



EVOLVING TEACHING, LEARNING MODELS AND CONCEPTS OF PRESENT EDUCATION

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ABSTRACT

Education has taken an entirely a new approach, there are education institutions which have taken a great hit after the impact of pandemic 2020 and they are still finding it difficult to cope up to the disruption that they faced, this research paper focuses on what organization have to follow with the change and how to manage the disruption, as education is a vital factor for every individual it is the responsibility of every educational institution to build the future generation, yes no doubt that these educational institutions are giving the best with regards to imparting knowledge, however the model that they follow is only a mere responsibility it is time to understand and question are the beneficiaries receiving the true value, this research article focuses on a model that can add value to the students and the facilitators so that as an organization they can overcome the disruption.

Keywords: (Education, Disruption analysis, Teaching pedagogy, blooms taxonomy, HOTS)

1. Introduction

In modern days education had changed drastically compared to the past 3 decades, there has lot of factors that has changed, the learning style, the teaching methods, the curriculum, the pedagogy etc. it is altogether a new approach and these approaches has to be considered holistically. For this reason, there are numerous models that talks about the holistic approach of education and learning, the prominent model is the blooms taxonomy, this framework talks about six major categories such as Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation.

The main objective was to establish a pedagogical interchange between the facilitators and learners so that the facilitator can plan and deliver appropriate instructions and design valid assessment, task and strategies which also ensure the learning is aligned with the objectives. One of the main components of evaluation is critical thinking through critical thinking problem solving can be done, this process enhances the ability of a student to be ready for corporate world.

Critical Thinking: Critical thinking is one important element for a student as a skill, critical thinking involves simulating curiosity, polishing creativity, refining research skills, enhancing problem solving ability and decision making. This concept helps the students in the process of analysing any given topic or a problem deeply based on relevant information.

1.1.1 Importance Steps of critical thinking

- a. Identify the issue or a problem
- b. Understand the reason behind the problem
- c. Collect data related to the problem
- d. Organise findings and data
- e. Sort and organise findings
- f. Develop and implement solution

- g. Analyse success and failure of the problem
- h. Identify ways to refine the solution.

1.1.2 Importance of critical thinking for an organization

It is very important for the education sector to inculcate problem based learning and critical thinking in the curriculum as this model helps the students to implement cognitive skills and will improve the efficiency of the students, however for an organization problem based teaching allows to recognise barriers to success and find potential solution for the potential issues, it will also create an interest for a student to think and attain the Higher Order Thinking Skills, it also helps to brainstorm new ideas and implement to the future goals of the organization, it also helps to identify the inefficiency and improves the quality of education to meet the international standards.

1.2 Review of Literature

(Nirmala & Kumar, 2018) In their research article the research has analysed on graduate employability is an evaluation criterion for not only institutions but also in the states and countries all over the world. The state with better employability rate seems to be socially as well as economically sound than the others. Many researchers have arrived at different models of employability, each focusing on a variety of skills. Though the focus of all researchers is on skill development, the graduates are in ambiguity as to what skills to be developed by them. Cotton (2000) has eased the situation by developing a conceptual framework of employability skills focusing on three major skill sets, namely, basic skills, higher-order thinking skills and affective skills. This paper makes an attempt to test Cotton's (2000) model among the undergraduates of arts and science colleges. The findings reveal that the three skill sets have a positive impact on the employability skills of the students. The study would be of benefit to the graduates in focusing on their skill development and for the institutions in designing their curriculum to bring out a greater number of employable graduates

(Kuang, Adler, & Pandey, 2021) in their research the researchers studied on the popular business simulation game, Monopoly, to assess its effectiveness as a learning and teaching tool for helping high school accounting students acquire and apply foundational accounting concepts. The study compares an accounting-focused, Modified Monopoly simulation game with two other instructional methods. Using a quasi-experimental approach that involves three learning groups with random assignment of treatments based on school/class, a sample of 144 accounting students was obtained. This study found students using Modified Monopoly showed significantly greater improvement between their pre- and post-test scores than students in Computer-assisted instruction (CAI), but significantly less improvement than a paper-based extended accounting problem (EAP).

(Harishree & Mekala, 2020) in their research the researcher conducted a detailed study on the 21st century skill sets serve to be the requisite tool for professional and career development of incumbents in the globalized era. As the workplace requirements change from knowledge age to information age and progress towards conceptual age, the prospective employees are expected to be equipped with 21st century skills. The reports of NSDC, NASSCOM and Deloitte highlight the prevailing skills gap between the students' skills set and the workplace requirement. To bridge this skills gap, the four Cs of 21st century skills, namely, Creativity, Critical Thinking, Collaboration and Communication Skills, are expected from the employees in an organization. In this regard, the paper focuses on the need for 21st century skills with specific reference to four Cs, in preparing the students of engineering towards their workplace readiness in this competitive world. In addition, it suggests the methods to integrate these skills in the English classroom and equip the students of engineering to meet the workplace challenges. The inculcation of these 21st century skills in the engineering curriculum will equip the students for better career prospects.

(Kunsch, Schnarr, & Tyle, 2014) In their research article the researchers find out the Complex business problems require enhanced critical thinking skills. In a dedicated, in-person critical thinking class, argument mapping techniques were used in conjunction with business and no business case studies to build the critical thinking skills of a group of master of business administration students. Results demonstrated that the critical thinking ability of the student sample improved significantly. The use of argument mapping techniques may be a useful tool to assist practitioners in business settings with complex decision making.

(Alvarez, Taylor, & Rauseo, 2015) In their research article the researchers discussed on the Most undergraduate marketing majors will spend at least some time in a sales role, and employers are requiring greater professionalism and more varied skill sets from their sales hires. In addition, there is an increasing demand for online and higher order learning in sales education. In response, this article proposes that sales courses using structured learning activities can increase critical thinking skills, irrespective of the learning environment. To test these propositions, a pre- and post-test interventional research study was conducted. Results show that students' objective critical thinking scores showed some improvement over a semester for both face-to-face and fully online courses. Moreover, a control group of students did not experience a similar increase in their critical thinking skills.

1.3 Research design refers to the overall strategy utilized to carry out research that defines a succinct and logical plan to tackle established research question through the collection, interpretation, analysis, and discussion of data. The methodologies and methods incorporated in the design of a research study will depend on the standpoint of the researcher over their beliefs in the nature of knowledge. It is also said that research plan and design is to give a blue print on how to frame a research problem and consequently to frame objectives of the study this research design will also help us to address certain question like Why, what, When and How etc. there can be certain question like what is the need for Critical Thinking in education sector both for the students and the facilitators.

1.4 Statement of the problem

Most of the educational institutions only focus on completing the syllabus on time, maintaining discipline, creating a good pass record and meeting the requirement of the education board, however they are not keep about providing holistic education and implementing higher order thinking skills and problem based learning and critical thinking.

1.5 Objectives of the Study

- a. To analyse the impact of critical thinking among students
- b. To evaluate the relationship among the variables

1.6 Data Collection

- **Primary Data Collection Method:** it **Consists** of collection of original primary data collected by the researcher; it is often undertaken after the researcher has gained some insight in the issue by reviewing secondary research or by analysing previously collected primary data. A survey method was done for the research work. The universe of the study were the respondents of the city of Bengaluru there were 40 Respondents who took the survey, from four colleges of Bengaluru the population of the study were both male and female respondents with a age group falling under the Category 20-24.

➤ Secondary data method of data collection

This study requires the support of secondary data to build questionnaires for primary research that could take existing research in this area a step forward. Information about Critical thinking, Higher order thinking skills were studied along with factors affecting critical thinking and the 21st century skills, Access to online Journals, like Emerald, SAGE, Journal of Behavioural finance, JSTOR and Global Economic Monitor, books and related articles to critical thinking were studied. It is Data collected by someone other than the researcher. These data will be collected through Research journals, Published Books, News Papers, Articles, Websites, previously conducted Research Projects.

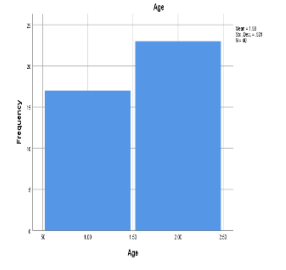
1.7 Variables of the Study: Socio demographic Variables

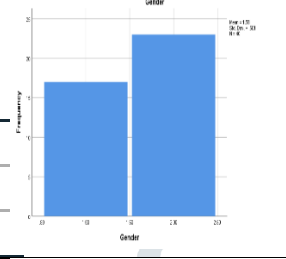
➤ Gender	➤ Place
➤ Age	➤ Locality
➤ Income	➤ Thinking Skills
➤ Education qualification	➤ Methodology

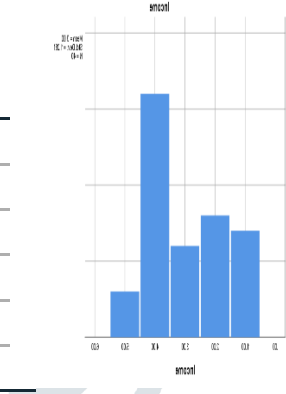
1.8 Statistical Techniques for Data Analysis

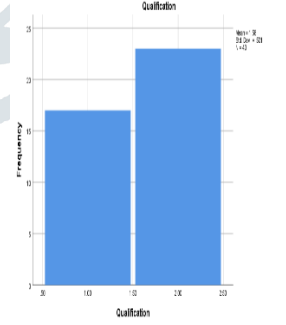
- (a) Karl Pearson’s Correlation
- (b) Chi square test
- (c) Neural Network

1.9 Data Analysis - Table Indicating the Demographic profile of the respondents.

Age						
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	18-20	17	42.5	42.5	42.5	
	21-22	23	57.5	57.5	100.0	
Total		40	100.0	100.0		

Gender						
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Male	17	42.5	42.5	42.5	
	Female	23	57.5	57.5	100.0	
Total		40	100.0	100.0		

Income						
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	2-3 Lakh	7	17.5	17.5	17.5	
	3-4 Lakh	8	20.0	20.0	37.5	
	4-5 Lakh	6	15.0	15.0	52.5	
	5-6 Lakh	16	40.0	40.0	92.5	
	6-7 Lakh	3	7.5	7.5	100.0	
Total		40	100.0	100.0		

Qualification						
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	UG	17	42.5	42.5	42.5	
	PG	23	57.5	57.5	100.0	
Total		40	100.0	100.0		

From the above table we see that out of the total population there are 40 respondents who belong to various demographic profiles, of which the above table emphasises on Age, Gender, Qualification and Course, from the age category the researcher has identified netizens from the age group of 18 to 25, from the above data it has been classified into 3 groups the first group being 18-20, the second group 20-22, the third group from 23 to 24. Among the respondents there are 17 respondents who belong to the age group 18-20 and 23 respondents who belong to the age group 21-22, here we see that majority of the respondents are from the age group of 21-22 that comprises of 57.5%. Out of the total population of 40 respondents the researchers sample population consisted of both male and female when we see the gender category, we see that there are 17 male and 23 female her we can see that female are more in number that comprises a 57.5% of the entire population. From the above table we see the income category is segregated into 5 fragments, the first is an income group that falls in the bracket of 2 to 3 Lakhs, second

3 to 4 Lakhs, third 4 to 5 Lakhs, fourth 5 to 6 Lakhs, fifth 6 and above, from the above table we see that there are 7,8,6,16,3 respondents respectively according to the income fragment classification of which we see that almost 40 % of the population fall under the income category of 5 to 6 Lakh per Anum. Lastly, we the Qualification of the respondents from the above table we see that the population is classified into two types as per the Qualification, her majority of the population are perusing their post-Graduation that comprises of 57.5 percent and the remaining 42.5 % of the respondents are perusing Under-Graduation. The above details give's an overview of the demographic profile of the respondents who play a major role in the study of the topic Critical Thinking.

1.10 Hypothesis 1

Null Hypothesis: H0- There is No Significant difference between course type and Research Skill that are taught at the college Level

Alternative Hypothesis: H1- There is A Significant difference between course type and Research Skill that are taught at the college Level

Table Indicating the Crosstabulation of Course Type and encouraging students for research skills

Crosstab				
		Research Skill		Total
		Yes	No	
Course type	UG	14	3	17
	PG	23	0	23
Total		37	3	40
Chi-Square Tests				
	Value	Df	Asymptotic Significance (2-sided)	
Pearson Chi-Square	4.388 ^a	1	.036	
Pearson's R			-.331	
Spearman Correlation			-.331	

From the above table we see the cross tabulation of the course type and encouraging students for research skills here we see that out of the total population of 40 there are 17 respondents from the UG and 23 respondents from the PG of which we see that 14 Students from the UG have said that their college encourages the students in research and 3 Students have answered that no their college does not encourage on the research skills in their course however on the other hand we see that out of the 23 students of PG all of them have said that the college encourages the students to improve on their research skills. however when we see the table it indicate that the chi-square value according to Pearson Chi-Square test shows 0.036 which is 3.6% as the level of significance since the level of significance is less than 5 % the researcher accept Null Hypothesis the is no significant relationship between the type of Course and the research skills that the college offers, however when we see parsons correlation value it shows negative of -.331 this should there is no relation between the type of course and the research skill. From this we infer that the post graduate students are encouraged in doing research and more focus is given on the post graduate students for doing their research which is a good practice followed by the education sector, we can also infer that the college has to implement research skill be it in PG or In UG this skill should be implemented, however if the colleges gives more focus on the research skill that is to be imparted among the under graduate students, such practice will enhance the research skill among students and increase the higher order thinking skills among the students.

1.11 Hypothesis 2

Null Hypothesis: H0- There is No Significant difference between course type and overall rating by the students on the platform offered by the course with regards to analysing and evaluating your skills

Alternative Hypothesis: H1- There is A Significant difference between Qualification and overall rating by the students on the platform offered by the course with regards to analysing and evaluating your skills

Table Indicating the Crosstabulation of Course Type and overall rating by the students on the platform offered by the course.

Crosstab					
		Overall Skill			Total
		Very poor	Poor	Average	
Qualification	UG	2	2	13	17
	PG	2	0	21	23
Total		4	2	34	40
Pearson Chi-Square		3.051 ^a	2	.218	
Interval by Interval		Pearson's R			.142
Ordinal by Ordinal		Spearman Correlation			.191

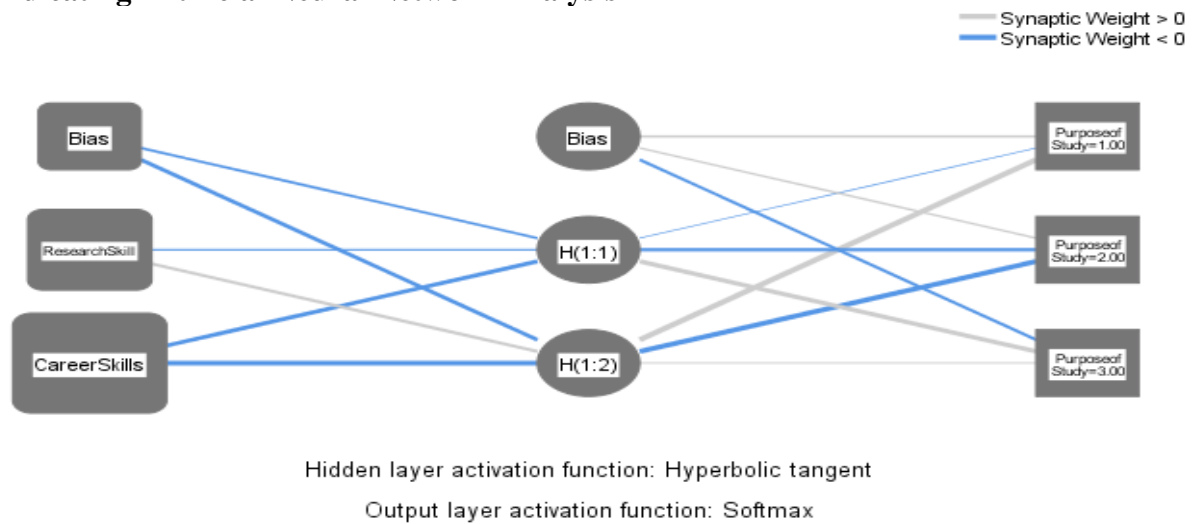
From the above table we see the crosstabulation of Course type and overall rating by the students on the platform offered by the course that they study, out of the total population of 40 respondents there were 17 students from UG and 23 Students from PG, out of the 17 students there were 2 students who rated very poor and 2 students who rated poor and 13 students rated as average, and out of the 23 PG students there were 2 who rated very poor and 2 who rated poor and 21 students who rated average, which means that the Majority of the students are happy in the skills taught in the college both in the UG and in the PG, however when we see the carls Pearson's Chi-square test the significance level is 0.218 which is 21.8% more than the critical level of 5 % therefore **we fail to reject the null hypothesis and accept the alternative hypothesis** i.e. there is a significant difference between Course offered by the college and overall rating by the students on the platform of skills offered by the course with regards to analysing and evaluating skills. This shows that the skills offered by the courses plays a important role in the skill development, however we see that when we see there is a very low correlation between these variable which doesn't depend on each other.

1.12 Artificial Neural Network Analysis

Classification					
Sample	Observed	Predicted			Percent Correct
		To Complete degree	to get a Job	to improve Skills	
Training	To Complete degree	1	4	0	20.0%
	to get a Job	0	11	0	100.0%
	to improve Skills	0	14	0	0.0%
	Overall Percent	3.3%	96.7%	0.0%	40.0%
Testing	To Complete degree	0	3	0	0.0%
	to get a Job	0	5	0	100.0%
	to improve Skills	0	2	0	0.0%
	Overall Percent	0.0%	100.0%	0.0%	50.0%

Dependent Variable: Purpose of Study

Figure 1: Indicating Artificial Neural Network Analysis



Independent Variable Importance		
	Importance	Normalized Importance
ResearchSkill	.415	70.9%
CareerSkills	.585	100.0%

The above table denotes the analysis that are conducted with regards to the variables of the study such as the purpose of the study and the reasons for completing the course, in the artificial neural network analysis it displays 3 layers the input layer, the hidden layer and the output layer the analysis clearly indicates the most prominent network and the strongest relationship between the variable, from the graph we see that the strongest network relationship is with regards to research skills and career growth skill, it is for the same reason the student are completing the course.

Conclusion

It is understood that every education institute and the learns have to adopt higher order thinking skill in the pedagogy, it will definitely improve the skills of the students in the corporate world so that they can be leaders of tomorrow, the holistic pattern of education is to focus on research skills, problem-based learning, career growth skills, case studies, and critical thinking so that the student can implement in all modules and subjects that they learn.

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