruction may offer a similar educational advantage. However, a very small, older, literature suggests that computerized self-paced instruction is more effective than other self-paced instruction. See, e. G. , Enoch, Handled, and Wellbeing (1986) and Usurer et al (1977) for randomized studies involving college-age students and Olson 1995, Sandhogs et al 1997, Heath and Ravish 2001).

While we do not have a direct test, we hypothesize that if CIA allows for more individualized instruction, then it may be more beneficial for struggling students who cannot keep up with the pace of the lectures in traditional classrooms or for more advanced students who could progress faster at their own pace. Further, we might expect CIA to be more effective for students with poorer rates of attendance. In a traditional classroom, students missing class will miss all of the material covered in class that day.

In contrast, the computer always picks up where the student left off the last time she was in class regardless of whether it was the day before or 5 days before. Similarly, in classes in which many students have poor attendance records or in larger classes, we might expect a bigger effect of CIA as teachers would struggle to find the appropriate level at which to pitch lectures. Finally, one might think that individualized instruction provided by CIA avoids mom of the disruption effects of having peers with poor attendance rates or being in larger classes as modeled by Lazier (2001).

Recent increases in computing power of affordable personal computers have resulted in an increase in the development and use of various forms of computer-delivered instruction. Understanding the effects of this instruction on learning is important to any future implementations of computers for instruction. This review of the literature on the effectiveness of computer-assisted instruction (CAI) is an attempt to show that CIA can be an effective mode of instruction in the education environment.

It is also intended to address three major issues within the body of research on the efficacy of CAI: (a) an aging body of literature; (b) the greater effectiveness of using CIA as a supplement to conventional instruction; and (c) the alleged superiority of CIA over conventional instruction. The authors conclude that, due to potential shortcomings in some past research comparing CIA to conventional instruction, CIA should be considered to be at least as effective as conventional instruction. Next, they conclude that new studies are needed to clarify the effects of CIA in contemporary student/computer environments.

Finally, they conclude that how CIA is delivered can impact its effectiveness. The teaching of fundamental programming skills is a field that extensively uses different kinds of tools to enhance learning experience. Within the realms of tools that are aimed for realistic, or "industrial" programming experience, these tools usually focus editors, or ease the learning of different concepts and structures with visualization and supporting content. Students often lose interest on programming because complex models and structures have to be learned before anything visually impressive can be created.

The students can memorize the constructs, but the motivation for doing this may be wrong: technologically oriented programming – data manipulation – is not interesting and does not promote learning because simple command line outputs are not exiting (Guiding and Slowly 2002). Just like many other courses (Rich et al. 2006, Rages 2006, and Hermann et al. 2003), our introductory course on programming suffered from high drop-out rates and falling student grades (Assuring and Nikolas, AAA).

In our case, dropping the course was a problem because it had a negative effect on the studies as a whole: if the course was ailed, it prevented participation in the advanced courses the second year, and delayed the studies in general. Student- Related Factors Age Bean and Metzger, “ A Conceptual Model. ” In their review of the literature, age was one of the most common independent variables in studies of attrition. Whisking (1990) the literature and current research concerning student age provides educational institutions with information about achievement differences among traditional and nontraditional groups.

This information provides higher education an underused educational tool to assist with the development of its traditional students. As education increases the dimensions of its mission, the nontraditional student is an overlooked, often untapped, resource. Bossier (1975) define nontraditional students are as those adult college students over 25 years of age. Traditional college students are those college students between the ages of 18 and 22. Grade point average (GAP), on a 4. 00 point scale, is used as the measure of academic performance. There is no typical mature student.

Defined as any student aged 21 or over at the start of their studies, around two fifths are aged between 21 and 24, a fifth teen 25 and 29, and a further two fifths are over 30 when they commence their courses. They study for many different reasons - for example: for career or personal development, to pursue an interest to find a new direction. [Http://www. AAAS. Com/](http://www.AAAS.Com/) Amid the flurry of Fresher' Fairs, goody bags and loyalty cards aimed at 18- and 19-year-old first year students, it's sometimes easy to overlook the fact that the student body is considerably more age-diverse than you might think.

This is the official journal of the American Aging Association; they stated that age is an international, peer-reviewed Journal that publishes articles describing research in the biology of aging and research on biomedical applications that impact aging. The range of coverage includes evolutionary biology, biophysics, genetics, genomics, proteomics, molecular biology, cell biology, biochemistry, endocrinology, immunology, physiology, pharmacology, neuroscience, and psychology. In addition, the Journal presents commentaries, debates, and meeting reports. [Http://www. Americanism. Org/](http://www.Americanism.Org/)

Attitude Eagan (1985) defined attitude as what influences the learner's response to performance rather than a specific performance unlike the other learned abilities. Psychologists define attitudes as a learned tendency to evaluate things in a certain way. This can include evaluations of people, issues, objects or events. Such evaluations are often positive or negative, but they can also be uncertain at times. For example, you might have mixed feelings about a particular person or issue. [Http://psychology. About. Com/](http://psychology.About.Com/)

P. M. Symons, in the paper referred to, mentions seven ways in which the term attitude is used, great organic drives (motives), muscular set,

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generalized conduct, neural set or readiness to adjust, emotional inconstant of action, feeling concomitant of action, accepting or rejecting verbal responses. He ends by deploring the use of the term, saying that we should use habits or skills. But in at least one article he joins the group who use accepting and rejecting verbal responses as evidence of attitudes.

An attitude describes a set of beliefs or views held about something and are defined in consumer psychology as an enduring inclination or tendency to respond to a brand or product in a specific way. [Http://www. Car. Org. UK/](http://www.Car.Org.UK/) Chain states that students express very high levels of interest in their courses; few are bored. Responses to items designed to measure intellectual orientation and satisfaction are high, but a high number also agree that they would prefer to study 'only topics which they believe to be relevant to their future careers, suggesting preference for 'Just in time' rather than 'Just in case' learning.

Around 45% agree that their usual working pattern involves doing the minimum amount of work which is required of me', but almost 40% reject this 'strategic' position. Sex Even though research shows that females and males differ in the ways they view technology, some scholars (e. . JAW Educational Foundation, 2000; Starr, 2000) question the assumption that females are less likely than males to be interested in technology. In the mid-1980s, there was a movement that began doubting the notion that females were less likely to be drawn to computer careers than males (Christie, 1996).

Even though statistics show that there are fewer females in computer laboratories and computer-related professions, Turtle (as cited in Starr)

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asserted that girls are not fearful of technology; they are simply uninspired and alienated by the way the K-12 education system presents computing to them. The JAW Educational Foundation interprets the females, behavior not as a phobia, but rather as a choice. Andersen explores the potentially damaging effects of gender bias in student evaluations of teaching, specifically with regard to student expectations.

Reviews a number of laboratory and “ real life” studies and summarizes their conclusions. Notes the different and conflicting expectations of students and recommends a broader approach to teacher evaluations. Beechen 1999 finds that female students rated female faculty especially high across five teaching dimensions and male faculty imperatively lower, whereas male students did not evaluate male and female professors as significantly different. Finds that assessments of faculty were further influenced by the strength of students’ gender schema and that gender schema may also lead to differential preference for particular teaching styles.

Basso 1995 argues that using quantitative approach, the overall effect of gender on student evaluations is small, accounting for about 3% of variance. However, there may be significant interaction effects between gender and other context variables that may cumulatively introductory courses at a liberal arts college. Bennett finds that students do not have different standards of reference for male and female instructors, but women are perceived to be less authoritarian and more charismatic. Female instructors in departments with fewer than 20% Ft women were rated even higher on these standards.

She finds that ratings that are consequential for performance ratings of men have an equal impact on women except for the following, which have more effect for women: (1) professionalism (seen by students as a highly structured instructional approach), instructional presentation (specifically, being compelling and self-assured and presenting a balanced interpretation of viewpoints), and (3) accessibility. Brooks 1982 Male graduate students exhibited significantly more aggressiveness (interruptive behavior) than female students in both male and female professors' classes, although more male aggressiveness occurred in female professors' classes.

Male students were more verbally assertive in female professors' classes only. Among students, aggressiveness was predominantly cross-sex, rather than same-sex. Computer Background Issues of equity in the use of teaching resources are a critical issue in school policymaking. Equity, though, involves more than simply access; it involves using resources appropriately to improve student outcomes. Using resources appropriately, in turn, depends on how defensible a teacher's philosophy of teaching and learning is.

Philosophical disagreements about equity and teaching practice usually revolve around the issue of whether students from low-socioeconomic backgrounds and students who present relatively unsuccessful school histories can be given the same kinds of demanding tasks and depended upon to act as responsibly as more advantaged and more academically successful students. In the absence of beliefs that poorer and less successful students can be given challenging tasks and a high degree of independence, teachers are apt to use computers with lower performing classes as a means of practicing lower-level skills and as a means of social control. [Http://www.https://assignbuster.com/aided-instruction-in-c-programming-language-essay/](http://www.https://assignbuster.com/aided-instruction-in-c-programming-language-essay/)

Critic. Gucci. Due/ The advantages of providing children with access to computers have been heavily debated. In August last year, business body IBEX called for the Government to provide second level school children with laptops, saying that they could be “ an important education enabler”. However, this thinking clashes with a 2004 report from he FIFO, an economic research unit at the University of Munich, which claimed that students’ education levels have little to do with computers in schools and more to do with effective school management. Http://www. Thirstier. Co. K/ Generated 1997 although the course was pertinent to computers and technologies, this study found that students who had low technology backgrounds achieved higher quality of online discussions than students who had high technology backgrounds. Students who had low technology backgrounds appeared to be much more active in online discussions ND have more interests in this course. They tended to post more and longer postings in both homogeneous and heterogeneous groups. They were also willing to share their concerns or questions with each other and tried to help answer questions posted by other students.

Although students who had high technology background heterogeneous group with students who had low technology backgrounds. They might be motivated by high quality of postings and active discussion attitudes presented by other group members. These findings show that students’ interests and motivation are very important for quality of learning. In the meanwhile, interaction plays a vital role to help students who have low learning interests and motivation improve their learning performances in online discussions.

Another interesting finding of this study is that there were no significant differences of discussion satisfaction among different types of interactions, although students who had low technology backgrounds had better performances in online discussions. Since there were 15 items with five-level Liker scale in this survey, the total survey score was 75. The lowest mean score of discussion satisfaction was 46. 10 for type woo interaction.

Therefore, students in all types of interactions showed high evaluation of their experiences of online discussions.

It seems that students' perceptions of online discussions cannot be predicted by their performances in online discussions. Most students, no matter what levels of technology backgrounds and types of discussion interactions they have, thought that they benefited from active participation in online discussion and put a lot of thoughts into their messages. Teachers Related Factors sex A double-blind experiment to evaluate the effect of facial attractiveness on teacher judgments was performed.

Given identical information, teachers systematically rated attractive children more favorably than unattractive children. In the case of unattractive children, teachers were more willing to recommend special-class placement and held lower expectations for future academic and social development.

Http://www. Incubi. MI. NIH. Gob/ Based on sociolinguistic research (Labor 1991: 206-7) we may accept the hypotheses that considers female students better at learning than male students and more open to new linguistic forms (Ellis 1994: 202).

Several studies have given evidence of this fact. In Burial's longitudinal research (1975) female students did better than male students (she based her conclusions on 6000 children beginning French at 8 in English primary schools). She reports that girls scored significantly higher than boys on all tests. Other studies have obtained similar conclusions (Bayle 1987, Noisy 1990). There are also studies that have not found substantial differences. So it would be interesting that each teacher explores what happens in his/her class.

Age Adult learners are at an advantage compared with that of younger learners in formal learning of grammar in instructional settings (Long, 1979). However, in the case of pronunciation, younger learners outperform adult learners. The superiority of adult learners was reiterated by the results of a research study, which concluded that adult learners have an initial advantage where rate of learning is concerned, particularly grammar and morphology (Ellis, 1994) According to Winner M. (First five year plan 1955-60) teaching is not recognized as a profession as it is in other parts of the world.

Teachers do not fully understand the distastes of their profession and have a low opinion of it. Teacher's work falls into three broad categories intellectual work, emotional work and work organization when school environment which is not possible if the teacher is poorly paid, socially distressed, psychologically distressed, under the pressure of society, parents family and high authorities. Studies (I. E. , Cohen, 2001) have indicated that the use of technology has an effect on all aspects of teaching and learning.

When educators integrated technology into the lesson, it required new learning approaches to the curriculum because of the ability to look at and explore information in new ways. Moreover, some studies have emphasized that technology can help by allowing learners to take a more active role in their learning through different instructional modes or methods (Kewaskum and Dunn, 1996). Dewar and Whetting (2000) commented that the new technologies provide opportunities for creating learning environments that enhance learner learning and achievement.

However, inappropriate uses of technology can become ineffective learning. Thus it is important to understand what technology is and how to use it and, most importantly, is comfortable using it (Smiling and Lawless, 2003).

Teachers Attitude Outbound and Balloon, (1985) have identified teachers' personality and attitude towards their teaching subjects as factors contributing to poor performance in science subjects. Simpson and Troops (1982) found out that attitude is another factor that determines achievement and enrolment of students in science subjects.

Attitudes as defined by smith (1998) as a relatively enduring predisposition to respond in a relatively consistent manner towards a person, object situation or idea. Daddies (2002) defined attitude as cognitive, emotional, and action tendency to a reticular behavioral intent. He ascertained that that attitude is an important factor that determined achievement of students in sciences. Teaching Style The Technology Acceptance Model (TAM), introduced by Davis (1989), is an adaptation of social psychology theory of reasoned action, specifically tailored for modeling user acceptance of information systems.

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The TAM, as shown in Figure 1, considers perceived usefulness and perceived ease of use as major determinants of intention to use a technology. The former refers to the extent to which a person believes that using the system will enhance task performance, while the latter refers to the degree to which the user expects the target system to be free of effort. The TAM explains user behavior across a broad range of end-user computing technologies (e. G. , text editor, spreadsheet, e-mail) and user population (e. G. , students, software professionals, physicians). The predictive power of TAM varies according to the cultural context.

Its power of prediction is higher in the West (45- 70%) than the East (10- 35%). Perceived usefulness emerges as important across all the cultures studied, whereas subjective norm is more important for the East than the West (Rose & Straus 1998; Straus 1994). Subjective norm has been of particular interest in Asian and African research, and cultural factors are highlighted to explain its relevance in determining behavioral intention to use computers (Dined et. Al. 2004; Mao & palatal 2001). So far there has been no research on the influence of teaching style on acceptance of e-learning by faculty.

Graphs (1996) identified five teaching styles that represented typical orientations and strategies college faculty use expert (displays induct), personal model (shows how to do things), facilitator (encourages students to make informed choices) and delegated (makes students work independently on projects or as teams). Recent investigations [(Kook & Jones 1985), (Carver et al. , 1999), (Gilbert & Han 1999), (Graduation, Painkiller & Cornstalks

2001), (Stash & De Bra 2004), (Hong & Kinship 2004)], try to integrate the learning styles and e-media in the design of their applications.

This is not an easy process, however. One of the main difficulties on the designing of hypermedia systems, is linking the learning styles with the hypermedia applications. Most of the teaching systems adaptation that integrates learning styles is based on the premise that adapting the teaching strategies with the students' learning styles will give better results (Dagger, Wade & Conman 2003), (Parades & Rodriguez 2002), (Stern & Wolf 2000), (Triangulation, Pomposity & Georgia 2002). Table 1 shows some of the systems found, their learning styles and the type of adaptation.

School Related Factors Facilities The absence of adequate help or technical support to facilitate teachers' technology mediated teaching is another factor which may hinder teachers' teaching. Granger et al. (2002), based on the findings of their study about factors contributing to teachers' success in implementing the technology mediated teaching, revealed that many teachers, when having some difficulties with the technology equipment being used, had to give up using it (obsession) because there was no one available to help deal with the problems.

According to the teachers, the institution did not have adequate numbers of technical staff who were prepared to support teachers in technology mediated teaching. Belgium (2001), in his study investigating teachers' obstacles in using technology, also identified that the lack of technical staff was considered by teachers as one of the main obstacles in their successful

use of technology based pedagogy. Becker (1999) identified some factors like lack of knowledge, manpower skills, technical support and incentives.

Lack of knowledge and Manpower skills, despite their active use of technology into pedagogy, most teachers still feel that they lack adequate knowledge and skills for optimally integrating the facility into teaching. Lack of technical support, the shortage of technical staff in any college is a serious robber that needs to be dealt with quickly by the institution's authority, technical staff should be available before, during and after the class sessions'.

Any unsolved technical matters ' can be disasters for technology integration program in any institution'. Lack of incentives, if there is no additional incentive provided by the institution for the innovations, it will create a barrier in the willingness of the teachers to integrate.