



Accounting and Ms Excel: Which Features for Accounting Students?

Gitahi J., PhD

Chandaria School of Business
United States International University-Africa, Nairobi, Kenya

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Abstract

Rapid development in information technology (IT) has brought about significant changes in every field. In the accounting field, computer technology has become a major aspect of effective and efficient accounting. Today's professional accountants need to have IT knowledge and skills that are relevant to their roles so as to provide competent and professional services. For new graduates entering the accounting profession, the ability to use various software and tools has increasingly become very vital. This study assesses features of Ms Excel (Excel) that are used by professional accountants and the features of Excel that accounting graduates entering profession should be able to use.

Keywords: Information technology (IT), Software, Accounting profession, New graduates

Introduction

Information Technology (IT), today, plays a very important role in every aspect of life. This is because technology makes work much easier and less time consuming among other advantages. Indeed, the impact of technology can be felt in every area of life. According to Boulianne (2012) there are many IT tools that are available to the accounting profession that enhance efficient and effective processing and analysis of information.

Employers therefore expect accounting students to acquire accounting related IT skills during their training.

Pathways Commission recognized the importance of IT and impresses on academic accounting programs to identify and integrate current and emerging accounting and business information technologies in the accounting curricula (Behn et al., 2012).

A number of authors observe a variety of reasons that makes it hard to incorporate IT into the accounting curriculum. For example, the rapid pace of technological change and innovation (Badua et al., 2011), the limited experience and education of faculty in the specific technologies, (Boritz and Stoner, 2014), and the lack of recognition and incentives for faculty to focus on curriculum development (Boulianne, 2016).

Behn et al. (2012) note that the practice of accounting is changing rapidly. Its geographic reach is global, and technology plays an increasingly key role. Today's students are more comfortable with technology and less interested in traditional teaching methods. Recommendation 4 of the Pathway Commission calls for development of curriculum models, engaging learning resources and mechanisms for easily sharing them as well as enhancing faculty development opportunities in support of sustaining a robust curriculum.

This makes it important for accounting instructors to answer the question: Which IT tools should be emphasized in accounting programs?

Literature review

A range of studies have considered what areas or topics should be included in the Accounting Information Systems (AIS) curriculum. Indeed, since the 1980s, researchers have studied which topics to address in the Accounting Information Systems (AIS) curriculum. One of the early works is "Accounting information systems courses and curricula: New perspectives" by Davis and Leitch (1988). They studied accounting professionals and faculty and developed a list of topics appropriate to undergraduate and graduate AIS courses. Noting the rapid change in technology, Badua et al. (2011) sought to develop a framework for an AIS curriculum. The study analyzed data from surveys of accounting faculty, inspected AIS books and carried out content analysis of AIS course syllabi. Badua et al. (2011) concluded the study with proposals for the structure and sequence of the AIS curriculum.

A study by Tam (2013) identified 18 topics in IT knowledge and skills relevant to accounting graduates and proposed a model for the delivery of IT content in an accounting curriculum named as the "Induction-Diffusion-Assimilation model".

Boulianne, E. (2016) carried out a survey on accounting students in a Canadian business school and concluded that software can be effectively utilized and integrated in class to improve knowledge acquisition of AIS. The authors further observe that in business schools, accounting students are increasingly exposed to the benefits and usefulness of computers and are encouraged to utilize IT. Lee et al. (2018) carried out a survey to assess accounting practitioners' evaluations of the importance of various software tools. From the findings, the authors conclude that Excel is the most used computer software / tool, and the most important software tool for newly hired accountants. Lee et al. (2018) further found that the importance of Excel is consistent across different accounting areas (that is, audit, tax, advisory, and corporate) and across all levels of experience. They further observe the importance of putting emphasizes on Excel in accounting programs.

This finding is consistent with those of a study by Brown and Pike (2010), in which over 55 full-time tax professionals at corporate headquarters were interviewed. The study found out that almost all financial statements used for tax compliance were prepared in Excel.

Rackliffe and Ragland (2016) in a survey on 245 accounting instructors at over 100 accounting programs examined accounting instructors' perceptions of Excel in public accounting and accounting education. They found out that a majority of faculty incorporate Excel in their accounting classes consistent with their perception of Excel importance.

Bradbard et al. (2014) note that spreadsheets are necessary tools for traditional accounting tasks such as planning, budgeting, forecasting as well as newer decision-making responsibilities. In the study, they reviewed a total of thirteen studies related to accounting practitioners and spreadsheets. They note that all the thirteen studies ranked spreadsheet knowledge as very important. In addition, many respondents ranked their spreadsheet expertise as very high. According to Jelen and Alexander (2010) there is a wide agreement that close to 50% of Excel users leave 80% of Excel untouched. This, they conclude, means that most users do not tap into the full potential of Excel's built-in utilities.

Something notable among the studies referenced above and other related studies is the expectation that instructors in AIS will provide leadership in technology-related decisions relevant to the overall accounting curriculum. In this study, I carry out a survey to assess professional accountants' usage of Excel and their view of what Excel skill new accounting graduates should have. This study, carried out in March and April of year 2022, contributes to the IAS literature by identifying the specific Excel features that are relevant to the accounting profession and which should be emphasized in accounting programs.

Methodology

Snowball sampling was used in this study. The initial contacts were mainly accountant that I have interacted with (1) during my external audit and other accounting related assignments, (2) as former student with whom I have kept in contact, and (3) at the Institutes of Certified Accountants of Kenya (ICPAK) events. Initially, I contacted 14 accountants, first via telephone call in which I explained the study and requested for or confirmed their current and active email addresses. After the initial telephone call, I sent out an email to each in which explained the study. In the email, I included a link to a SurveyMonkey questionnaire. Out of this, nine responses were received. This led to modification in the form of reorganization, rewording, and removal and addition of several items.

The questionnaire was now ready for use. I then used the same approach, that is, first contact via telephone call in which I explained the study and requested for or confirmed current and active email addresses. After the initial telephone call, I sent out an email to each potential respondent, in which I explained the study, in the email, I included a link to a SurveyMonkey questionnaire. The initial number of accountants to who the questionnaire was sent to was 39. I also requested each participant to provide me with the contact at least one accountant they know and also requested them to inform the referrals about the study, and that I would be getting into contact to have them participate. This approach was repeated with the referrals. The total accountants contacted were 432. Out of these, 307 emails were sent, which yielded 116 usable responses.

The questionnaire

The questionnaire was created using SurveyMonkey and the Email invitation collector (Abd Halim et al., 2018) This made it easy to administer the survey and to manage the responses. The questionnaire had three sections, A, B and C. Section A of the questionnaire assessed the respondent's personal usage of Excel and contained 35 items, (see Table 1), primarily compiled based on books on Excel with a bias to its use in accounting, and journal articles (mainly, Anthony, 2021; Jeff, 2017; Moch, 2018; Ramachandran & Ragland, 2016). The questions on the items were based on a five -point Likert-type scale: 5 – Almost always, 4 – Often, 3 – Sometimes, 2 – Seldom, 1 – never.

Section B examined the respondent's view on the level of Excel knowledge required for newly graduated accountants at the point of joining the firm that the respondent works at. It contained the same 35 items in section A (see Table 1). The questions were based on a five -point Likert-type scale: 5 – Absolutely essential, 4 – Very important, 3 – Of average importance, 2 – Of little importance, 1 – Not important at all.

Section C dealt with respondent's demographics data, that is, level of education, certifications, and experience.

Results

Table 1. Means and standard deviations, and their ranking (for respondent's usage and Skills required for new hires), their ranges, and the Spearman's rank correlation coefficient

		Mean - respondent usage	Rank- mean respondent usage	Standard deviation- respondent usage	Mean - new hire skill level	Rank - mean new hire	Standard deviation - new hire skill level
1	Basic excel mathematical functions (summation, subtraction, multiplication, division, to the power of, etc)	4.834	1	0.957	4.741	1	0.755
2	Referencing (absolute, mix, relative)	4.810	4	0.819	4.483	4	1.455
3	Create and format basic charts such as column, bar, pie, xy, or line	4.776	6	0.893	4.052	8	1.405
4	Sorting function	4.566	7	0.358	4.181	6	1.038
5	Data validation	3.659	11	0.795	2.802	14	1.374
6	3d formulas	0.633	29	0.872	0.474	28	1.341
7	Goal seeking function	2.060	14	0.901	3.017	13	1.367
8	Trim	0.343	32	0.782	0.129	34	0.749
9	Maneuver around worksheets and workbooks (example, add, remove, rename, move, etc)	4.832	2	0.440	4.569	3	0.880
10	Subtotal and summarize data	2.034	15	0.826	3.276	12	1.438
11	Aggregate	2.016	16	0.939	1.810	18	1.373
12	Basic formatting (bolding, underlining, fill, alignment, numeric formatting etc)	4.832	3	0.963	4.397	5	0.970

13	IF statement (simple, nested, logical)	3.148	12	0.497	3.448	11	1.434
14	COUNTIFS, AVERAGEIFS, and SUMIFS functions	2.241	13	1.001	2.069	17	1.370
15	Pivot tables and pivot charts to describe data	1.106	22	0.941	1.552	19	1.395
16	Rounding numeric cells (e.g., ROUND, ROUNDDOWN, ROUNDUP, CEILING, FLOOR, etc)	4.393	8	0.931	3.578	10	0.799
17	MATCH and INDEX	0.353	31	0.937	0.302	31	0.737
18	Basic statistical functions (AVERAGE, STDEV, etc)	4.078	9	0.540	4.138	7	1.434
19	Link workbooks together (pulling data from one workbook into another workbook)	3.747	10	0.971	3.707	9	1.415
20	Conditional formatting	1.138	21	1.088	0.819	26	0.998
21	Sensitivity analysis with data tables	0.055	35	1.042	0.216	32	1.467
22	Macros	0.460	30	0.526	0.603	27	1.364
23	Import data into Excel	4.792	5	0.825	4.655	2	1.385
24	IF functions in combination with other functions (ISBLANK, VLOOKUP, HLOOKUP, ISNUMBER, etc)	1.104	23	0.987	1.336	21	0.758
25	Descriptive names for cell references and ranges	1.008	24	1.036	1.164	23	0.848
26	Summarize data with histograms	0.926	25	0.926	0.905	25	1.318

27	Manipulating and parsing text – (VALUE, LEFT, RIGHT, LEN, etc.)	2.002	17	0.539	2.371	15	1.410
28	ANOVA (analysis of variance)	0.334	33	0.942	0.086	35	0.988
29	Manipulating dates and times (Eomonth, Edate, Workday, etc.)	1.818	18	0.979	1.466	20	1.441
30	Scenario Manager for sensitivity analysis	0.074	34	1.042	0.172	33	1.409
31	Export data from Excel to a database	0.907	26	0.612	1.250	22	1.359
32	VLOOKUP and HLOOKUP and XLOOKUP	1.638	19	0.960	2.198	16	0.654
33	Summarize data with descriptive statistics	0.819	27	1.074	0.431	29	0.817
34	Finance functions like NPV, PMT, IRR, PV, FV, PPMT and CPMT	1.475	20	1.012	0.991	24	1.315
35	Create and format advanced charts (stock, radar etc.)	0.733	28	0.931	0.388	30	1.426
	MAX	4.834		1.0877	4.7414		1.4672
	MIN	0.055		0.3575	0.0862		0.6538
Spearman's rank correlation coefficient							0.973

Table 1 shows the mean of usage of the 35 Excel features by the respondent. The range for this mean is 4.8336 - 0.0548. The mean of respondents' opinion on the level of skill accounting graduates entering the profession need to have for the 35 items is also shown. Its range is 4.7414 – 0.0862. Table 1 also shows the ranking of the mean of usage of the 35 Excel features by the respondent and the ranking of their opinion on the level of skill needed by a new accounting graduate for each of the features. Also shown in the table is the standard deviation for respondents' usage of the

Excel features and their opinion on level of skill required for new accounting graduates for each feature.

The ranges for the standard deviation are 1.0877 – 0.3575 and 1.4672 – 0.6538 respectively. Spearman's rank correlation coefficient (r_s) was calculated for the two ranking sets, that is, respondents' usage and their view on the level of skill needed by new accountants for each feature. As shown in table 1, $r_s = 0.973$. This means that there is a very strong correlation between the respondents' usage of excel and the expected excel skills for accountants joining the firms that the respondents work at.

It is also notable from the analysis that there is a relatively huge drop in the mean of the respondents' usage after the 12th most used feature in the ranking order. This is also mirrored by the mean of respondents' view on the level of skill needed by new accountants. This implies that most respondents used the first 12 most used features in the ranking order indicating their importance for accountants. This suggests that the 12 Excel features that ranked as most used are important for accountants across all accounting fields. Ideal then, accounting programs should primarily seek to equip accounting students with skills on usage of these features.

Discussion and conclusion

These results are insightful, and they are indeed important to instructors in IAS. They are useful in shaping the content to be included in an IAS course. It is however important to observe that in this study I enquired on the usage of the features and not the knowledge or understanding of thereof. It is possible that an accountant will fail to use a feature because he or she is not aware of it, or does not know how to use it, even though it would otherwise be useful in their work. While I tried to make the list of features as wide and relevant as possible, it is not exhaustive and some features that are useful to accountants may not have been included in the list.

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