

Make them think in the Digitalized Era: Developing Critical Thinking Skills Using Technology

P. Anu, P. Bhaskaran Nair

Abstract--- *Critical thinking is a term that involves more than just thinking about something critically. It is a general concept that can be applied in any discipline and practice requiring the use of agreed means of collecting and using knowledge to develop solutions expressed from multiple points of view. In the current computerized age, anybody can distribute any data on their sites, internet based life stages, and other online gatherings. The reason for this investigation was to recognize the influence of the digital era on the development of critical thinking skills among visual art students from the perspective of instructors so that teaching methods can be adjusted to improve student learning.*

Keywords--- *Digitalized, Critical thinking, Era*

I. INTRODUCTION

Towards investigations demonstrate that innovation can assume a dynamic job in creating critical thinking abilities in youngsters; in any case, examines additionally note a decrease in critical thinking and examination including essential social aptitudes as youngsters possess less energy for vis-à-vis associations. For the reasons for this exploration, innovation in training will be constrained to that of auxiliary tutoring, and explicitly center school English Language expressions classes. It is an assessment of the effect of these developing advances on our instructive verbalization of the progressions to educating and discovering that these advances could have and specifically to the capacity of innovation to encourage higher request thinking, critical thinking or profound learning. The progressing work for guardians and educators is to consistently focus on finding the balance that "sweet spot" when it comes to the use of educational technology, gaming technology, and social media options. This is of utmost importance in order to help establish healthy ways for young people to navigate personal thoughts, make valuable decisions, analyze information, and make time for personal reflection.

The advanced data age has been one of the most vital turning points of this century. Individuals never again trust that news and different projects will get information as it recently seemed to be. You would now be able to get to whatever data you need utilizing your telephone. Throughout the years, computerized gadgets have moved from huge work areas to wearable innovations, for example, brilliant watches and savvy glasses, with telephones getting progressively flexible.

At present, when knowledge is widely available, we are living in an era. Each time people face a problem, their default answer is 'Googleit' instead of brainstorming for an answer. It contrasts sharply with what happened in the past, with books being the key source of data.

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In the past, the absence of a trained data entry meant that understudies won to check for information and watch out for data's validity before tolerating it as fact. Furthermore, there were a few outlets where information, such as print media, television, and radio, were distributed. Likewise, information from these sources has been verified.

Anyone can distribute any data on their websites, online networking stages, and other inline gatherings in the current computerized age. There is no data checking standard. Sadly, those who look for comparable data do not usually check the information's validity. Subsequently, advertising and bogus data are often interpreted as reality, which leads to fundamental leadership.

II. DEVELOPING AND UTILIZING CRITICAL THINKING

Critical thinking involves conceptualizing the data, applying the data as problems arise, breaking down the data and integrating it before making a final decision. It's just after that that there can be an obvious end result. Unfortunately, this needs the information age as answers are generally and promptly accessible and there is no push to check the source or even think about the data.



Figure 1: Critical thinking

There is an extraordinary need to upgrade critical thinking, especially among undergraduates and common workers, with the goal of having quality and accurate data as well as enhancing their psychological ability to address issues. Here are a number of different ways to do this:

III. DETERMINE THE MOTIVE BEHIND THE INFORMATION

Most of the data found on the Internet has behind it a hidden motive. Perhaps the businesses and writers who put the information on the Internet tried to sell something to the readers. Others are propagandists who seek to influence the way of thinking of a reader.

Despite the efforts being made by web search tools to sift through sites that are deals from the top positions, heaps of infomercials are still making it to SERPS' highest point. Digital experts need to be qualified to interpret the logic behind the data provided to separate specific sites that provide credible marketers data.

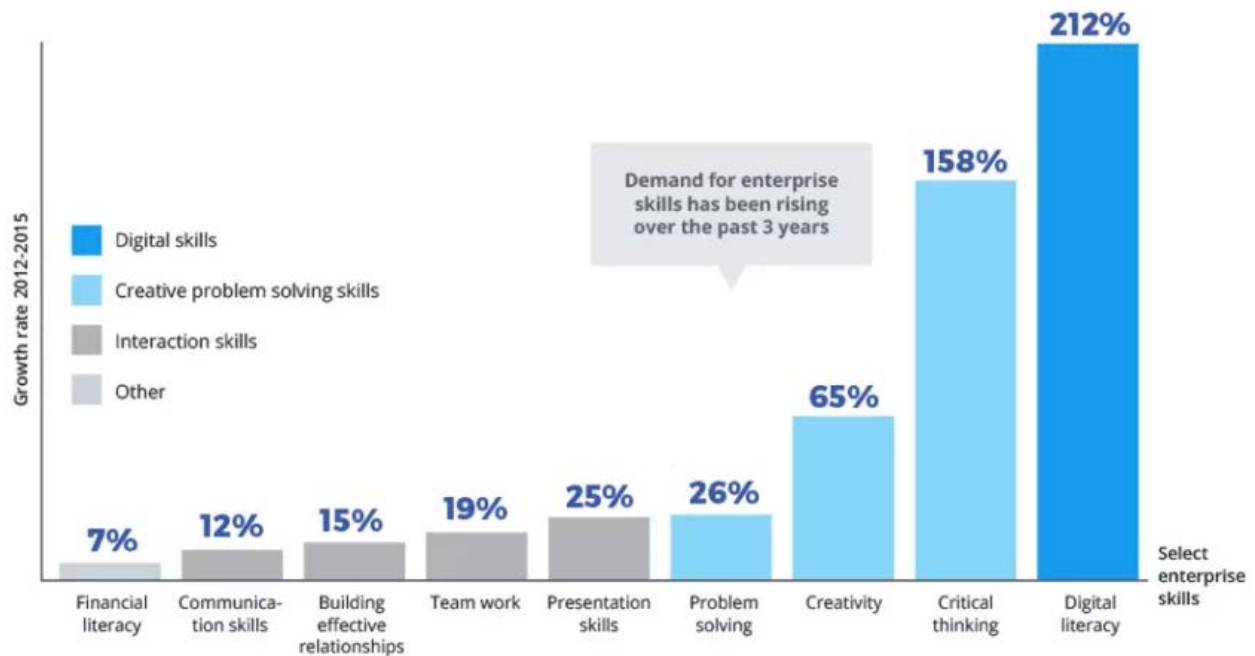
IV. IMPROVING RESEARCH QUALITY

The most serious issue with various analysts is their core instructive base depending on the main source they bum through. Wherever there is a problem that requires solutions, it is important to search for arrangements from three distinct sources at any pace. Through analysis, discerning whether the information from any of them is not authentic is anything but difficult. Top to bottom research likewise improves critical assessment and appreciation.

Critical thinking helps us to consider problems carefully and to apply the correct data while making arrangements. It is necessary for the computerized age to decide how authentic and counterfeit information can be separated. Therefore, it's nice that data comes from different sources on the internet and disconnected so it's reliable and has enough truth.

The Young Australians Foundation's 2015 Study, The New Basics, reveals that interest in the critical thinking skills of new graduates has grown in three years by 158 percent. This data was taken from a study of 6,000 unique sources of 4.2 million online job posts from 2013-2015.

An important reason for an advanced degree — paying little attention to the subject — is to teach students how to peruse, understand, and respond to complex disputes. This allows people to be incredibly employable, resilient and highly critical.



Graph 1: Growth in proportion

Growth percentage of jobs requiring rising skill, percentage of early career employment, 2012-15. Image: New Basics, Young Australians Foundation

V. USING CRITICAL THINKING SKILLS ONLINE TOOLS

Virtual educators can use creative tools to carry out activities that help graduates develop critical thinking at lower and higher levels.

- **Activities for reflection.** Reflection activities provide an incentive for undergraduates to pursue their training and demonstrate their progress throughout the semester. To order to upgrade the degree of critical thinking undergraduates through smart exercises, advise undergraduates to refer to course materials that helped them advance their knowledge and thought.

Example: Use Google Doc, a joint effort include in Canvas, and advise undergraduates to keep a diary in which they consider what they are realizing, portray the advancement they are making in the class, and refer to course materials that have been generally pertinent to their advancement. Undergraduates can impart the Google Doc to you, and teachers can remark on their work.

- **Practices for peer review.** Peer survey exercises encourage undergraduates to show interpersonal skills by questioning the work of each other, opening up undergraduates to elective perspectives, and encouraging undergraduates to discuss what they are perusing. Online peer auditing will keep undergraduates confidential and transparent feedback (Lin, S. S., Liu, E. Z. F., and Yuan, S. M., 2001, Web-based peer assessment: feedback for analysis with different styles of thought).

Ex.: Use the highlight of the corresponding survey task in Canvas and design peer audit groups physically or subsequently. Such classes may be obscure, or they may indicate the names of undergraduates. Advise undergraduates to provide guidance for two of their companions on the key draft of an analytical paper. To create a rubric for use in undergraduates, use the Canvas rubric highlight. Shows the rubric alongside the instructions of the project with the aim that undergraduates know what they will be judged on and how their friends will be evaluated.

Gatherings for discussion. Talk discussions encourage undergraduates to talk to their partners, answer addresses that require them to show critical thinking skills at both lower and more significant levels, and break down course content. At a time when educators set clear guidelines for promoting and modeling critical thinking skills through participation in discussion discussions, undergraduates can also show how they participate in the process of critical thinking.

Ex.: Use the highlights of the discourses in Canvas and enlighten undergraduates to discuss a video they watched. Offer the beginning of the debate discourse in the assembly of the dialogue, and give directions to the undergraduates to take a side of the discussion and refer to the readings of the course to assist their arguments.

- **Activities for small groups.** Small group exercises make it possible to convey undergraduates, question fathoms, hear alternative viewpoints, and team up to break down and orchestrate the material of the course. Teachers will interact with undergraduates in various degrees of critical thinking by allocating small group activities.

Example: Use goreact, an interactive introductions tool for creating and commenting, and advise undergraduates to prepare an introduction that describes and raises issues about a perusing. Advise undergraduates to report on the

creator's contention's strengths and weaknesses. Understudies can present the connections in an exchange discussion or a task using their go react introductions the supplement interface include in Canvas.

- **Activities of virtual storytelling.** Recounting computerized stories enables sight and sound (photos, sound, and video) to be used by understudies to introduce information. Computerized stories can include 1) individual accounts, 2) archiving occasions stories, and 3) advice and guidance stories. Creating computerized stories helps understudies analyze, think about, or break down course content (Robin, 2006, Virtual Narrative: A 21st century study hall creative technology tool).

Ex.: Use go react, a Power point description, or a Google Doc, and inform understudies to tell a story which illuminates per users and audience members about how the content of the course they are studying is beneficial in their expert lives. In the plot, advise understudies to provide clear readings and class activities which they generally find relevant for their expert work. Using a talk gathering or a project in Canvas, links to the go react presentation and Google doc can be submitted. You may apply the PowerPoint record through a discussion or in an assignment.

VI. METHODOLOGY

The aim was to coordinate request-based learning activities by educating and getting the hang of software use to improve the critical thinking skills of understudies.

- Analysis and review of relevant articles and research papers.
- Collecting and analyzing information on learning patterns are five experts. These experts have been approached to provide information on understudy ICT training for picking up, learning styles, and personal preferences.
- Research resources are designed as follows: 1) request-based learning exercises to develop understudies ' critical thinking skills by teaching and picking up software, and 2) form of suitability assessment.
- •The training habits were checked and the five recognized experts filled out fitness test templates
- Analyzes using mean (\bar{x}) and standard deviation (S.D.) were the results of the suitability assessment. The use of Likert scales linked to the middle, highest, medium, lowest and least words is considered to be based on five evaluation requirements.

VII. RESULTS

Request-based learning exercises are illustrated in Figure 2 to develop the critical thinking skills of undergraduates by teaching and getting the hang of using technology.

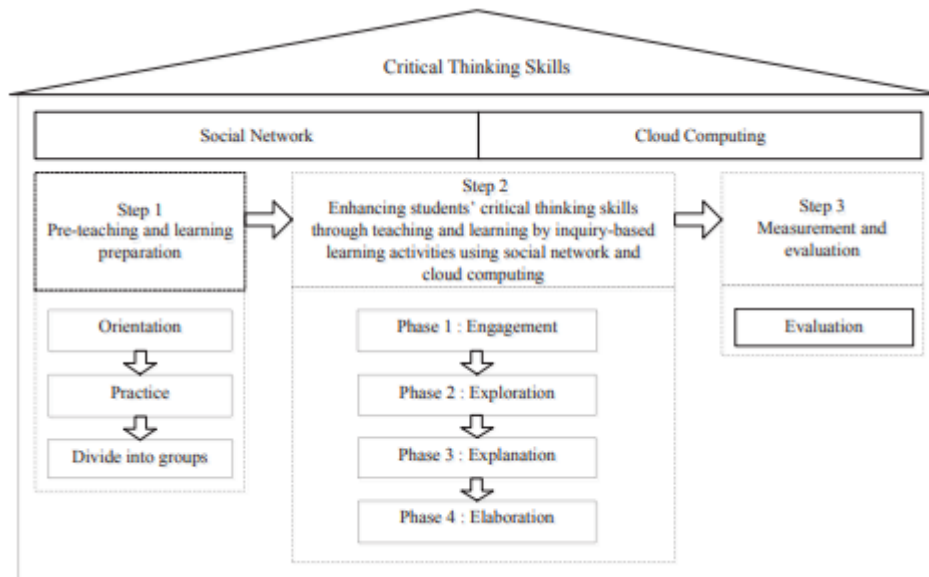


Fig. 2: Improve critical thinking skills for undergraduate studies by training and learning through software-based learning on request

There were three key steps in the learning activities:

1) *Planning of pre-teaching and learning*

1.1) *Orientation*

Teachers use the Learning Management System (LMS) to recommend classes, learning objectives, training strategies, learning tasks, ways to submit and check assignments, communication channels and measuring and assessment procedures.

1.2) *Practice*

Students are registering and beginning their education on LMS, Facebook and distributed computing. Students can use a single sign on Facebook to share data with other relational organizations.

1.3) *Divide students into groups*

Students were split into groups. Each group is made up of five men. Group names are made, group people's jobs are characterized and a group head and secretary is appointed.

2) **Build students' critical thinking** skills by educating and learning using informal organization and distributed computing through request-based learning projects. This can be broken down into four phases:

2.1) Engagement

- By sharing papers, descriptions, images, sound clips or recordings on a Facebook divider using short activities or models that relate to earlier material, teachers spark students' inclinations and interest.
- Teachers present questions that flash the inclinations of students and raise issues that use Facebook remark capabilities to help students assess origin and impression believability.
- Teachers look at the earlier information of students using the remark work of Facebook.
- Teachers and students use Facebook remarks or Facebook speaking skills to differentiate between questions and questions they are fascinated to pose together. This intervention aims to help students assess and judge the reliability of facts and hypotheses and draw deductive conclusions.

2.2) Exploration

- By using Facebook speaking capabilities to generate answers-requiring questions and issues, students explain their understanding. This conduct helps to define and distinguish proof of assumptions.
- Via document exchange, students prepare their investigation and review. The move updates the meanings and identifies proof of presumptions.
- Students use Facebook speaking skills to set up speculations, identify potential elective theories and analyze and share their feelings. During these activities, students can record and share information through the sharing of archives. This move reinforces meanings and proof of presumptions that can be remembered.
- Students are searching for information and conducting experiments, engaging in work activities or testing eye theories. During these activities, they scan for data using web crawler, which they could then collect using recording, documenting, data, photography, sound and video sharing in different organizations. This campaign will help students to assess the validity of information and interpretation.
- Students verify speculations, increase new information, speak to community individuals using Facebook dialog capabilities about and exchange assessments. We capture new information and link to archive, file, data, image, sound or video sharing data from various assets. This intervention will update and predict realistic outcomes by planning acceptance checks.

2.3) Explanation

- Students use archive sharing to evaluate, interpret and make determinations from the information gathered. This intervention is expected to improve the construction of inductive inference and to make a decision.
- Students use internet tools to explain and present possible findings in different arrangements. They refer to archive, file, information, image, sound or video sharing data sources. This campaign promotes the reliability of sources and expectations and facilitates the arrangement of enlistment assessments and the estimation of likely outcomes.

- Teachers and students share assumptions among classes. We present questions and suggestions to promote comprehension using technologies implemented in web tools for feedback. This practice helps determine sources and conclusions ' validity.

- Students in each class build and present new knowledge using web tools and quote data from various resources through writing, documenting, documents, photography, sound or video sharing. The project explores definitions and presents evidence of theories and semantics.

2.4) Elaboration

- Teachers are presenting new encounters, new circumstances or new inquiries to help students apply and more generally develop their insight. It is done through Facebook dividers' archive, data, photograph, sound or video sharing.

- Students gain new information and interact with members of the group to exchange additional views. A interpretation can be improved by using Facebook comment or Facebook discussion capabilities. This campaign will boost source and expectation reliability, support meanings, and identifiable evidence of hypotheses and semantics.

- Teachers are asking students to clarify earlier and fresh details about certain focuses and interactions using Facebook remark capabilities.

- Students use new information in a variety of settings, view results using a web app, and use documents, data, image, sound and video sharing to link data from various devices. These actions reflect semantics.

3) Measurement and evaluation

3.1) Evaluation

- Students self-assess their creation of reading, comprehension and working group success through the exchange of documents.

- Students assess the group performance of other group members through the exchange of documents.

- Students assess the quality of teaching and learning through the exchange of documents.

- Students use record sharing to measure and evaluate their learning outcomes. This action aims to enhance the validity of sources and perceptions, help build and judge deductive conclusions, help characterize and acknowledge hypotheses, plan enlistment to explore and anticipate likely results, derive and judge inductive conclusions and semantics.

- Teachers use Facebook and the online platform to measure reading, success and student participation.

3.2. Assess the efficacy of improving the critical thinking skills of students by educating and learning through request-based learning practices using informal organization and distributed computing.

Table 1 The example shows that improving critical thinking skills for students through education and learning through request-based learning using relational organization and distributed computing ($x = 4.7$, S.D. = 0.50) was highly appropriate for students.

Table 1: Effectiveness evaluation of students ' critical thinking skills through training and learning through on-demand learning activities using informal organization and distributed computing.

Evaluation Lists	Results		Level of appropriateness
	\bar{x}	S.D.	
1. Pre-teaching and learning preparation			
1.1 Orientation	4.80	0.45	Highest
1.2 Practice	4.80	0.45	Highest
1.3 Divide students into groups	4.60	0.55	Highest
2. Enhancing students' critical thinking skills through teaching and learning by inquiry based learning activities using social network and cloud computing			
2.1 Engagement	4.60	0.52	Highest
2.2 Exploration	4.72	0.49	Highest
2.3 Explanation	4.70	0.50	Highest
2.4 Elaboration	4.65	0.52	Highest
3. Measurement and evaluation			
3.1 Evaluation	4.76	0.47	Highest
Summary	4.7	0.50	Highest

Table 1: Results of the proprietary evaluation of critical thinking skills of students through instruction and learning through request-based learning activities using informal community and distributed computing.

Table 2 The example shows that the upgrading of critical thinking skills by teaching and learning through request-based learning activities using informal organization and distributed computing was exceptionally material for real practice ($x = 4.5$, S.D. = 0.55).

Evaluation Lists	Results		Level of appropriateness
	\bar{x}	S.D.	
1. Teaching and learning by inquiry based learning activities using social network and cloud computing is appropriate to enhance critical thinking skills	4.6	0.55	Highest
2. Enhancing students' critical thinking skills through teaching and learning by inquiry-based learning activities using social network and cloud computing is possible to apply in real practice	4.4	0.55	High
Summary	4.5	0.55	High

Table 2: Results of the patented assessment of developing the critical thinking skills of the understudy by teaching and learning by request-based learning practices using informal culture and distributed computing to apply in real practice

VIII. CONCLUSION

Improving students ' critical thinking skills by teaching and learning through inquiry-based learning exercises using social network and cloud computing is ideal for practical application and helps students gain the knowledge and skills they need to be effective in the information age. The findings of this research study revealed perspectives for students on the use of technology to support their learning and critical thinking development.

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