

Time to Bridge the Gap between Accounting and Technology through Improving the Accounting Curriculum: A Perceptual View

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Abstract

Today there are many advancements in accounting practices across the globe. But the accounting curriculum in the higher education institutions of India are still out dated. This in turn indirectly impacting on the transversal competencies of accounting graduates. Therefore, in the present study the opinions from academicians and professionals are gathered on the current status of accounting education in India and the collected opinions are analyzed through independent samples t-test and concluded that higher education institutions in India needs to redesign accounting curriculum in par with professional educational curriculum like professionals education curriculum followed by professional institutes such as ICAI, ICSI, ICWA and IIMs at large.

Keywords – Accounting, technology, accounting curriculum, competencies of graduates

Introduction

In every field, there is a touch of technology. Technologies are ever-changing and every field gets ready to adapt to them very rapidly. What matters the most is how rapidly new technologies are adopted to stay competitive in the economy. In the same way, technology has transformed the business environment to a larger extent. Especially digital transformations in business operations are occurring at lightning speed. Digital technologies are not only adopted in the core operational areas of the organizations, but also in the main functions such as human resources, purchasing, accounting, and finance. All the systems and processes in accounting are digitalized at a rapid pace. The organizations have fallen under paperless accounting and implemented digital solutions such as accepting invoices and other files by means of an interface directly into the accounting system, data quality management, process automation, integrated consolidation system, real-time reporting or digital reporting, and cloud computing.

Accountants in this digital era should be tech-savvy to be responsive to the transformations in the accounting profession. An accountant must possess both digital accounting skillsets and traditional accounting skillsets. Otherwise, his competencies will be obsolete in this digital era. So, here comes the contribution of educational institutions toward upgrading accounting graduates. The present accounting curriculum is not in line with the market needs of the accounting profession. Accounting graduates are not capable of handling technology-based accounting systems and processes right after their graduation. Therefore the present study is exploring on the developments in the accounting profession due to digitization and suggest what advancements need to be done to the accounting curriculum to suit the real world and make accounting graduates employable right after their graduation.

Purpose

The purpose of present study is to highlight the developments in the accounting profession and to show whether there is a need for redesigning accounting curriculum in India or not, through studying the earlier literatures and the perception of academicians and professionals.

Recent developments in Accounting Profession

Accounting Profession and Accounting Curriculum

The present accounting graduates are future accountants. To what extent the accounting students are ready to handle the new technologies in accounting systems and processes? Is the present accounting curriculum suitable for the existing job market? Many educational institutions might not have developed curricula that are on par with digital technology for tomorrow's accounting professionals. The institutions need to incorporate new learning outcomes and competencies in accounting curricula suitable to digital technological changes when preparing accounting graduates for the accounting industry. It is to be understood that as the accounting profession is fast changing its natural that the accounting curriculum should also need to be upgraded. It's the right time to replace outdated content with new up-to-date learning resources. The educational institutions need to be responsive in this stage towards the changing roles of accountants and prepare the curriculum according to that. The effects of

outdated traditional conventions in accounting curricula and pedagogical techniques lead to (Dellaportas (2019) & Nelson (1995)):

- i) Under prepared graduates for a dynamic profession.
- ii) Institutions will produce graduates who are not employable in the existing job market.
- iii) The curriculum encourages only memorization instead of outcome-based students who can relate concepts to various real-world problems.
- iv) No strategic advantage at the workplace. Firms have to suffer.
- v) Only goal or content-based education instead of active independent students in the learning process.
- vi) Increase in rote learning which leads to unproductive graduates who will not be capable to communicate, verify or apply in financial information.

Inclusions to be made in the present Accounting Curriculum

Big data and Accounting Education

Big data is extensively adopted financial accounting and management accounting. In management accounting git is used in budgeting and control. In financial accounting and reporting it helps to ensure quality, relevance, transparency for stakeholder's decision and also helps in revising accounting standards (Warren *et al.*, 2015). Therefor the accounting graduates needs to get updated with big data analytics to analyse large data sets to design financial trends, patterns and forecast future financial positon and performance. It's the educational institutions responsibility to consider and invest to train accounting students in this new area by training or equipping them with this new technology by inclusion in the curriculum.

Block chain technology and Accounting Education

Many start-ups in most of the developing countries are using block chain technologies for their business operations (Dogo et al., 2019). The Big Four Accounting and Auditing firms are relying on this technology already. So this provides an opportunity to accounting graduates to be employable only if they knowledge about this new technology. Blockcahin technology have a significant impact on auditing, financial reporting and financial management (ACCA, 2016; Smith, 2018). These aspects needs to be included in accounting education.

Cloud computing and Accounting Education

Most of companies around the world are gradually adopting cloud computing in order to save operational costs in providing their services (Alam, 2018). To further save costs many firms are encouraging accountants to resort on in-house cloud computing instead of outsourcing because it has a major role to play in accounting and auditing (Coyne et al., 2017). This creates a great opportunity to future accountants to see themselves in those positions only if they are equipped with his technology. This aspect is also prominent and need to align in the curriculum.

Artificial intelligence (AI) and Accounting Education

In today's accounting industry, artificial Intelligence or machine learning is considered as a core requirement in the accounting profession. The firms are extensively resorting in this technology and not outsourcing instead accountants are advised to enhance their knowledge in this. In every industry artificial Intelligence or machine learning is playing a pivotal role (Mohri et al, 2018). As humans machines and computers are learning to read, analyse trends, and interpret certain patterns of financial data. So it's a high time to accounting professional to appreciate this technology and in order to find better places in this technology based accounting industry.

eXtensible Business Reporting Language (XBRL)

XBRL is an XML based business reporting standard. This technology is rapidly been applied across the globe by the companies for their business reporting. XBRL is one and only the way for preparing and publishing ABR (Annual Business Report) which contains both financial and non-financial information to be published by companies to various stakeholders under EBR model (Enhanced Business Reporting). With the help of this technology business houses can:

- ⇒ Easily comply with various regulatory aspects.
- ⇒ Easily file various compliance reports with various regulatory authorities in a single format.
- ⇒ Further process the reported information (analysis, budget and decision purpose).
- ⇒ Integrate the IFRS (International Financial Reporting Standards) for financial reporting.
- ⇒ Integrate BRSR (Business Responsibility and Sustainability Reporting guidelines) issued by SEBI for sustainability reporting.

The aspect of financial reporting created and redefined the role and title of accountants. Therefore, this aspect is need to be incorporated in accounting curriculum so as to enhance the skills and employability of accounting graduates. In India professional organizations such ICAI (Institute of Cost Accountants of India) putting greatest effort to upgrade professionals in this context. We can see the CMA Final Group III – Corporate Financial Reporting is a well-designed accounting curriculum which consists of all the above mentioned aspect. This curriculum can be adopted by all other higher education institutes of the nation to make Indian accounting education environment as more competent and globally acceptable.

Perception View of Academicians and Professionals to Redesign Accounting Curriculum in India

As the part of the paper an attempt has been made to gather the perception from the academicians and professionals regarding the relevance of updating accounting curriculum in higher education system in India. For this purpose the present study gather the information from 46 academicians who are currently teaching accounting in higher education institutes in Karnataka and 32 professionals who are CAs, CMAs and CSs in Karnataka. The perception is gathered through google forms distributed through the email. The email ids are collected

through the websites of HEIs and membership directory of professional organisations. The results of statistical analysis of primary data is depicted in the table no. 01 and 02 below.

Table No. 01: Group Statistics on Perception View of Academicians and Professionals to Redesign Accounting Curriculum in India					Rank
Statements on Relevance of Accounting Curriculum		N	Mean	Std. Deviation	
1. There is a rapid change in accounting professional practices across the globe.	Academicians	46	4.17	.851	7
	Accountants and auditors	32	3.78	1.070	1
2. More technological aspects are initiated in real accounting practices by companies today.	Academicians	46	4.24	.923	5
	Accountants and auditors	32	3.50	1.016	7
3. There is gap between theory and practice taught in the HEIs and actual practice in the accounting environment.	Academicians	46	4.39	.682	1
	Accountants and auditors	32	3.47	.803	8
4. Redesigning of accounting curriculum at Indian HEIs is the market need today.	Academicians	46	4.35	.766	3
	Accountants and auditors	32	3.56	.878	4
5. Practice-based accounting curriculum along with theoretical problems should be incorporated to enhance the quality of accounting graduates.	Academicians	46	4.17	1.102	8
	Accountants and auditors	32	3.47	.983	9
6. The redesigning and implementation of updated accounting curriculum in HEIs enhances the transversal competencies of accounting graduates in India.	Academicians	46	4.22	.876	6
	Accountants and auditors	32	3.53	1.107	5
7. Implementation of curriculum in par with professional curriculum enhances the	Academicians	46	4.24	.802	4
	Accountants and auditors	32	3.59	.979	3

employability of accounting graduates in India.					
8. There should be a need for combined effort of 1 and professionals (CA, CMA, and CS) to streamline the accounting curriculum.	Academicians	46	4.33	.967	3
	Accountants and auditors	32	3.63	.751	2
9. Redesigning and implementation of accounting curriculum in India helps to streamline the accounting education to global standards.	Academicians	46	4.39	.802	2
	Accountants and auditors	32	3.50	.984	6
Overall	Academicians	46	4.3012	.59394	
	Accountants and auditors	32	3.5590	.81576	

Source: Survey Data

The table 01. Shows the descriptive statistics on the perception view of academicians and accountants and auditors to redesign the accounting curriculum. The mean value of each statements in majority of aspects is more than the overall mean value of both academicians and professionals’ perception. It means they are positively standing towards redesigning the accounting curriculum in India.

Table No. 02: Independent Samples Test						
Statements on Relevance of Accounting Curriculum		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
1. There is a rapid change in accounting professional practices across the globe.	Equal variances assumed	.573	.451	1.802	76	.075
	Equal variances not assumed			1.730	56.746	.089
2. More technological aspects are initiated in real accounting practices by companies today.	Equal variances assumed	.191	.663	3.337	76	.001
	Equal variances not assumed			3.280	62.619	.002

3. There is gap between theory and practice taught in the HEIs and actual practice in the accounting environment.	Equal variances assumed	1.079	.302	5.461	76	.000
	Equal variances not assumed			5.304	59.632	.000
4. Redesigning of accounting curriculum at Indian HEIs is the market need today.	Equal variances assumed	.479	.491	4.193	76	.000
	Equal variances not assumed			4.092	60.828	.000
5. Practice-based accounting curriculum along with theoretical problems should be incorporated to enhance the quality of accounting graduates.	Equal variances assumed	.129	.720	2.904	76	.005
	Equal variances not assumed			2.964	71.317	.004
6. The redesigning and implementation of updated accounting curriculum in HEIs enhances the transversal competencies of accounting graduates in India.	Equal variances assumed	2.097	.152	3.055	76	.003
	Equal variances not assumed			2.937	56.837	.005
7. Implementation of curriculum in par with professional curriculum enhances the employability of accounting graduates in India.	Equal variances assumed	1.218	.273	3.199	76	.002
	Equal variances not assumed			3.093	58.297	.003
8. There should be a need for combined effort of academicians and professionals (CA, CMA, and CS) to streamline the accounting curriculum.	Equal variances assumed	1.681	.199	3.439	76	.001
	Equal variances not assumed			3.597	75.007	.001
9. Redesigning and implementation of accounting curriculum in India helps to streamline the accounting education to global standards.	Equal variances assumed	.400	.529	4.396	76	.000
	Equal variances not assumed			4.238	57.793	.000
Overall	Equal variances assumed	1.424	.236	4.623	76	.000
	Equal variances not assumed			4.386	53.428	.000

Source: Survey Data

To examine the mean difference in the perception on redesigning accounting curriculum among academicians and professionals independent samples t-test has been performed. The results in table 02 shows that there is a significant difference in the overall perception towards redesigning of accounting curriculum among academicians and accountants. However, there is no significant difference in perception of academicians and professionals on the statement that there is some rapid change in the accounting professional practices across the globe.

Conclusion

In this digital age accounting graduates needs to be well-equipped with technology in addition to a content-based accounting curriculum. It's the right time to bridge the gap between accounting curriculum and technology by educational institutions. It should be more technology-centered in order to fill future vacancies in the accounting profession. These new advancements in technology should be imparted in accounting curricula, especially at the tertiary level.

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