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Student perspective on skills needed in the accounting profession: a review of studies

ABSTRACT

This paper has been written based on surveys published in the foreign literature discussing student perception of the importance of competencies and skills needed in the accounting profession. While working towards the accomplishment of the above task we: (a) reviewed and categorised the subject-matter literature on accounting education, (b) discussed the methodology applied to analyse the surveys, (c) investigated into selected surveys on student perceptions of the importance of competencies and skills needed in the accounting profession, and (d) formulated conclusions. Generally speaking, two main conclusions can be drawn from the analysis. Firstly, the comparison of the subject-matter literature is difficult because the importance of skills is tested against a wide variety of methods plus the scope and type of the skills included in these studies vary often to a substantial degree. Secondly, despite the above-mentioned limitations, surveys suggest that students realise that nowadays technical bookkeeping skills are not enough to work in accounting. They know they need other skills in the field of communication, teamwork, decision making, analytical and logical thinking, professional demeanour, as well as a solid value system and interpersonal competences.

Keywords: accounting, skills, education, review of studies

JEL Classification Codes: A2, M41

1. Introduction

The subject-matter literature reports that the issue of the so called “modern accounting education” has been taken up since the late 1950s [Lawson et al., 2014]. Yet, the review of the literature suggests that a vast majority of surveys into competencies and skills expected of people in the accounting profession were conducted after 1990 and the interest in the subject continued also into the first decades of the twenty first century. The subject was examined by researchers from different parts of the world: Africa, North America, South America, Australia and Oceania, Asia, and Europe (see Table 1). Some publications are effects of cooperative efforts of scientists from research centres based in different parts of the world.

Papers that directly address skills and attributes needed in accounting-related jobs can be grouped in the following way. The first group includes publications which explain how employees (also potential employees, i.e. students) and academics perceive skills/attributes critical for the accounting profession, which can guarantee success in the labour market. The second group consists of publications focusing on employers’ expectations as to the skills and attributes of their employees in accounting departments. The third group of surveys addresses accounting curricula and teaching methods deployed to develop individual skills in students. Authors of publications from the fourth group focus on the attractiveness of accounting and planning-related professions, on career planning, as well as on determinants involved in choosing the accounting profession.

Some publications belong to just one thematic group but there are also cases of studies which can be assigned to two or even three groups. That is particularly true of papers whose authors investigated into the importance of individual skills/attributes from the perspective of employees (also students) and employers in one and the same study. Such papers can be allocated to the first or second group [e.g. Jackling and De Lange, 2009; Awayiga, Onumah, Tsamenyi, 2010; Klibi and Oussii, 2013]. Moreover, attention should be paid to the fact that in the subject-matter literature we can come across a number of references to publications touching upon subjects that go far beyond accounting. In particular, we mean here references to publications on how skills/attributes are shaped at universities, hence some studies on competencies in accounting are interdisciplinary by nature.

From Table 1 above we can see that skills/attributes expected of people working in accounting are examined and discussed practically all over the world and still remain pertinent. Understandably, in the world that is constantly changing, matching education with employers’ and employees’ (also students’) needs will always evolve, although at a different pace in different places.

From the point of view of this text, publications from group one are the most important, especially those which concern studies on how potential employees, in this case students, perceive skills/attributes critical for success in the accounting profession. These research studies have been reviewed for the purpose of this paper.

Table 1. Examples of publications from thematic groups authored by representatives of research centres from different parts of the world

Thematic group: Parts of the world:	First group – perspective of potential employees and academics	Second group – employers' perspective	Third group – curricula	Fourth group – Planning accounting career and its course
Africa	Awayiga, Onumah, Tsamenyi, 2010; Klibi i Oussii, 2013	Awayiga, Onumah, Tsamenyi, 2010; Klibi i Oussii, 2013	-	Coetzee and Oberholzer 2010
North America and South America	Parham, Noland, Kelly, 2012	Yoon, Vedd, Jones 2013; Weaver, Kulesza, 2014; Ahadiat and Martin, 2015; Camacho, 2015; Ahadiat and Martin, 2016	Kennedy and Dull, 2008; Lawson et al., 2014; Daff, De Lange, Beverley, 2012; Jackling Grant, Ratliff-Miller, Rosa, 2016	Carcello, Copeland, Hermanson, Turner, 1991; Chen, Jones, McIntyre, 2008; Bagley, Dalton, Ortegren 2012; Dalton, Buchheit, McMillan, 2014; Hsiao and Castro, 2015
Australia and Oceania	Oswick, Barber, Speed; 1994; Zaid and Abraham, 1994; Jackling, De Lange, Gut, 2006; Kavanagh and Drennan, 2008; Jackling and De Lange, 2009; Wells, Gerbic, Kranenburg, 2009	Zaid and Abraham, 1994; Kavanagh and Drennan, 2008; Jackling and De Lange, 2009; Wells, Gerbic, Kranenburg, 2009; Stone and Lightbody, 2012; Tam, 2013.	Jones and Abraham, 2009; Daff, 2013; Tam, 2013.	Auyeung, Sands, 1997; Kamran, Kazi, Manzurul, 1997; Smith-Ruig, 2009; Adapa, Sheridan, Rindfleish, 2015.
Asia and Europe	Oswick, Barber, Speed, 1994; Morgan, 1997; Stoner 2009; Senik, Broad, Mat, Kadir, 2013	Morgan, 1997; Uyar and Gungormus, 2011; Senik, Broad, Mat, Kadir, 2013; Zureigat, 2015	-	Auyeung, Sands, 1997; Danziger and Eden, 2006; Sugahara and Boland, 2009; Byrne, Willis, Burke, 2012; Grottke, Pelger, Schmiedeberg, 2013

Source: own compilation.

2. Goal and methodology

Primarily, this review of research studies is motivated by the wish to identify a set of skills and attributes perceived by students as critical for a successful career in accounting-related jobs. In order to accomplish the above stated goal, we reviewed results of surveys conducted by academics from different parts of the world, compared and categorised them. In anticipation of the conclusions of this exercise, already at the beginning we need to make a reservation, which clearly emerged in the course of the exercise and exerted a meaningful impact on the choice of studies and methodology. Unfortunately, it is difficult to compare the results of studies on student perceptions of the importance of skills/attributes because researchers have deployed different methods in their investigations.

Although practically all the studies concerning the student perspective on accounting skills were questionnaire-based, sets of competencies and skills differed. Further in this paper we will demonstrate that the number of skills/attributes that have been considered in more than one study is much smaller than the number of skills/processes featuring in just one study.

Moreover, different scales were used to assess the relevance of these skills/attributes. In most cases, the respondents were asked to rate their answers about the importance of a given skill/attribute for a career in the accounting profession on a five-point scale from 1 “not important” to 5 “extremely important”. However, some researchers used a four-point scale, where by choosing 1, the respondents gave the highest priority to the skill/attribute in question [Oswick, Barber, and Speed, 1994]. There were also surveys in which the importance of skills was assessed without any five- or four-point scale and the students were asked to choose three skills they considered the most important from a bigger set of skills listed in the questionnaire. A skill/attribute chosen by the biggest number of the students was considered the most important. Consistently, the second most important skill/attribute was the one ticked by the second highest number of the respondents.

Difficulties in comparing the results of different surveys are exacerbated by one more aspect, i.e. a different scope of results that have been disclosed. For instance, Parham, Noland, and Kelly [2012] used a questionnaire containing 42 skills/attributes, while they disclosed the results for only 9 of the most important skills/attributes and 5 skills which the students considered the least important for their future career in the accounting profession. On the other hand, Klibi and Oussii [2013] used a questionnaire containing a set of 78 skills/attributes and revealed all of the obtained results.

To start with, we decided to review all the publications from group one included in Table 1. However, due to the above-mentioned difficulties, we finally focused on five research studies that we discuss below. The results of four research studies which used a five-point scale from 1 to 5 to assess skills/attributes have been grouped and presented in Table 3. These research studies were conducted by:

- R1 – Kavanagh and Drennan [2008];
- R2 – Awayiga, Onumah and Tsamenti [2010];
- R3 – Parham, Noland and Kelly [2012];
- R4 – Klibi and Oussii [2013].

The final study considered in this publication (i.e. R5) was conducted by Jackling and De Lange [2009]. Since the results of this last survey may not be directly compared with the results of surveys R1-R4 (because they are based on different methodologies), its results are not included in Table 3.

When working on Table 3, which includes the results of research studies R1, R2, R3, and R4, we adopted some assumptions (illustrated in Table 2). The second column specifies in an alphabetical order all the skills included in the above-mentioned surveys for which the results were disclosed. Importantly, descriptions of skills and competencies are given in the original wording. That was dictated by the wish to quote the results of surveys in the most faithful manner but also to show differences in terminology used in these surveys. If the name of a skill/attribute has been used in two or more surveys, it is given in Table 3 only once. In other words, we eliminated repetitions, however, only with regard to skills/attributes which were called by the authors by exactly the same name. Columns from 3 to 6 include the results

of surveys R1-R4. If in the column of a particular survey there is “-” in the row of a particular skill/attribute, it means the skill/attribute was either not considered in the survey or the results for this skill/attribute were not disclosed.

Table 2. Assumptions adopted to compare the results of surveys on student perceptions of the importance of individual skills

1	2	3	4	5	6
No.	Skill	R1	R2	R3	R4
1.	Skill one				
2.	Skill two				
3.	Skill three				
...	...				
n.	Skill n				

Source: own compilation.

When it comes to the methodology of this review, we need to bear in mind that in the subject-matter literature the skills which students believe they should have when entering the accounting profession are divided into two categories. In analyses published after the year 2000 we have often come across statements that nowadays technical skills are not enough as one needs also generic skills. Despite this rather widely shared conclusion, usually these categories are not explicitly defined and, on many occasions, researchers do not use them to categorise competencies and skills in their studies. For these reasons we have not used these categories in our review.

3. Studies: a review

Below we outline and discuss the results of six research studies (R1-R5). As we have already mentioned, the results of four of them (R1-R4) have been not only discussed but also presented in Table 3.

Research R1 was conducted in Australia by Marie H. Kavanagh and Lyndal Drennan [2008] who asked four research questions. The first question, which is the most important for our review, reads: *What professional skills do graduating accounting students perceive as having the highest priority for career success?* The survey involved 322 students of economics graduating from one out of three universities (public and private). In order to answer the above stated research question the respondents were asked to rate 47 skills included in the questionnaire on a scale from 1 “not important” to 5 “extremely important”. The results that were obtained and disclosed are presented in Table 3. With respect to this particular survey, we would like to make the following comments. Firstly, although the minimum score a skill could receive was 1, all of 47 skills scored between 3.07 and 4.25 with twelve skills/attributes having ratings

above 4. It means all of these skills were perceived as at least moderately important by the students. Secondly, amongst the skills/attributes with ratings not lower than 4, one will not find technical skills dedicated exclusively to accounting, such as *accounting software skills* (rating 3.83) or *technical/bookkeeping* (3.65). This result apparently coincides with the widespread view in the subject-matter literature that nowadays technical bookkeeping skills are not enough to work in the accounting profession. There are other competencies whose importance is perceived as higher than that of technical skills. Skills with ratings not lower than 4 in this survey include (in the order of priority): *continuous learning, decision-making, problem solving, oral communication, self-motivated, critical thinking, professional attitude, teamwork, written communication, computer literacy, analytical, work ethic*. Thirdly, foreign languages scored the least among all these skills (*foreign language*, 3.07). However, when interpreting this result, we need to bear in mind that the survey was conducted in an English-speaking country. Hence, the result does not necessarily inform about the importance of the ability to speak foreign languages in non-English speaking countries (e.g. in Poland). Fourthly, the survey provides no definition of the notion of *career success* used in the research question. By the same token, the fact that career success can be understood differently by different people (having diverse preferences) was completely disregarded, which might have determined the obtained results.

Research R2 was conducted by Joseph Y. Awayiga, Joseph M. Onumah, and Mathew Tsamenti [2010] in Ghana. In this case, the respondent group comprised graduates of majors related to accounting and employers. The authors divided skills into two groups: *professional skills* and *technology skills*. Research questions concerned these two groups of skills. The first research question read: *What are the professional skills considered important for the current/future career of accounting graduates as perceived by both employers and graduates, and how are the ratings of these skills different or similar between the two groups?* The second one was formulated as follows: *What are the technology skills considered important to be possessed by new accounting graduates for entry-level work and career advancement as perceived by both employers and graduates, and how are the ratings of these skills different or similar between the two groups?* From the point of view of our review, the student perspective is important, which is why we will discuss the results of survey R2 concerning only this group of respondents. The researchers received completed questionnaires from 131 students. The questionnaires included a collection of skills whose importance for current/future career in the accounting profession was assessed on a scale from 1 “*not important*” to 5 “*extremely important*”. Similarly to the first research study R1, the results of R2 are included in Table 3. For R2 we have formulated the following observations and conclusions. Firstly, like in R1, all the skills received ratings much higher than the lowest possible score, i.e. 1. The lowest rating of 3.4 was given to the skill called “*Windows*”. The highest rating (4.77) was given to *Analytical/critical thinking*. Secondly, all the *professional skills* scored more than 4. Professional skills included in this case: *analytical/critical thinking, communication skills, professional demeanour, intellectual skills, computing technology, interpersonal skills, personal skills, organizational and business management skills, technical and functional skills*. Thirdly, almost all the *technology skills*

received ratings lower than 4 (in Table 3 these skills are annotated as “*technology skill*”). The only exception is *Spreadsheet package* skill (rating 4.74). This seems to confirm the conclusion from the previous research R1, according to which today one needs more than just technical skills to have a career in accounting. There are other skills more important than technical ones. Fourthly, among 18 skills considered in R2, there is only one entitled in the same way as in R1 (*Interpersonal skills*) and three called similarly: *Analytical/critical thinking*, *Communication skills*, and *Professional demeanour*. Surveys R1 and R2 suggest that the students assessed the above-mentioned four skills in a similar way. However, it is worth noting at this point that the differences in lists of skills considered in different surveys hinder comparisons of their results.

Research R3 was carried out by Abbie Gail Parham, Thomas G. Noland, and Julia Ann Kelly [2012] in the USA. They aimed at finding out which skills are perceived by students as important for their future professional career. The primary research question concerned *the opinions of students to determine what skills they deem to be important for their future careers*. The researchers collected answers from a group of 205 students, 46.5% of whom had chosen accounting as a major. The research questionnaire contained 42 skills rated on a scale from 1 (not important) to 5 (extremely important). In the description of the survey Parham, Noland, and Kelly did not single out all the skills from which students could choose. They listed nine skills which were deemed extremely important (see Table 3) and five rated as the least important. The results and the description of the survey have led the author of this publication to the following conclusions and observations. Firstly, the importance of the skills was rated from 2.34 to 4.41. Secondly, the skills which Parham, Noland, and Kelly considered critical received ratings above 4. The set comprises nine skills, out of which eight featured under identical names in surveys R1 or R2, while one featured under a similar name in research R1. The set includes the following skills (in the order of priority): *professional demeanour*, *written communication*, *motivation*, *decision-making*, *oral communication*, *interpersonal skills*, *analytical/critical thinking*, *leadership*, *teamwork*. Interestingly, none among these skills is strictly technical, which seems to confirm the conclusion about technical skills drawn for research studies R1 and R2. Thirdly, the ability to speak a foreign language was the second lowest rated skill. However, similarly to survey R1, one may not forget that research study R3 was also conducted in an English-speaking country.

Research R4 was conducted by Mohamed Faker Klibi and Ahmed Atef Oussii [2013] in Tunisia. They posed two research questions. The second question concerned student perceptions of skills that they see as critical for a successful career in accounting-related jobs. The question was identical with the one asked by Kavanagh and Drennan [2008]: *What professional skills do graduating accounting students perceive as having the highest priority for career success?* Yet, differently from Kavanagh and Drennan [2008], Klibi and Oussiod included as many as 78¹ skills in the questionnaire addressed to students. These skills were divided into the following seven groups: (1) *Technical skills (accounting, financial and tax)*, (2) *management*

¹ Kavanagh and Drennan [2008] considered 47 skills and attributes.

skills, (3) *IT skills*, (4) *Physical qualities*, (5) *Intellectual skills*, (6) *Interpersonal skills*, and (7) *Personal skills*. The students were expected to assess the importance of these skills and attributes on a five-point scale from 1 (irrelevant) to 5 (critical). A questionnaire with these skills and attributes was distributed among 92 students of accounting at four universities offering courses in economics. Eighty-one questionnaires were returned and used to calculate the results presented in Table 3. The results and description of research R4 have led the author to the following conclusions and observations. Firstly, ratings given to skills ranged from 2.930 to 4.590 (unlike in research studies R1-R3, the authors of R4 gave results to the third decimal place) with only two skills rated below 3. Thus, similarly to surveys R1-R3, also in this case the students assessed the importance of individual skills as at least moderate. Secondly, 33 skills received ratings not lower than 4. These skills include the so-called technical skills, which seems to contradict the conclusions from research studies R1-R3 on the importance of these skills. Thirdly, language skills scored 4.050, that is higher than in English-speaking countries. Fourthly, although the survey included as many as 78 skills, only seven out of them were phrased identically as in research studies R1-R3 and ten were phrased in a similar way to surveys R1-R3. Based on this observation, the author believes that due to the number of skills and names used to describe them, the results obtained by Klibi and Oussii [2013] are probably the most difficult to be compared with the rest of surveys.

Table 3. Rating of the importance of skills needed in the accounting profession: the results of studies on the student perspective

1	2	3	4	5	6
No.	Skill	R1	R2	R3	R4
1.	Ability to develop effective learning methods	-	-	-	2.930
2.	Ability to inspire confidence (credibility, honesty)	-	-	-	4.345
3.	Ability to stimulate and to facilitate	-	-	-	3.851
4.	Accounting for property, plant and equipment	-	-	-	4.135
5.	Accounting software skills	3.83	-	-	-
6.	Actuarial and risk assessment	-	-	-	3.679
7.	Adapt to situation of changes	-	-	-	3.880
8.	Advertising and promotion	-	-	-	3.012
9.	Analysis capacity and logical thinking	-	-	-	3.765
10.	Analytical	4.06	-	-	-
11.	Analytical/Critical thinking	-	4.77	4.24	-
12.	Analyze business performance	-	-	-	3.650
13.	Analyze cost and margins	-	-	-	3.913
14.	Capacity for dialogue, exchange and negotiation	-	-	-	4.333
15.	Cash management basics	-	-	-	4.358
16.	Change management	3.44	-	-	-
17.	Citizenship	3.18	-	-	-
18.	Collaborate with other teams	-	-	-	4.049

1	2	3	4	5	6
No.	Skill	R1	R2	R3	R4
19.	Communication skills	-	4.41	-	-
20.	Communication software – Outlook (technology skill)	-	3.59	-	-
21.	Company promotion	3.50	-	-	-
22.	Computer literacy	4.06	-	-	-
23.	Computer Security skill	-	-	-	3.802
24.	Computer technology competence	3.68	-	-	-
25.	Computing technology	-	4.25	-	-
26.	Conduct audits and prepare final reports	-	-	-	4.283
27.	Conduct inventory and check accounting records	-	-	-	4.098
28.	Consolidate financial statements	-	-	-	4.222
29.	Continuous learning	4.25	-	-	-
30.	Creativity	3.78	-	-	-
31.	Critical reading	-	-	-	3.888
32.	Critical thinking	4.11	-	-	3.938
33.	Cross-cultural appreciation	3.19	-	-	-
34.	Cross-cultural communication	3.35	-	-	-
35.	Cultural sensitivity	3.36	-	-	-
36.	Customer service	3.71	-	-	-
37.	Database package (technology skill)	-	3.99	-	-
38.	Decision modelling	3.63	-	-	-
39.	Decision-making	4.19	-	4.31	-
40.	Develop and manage budgets	-	-	-	3.913
41.	Develop business plans	-	-	-	3.518
42.	Electronic commerce (technology skill)	-	3.57	-	-
43.	Emotional Stability: self-control, calm.	-	-	-	3.925
44.	Empathy	-	-	-	3.543
45.	Ensure effective financial control	-	-	-	4.234
46.	Ensure the smooth running of internal control	-	-	-	3.950
47.	Entrepreneurship	3.57	-	-	-
48.	Ethical awareness	3.79	-	-	3.382
49.	Find creative solutions	-	-	-	3.987
50.	Find effective ways to solve problems	-	-	-	3.765
51.	Flexibility	3.90	-	-	4.098
52.	Foreign language	3.07	-	2.71	-
53.	Good posture and looking physically presentable	-	-	-	4.024
54.	Hardware skills	-	-	-	4.111
55.	Independent thought	3.93	-	-	-
56.	Intellectual skills	-	4.27	-	-
57.	Interdisciplinarity	3.87	-	-	-
58.	Interpersonal skills	3.85	4.21	4.27	-
59.	Investment Analysis and Portfolio Management	-	-	-	3.222

1	2	3	4	5	6
No.	Skill	R1	R2	R3	R4
60.	Leadership	3.89	-	4.20	3.790
61.	Listen effectively to obtain information	-	-	-	4.259
62.	Listening	3.69	-	-	4.110
63.	Logical argument	3.97	-	-	-
64.	Macro Economics	-	-	2.86	-
65.	Mastering foreign languages	-	-	-	4.050
66.	Mastering Good Governance series	-	-	-	3.592
67.	Mastering tax system	-	-	-	4.160
68.	Measurement	3.66	-	-	-
69.	Micro Economics	-	-	2.83	-
70.	Motivation	-	-	4.32	-
71.	Negotiation	3.85	-	-	-
72.	Optimism	-	-	-	3.740
73.	Oral communication	4.18	-	4.29	-
74.	Organizational and business management skills	-	4.06	-	-
75.	Organize and delegate works	-	-	-	3.950
76.	Organize and manage human resources	-	-	-	3.333
77.	Organize workload and handle tight deadlines	-	-	-	4.197
78.	Participate in planning	-	-	-	3.481
79.	Perform electronic transfer of accounting data	-	-	-	3.913
80.	Perform the bank reconciliation statement	-	-	-	4.209
81.	Personal convictions	-	-	-	4.000
82.	Personal health practices	-	-	-	3.950
83.	Personal skills	-	4.06	-	-
84.	Personal style	-	-	-	4.000
85.	Practice sports	-	-	-	2.940
86.	Prepare financial statements	-	-	-	4.590
87.	Prepare invoices control	-	-	-	4.123
88.	Prepare payroll	-	-	-	3.876
89.	Prepare tax returns	-	-	-	4.222
90.	Present and defend points of view and the outcomes of their own work, in writing, to colleagues, clients, and superiors	-	-	-	3.910
91.	Present and defend points of view and the outcomes of their own work, verbally, to colleagues, clients, and superiors	-	-	-	4.112
92.	Presentation software (technology skill)	-	3.95	-	-
93.	Pressure resistance	-	-	-	3.760
94.	Problem solving	4.19	-	-	-
95.	Professional attitude	4.10	-	-	-
96.	Professional demeanour	-	4.37	4.41	-
97.	Project management	3.72	-	-	-
98.	Read with understanding	3.91	-	-	-
99.	Research	3.57	-	-	-

1	2	3	4	5	6
No.	Skill	R1	R2	R3	R4
100.	Resource management	3.58	-	-	-
101.	Retailing and Sales	-	-	2.34	-
102.	Risk analysis	3.72	-	-	-
103.	Risk propensity	3.35	-	-	-
104.	Role Playing	-	-	2.85	-
105.	Select and assign work priorities	-	-	-	4.111
106.	Self confidence	-	-	-	4.110
107.	Self-motivated	4.11	-	-	-
108.	Self-promotion	3.49	-	-	-
109.	Self-training	-	-	-	3.925
110.	Sense of humor	-	-	-	3.802
111.	Sense of personal identity	-	-	-	3.850
112.	Sense of solidarity	-	-	-	3.962
113.	Social adaptability	-	-	-	3.913
114.	Social justice	3.36	-	-	-
115.	Solve unstructured problems	-	-	-	3.814
116.	Spreadsheet package (technology skill)	-	4.74	-	-
117.	Strategic management	3.64	-	-	3.888
118.	Take reasonable job-related risk	-	-	-	4.049
119.	Teamwork	4.10	-	4.15	-
120.	Technical and functional skills	-	4.01	-	-
121.	Technical/bookkeeping	3.65	-	-	4.506
122.	Techno. Management and budgeting (technology skill)	-	3.91	-	-
123.	Tenacity	3.81	-	-	-
124.	Tenacity, perseverance and self-motivation	-	-	-	4.135
125.	The ability to use various information	-	-	-	3.900
126.	The desire for personal success	-	-	-	4.308
127.	The effective use of Electronic Data Interchange procedure	-	-	-	3.740
128.	The effective use of visual aids in presentations	-	-	-	3.775
129.	The selection and the use of appropriate software	-	-	-	4.209
130.	The use of quantitative methods, and statistics	-	-	-	3.283
131.	To record provisions for depreciations	-	-	-	4.395
132.	Track inventory analysis	-	-	-	3.888
133.	Updating control procedures	-	-	-	3.580
134.	Use and understand various information	-	-	-	4.225
135.	Values	3.96	-	-	-
136.	Windows (technology skill)	-	3.40	-	-
137.	Word-processing package (technology skill)	-	3.65	-	-
138.	Work ethic	4.04	-	-	-
139.	World wide web (technology skill)	-	3.56	-	-
140.	Written communication	4.07	-	4.33	-

Source: own compilation based on Kavanagh and Drennan [2008]; Awayiga, Onumah and Tsamenti, [2010]; Parham, Noland and Kelly [2012]; Klibi and Oussii [2013].

The final research study (R5) included in this review was conducted by Beverley Jackling and Paul de Lange [2009] in Australia. The main research question asked in it concerned graduates and read as follows: *What emphasis did graduates perceive was given in academic programs in terms of technical and generic skills?* When it comes to the graduates' perception of skills, the authors added one more theme of specific importance to this review, which, however, was not explicitly articulated in any research question. In the second part of the questionnaire addressed to the graduates, they were asked to identify three skills they considered the most important for successful progression in their career. The questionnaires were sent to 650 graduates of an Australian university. One hundred seventy-four complete answers were returned; they were used to rank the importance of skills critical for success in the accounting profession from the graduate perspective. Based on the results, the authors concluded that three skills perceived by the graduates as crucial for successful progression in their career are generic rather than technical. The hierarchy of importance identified in the survey was the following (from the most to the least important): *communication skills (verbal and written), problem-solving skills, personal skills (e.g. think independently creativity, flexibility), analytic/design skills (e.g. evaluate, interpret), key accounting and associated skills, work ethic, time management, interpersonal skills (e.g. presentation and negotiating skills), team skills, ethical values, technology*. As observed by the authors of this research, the conclusion seems to concur with what was found by other researchers (the authors mention Albin and Crockett, 1991; LaFrancois, 1992; Hock, 1994; Morgan, 1997; NCVET, 2003; Howieson, 2003; CPA Australia, 2005).

In the subject-matter literature there are also surveys focused on the importance of individual skills, e.g. IT literacy [Stoner, 2009; Senik, Broad, Mat, Kadir, 2013] or communication skills [Zaid and Abraham, 1994; Morgan 1997]. These studies reflect the importance of these skills and show deficits thereof. Yet, they do not help identify the relative importance of various skills, which is why they have not been discussed in detail in the above literature review.

4. Summary

Based on the above literature review, we formulated the following conclusions. Firstly, the surveys were conducted on different sets of skills. Differences concerned the number of skills listed in research questionnaires, their names, and the number of skills disclosed in the obtained results. For these reasons the comparison of results obtained by different researchers in different parts of the world and in different settings is hindered and conclusions drawn from them can be erroneous. On the other hand, skills and attributes considered in the questionnaires can be selected freely. Secondly, even if we bring together surveys carried out for similar sets of skills, there is no consensus as to a detailed hierarchy of the importance of individual skills. The content of Table 2 allows us only to conclude that skills/attributes, which:

- (a) are in the top nine² of the hierarchy of importance in at least three studies include skills connected with communication (*communication skills, listen effectively to obtain information, oral communication, written communication*), teamwork (*team skills, teamwork*), analytical (*analytic/design skills, analytical, analytical/critical thinking*), and decision-making skills;
- (b) are in the top nine of the hierarchy of importance in at least two surveys include skills linked with the value system (*ethical values, values, work ethic*), professionalism (*professional attitude, professional demeanour*), logical thinking (*logical, logical argument*), accounting (*conduct audits and prepare final reports, key accounting and associated skills, prepare financial statements, technical bookkeeping, to record provisions for depreciations*), and interpersonal skills (*interpersonal skills*).

The above shows that potential employees realise that in order to work in the accounting profession they need not only technical skills but also other, so-called generic ones. Thirdly, in some cases the term “successful career path” was used, although the term itself was not defined. Career success can be interpreted differently and measured, e.g., in terms of salary, employment stability, highly appreciated quality of work or prestige linked with for whom we work. This aspect was highlighted by Theresa Smith-Ruig [2009], who found out that “*career plateau is (...) strongly influenced by how an individual defines career and success*”. How we perceive success may (but does not have to) impact our perception of the importance of skills and attributes. Having the aforesaid in mind, it seems that further studies in which the term could be described more precisely would be fully justified and needed. For instance, we could assume that success means (a) having a satisfactory job in accounting or management accounting or (b) doing one’s job correctly in accounting or management accounting sections.

This paper is the first stage of a wider scientific and research effort focused on skills necessary in the accounting profession. Further stages include publication of the results of studies carried out by the author and the review of surveys that have been conducted in the area in question in Poland. This paper reflects the present stage of the research and is focused exclusively on research studies conducted in other countries.

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² Nine most important skills were considered in this case because Parham, Thomas, and Kelly [2012] disclosed the results for 9 top skills/attributes.

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