

Students' perceptions of the usefulness of an annual report project for the development of skills and knowledge

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Abstract

This study looks at an annual report project that simulates a real-life situation to encourage students to integrate knowledge, develop skills and values appropriate to self-directed enquiry and research, use technology, work in groups and be active participants in the learning process, question, seek answers and learn independently. Students selected the annual report of a Top 150 JSE-listed company and answered questions on aspects of financial and managerial accounting, auditing and finance.

A questionnaire investigated whether project participation enhances skills (such as judgment, interpretative, listening and problem-solving skills) and abilities (such as thinking critically, asking pertinent questions, organising). There were significant differences in students' perceptions, including gender and language differences.

The results show accounting educators using such projects which skills and knowledge areas need to be addressed elsewhere in the curriculum and whether to include such a project in their programmes.

Key words

Accounting curriculum

Annual report project

Knowledge

Skills

Students' perceptions

1 Introduction

The *International Education Standard (IES) 3 – Professional Skills*, issued by the International Federation of Accountants (IFAC) in 2003, requires individuals who want to become professional accountants to acquire intellectual skills, technical and functional skills, personal skills, interpersonal and communication skills, and organisational and business management skills. *IES 3* acknowledges that these skills cannot always be acquired in specific courses, but are acquired as a result of the total effect of a professional accounting programme and practical experience, and that these skills are developed through

lifelong learning (IFAC 2003:34). Accounting educators must also ensure that accountancy knowledge is acquired together with professional values, ethics, and attitudes.

Bonner (1999) suggests that teaching methods should be based on learning objectives, but high student numbers often drive the delivery process. This implies that teaching methods may combine requiring students to read a text, to listen and to participate in a lecture, to watch demonstrations of worked out problems/questions, to answer short/long questions/cases and to discuss issues with other students. The use of case studies has been advocated as a method to develop finance and accounting-related skills and knowledge in accounting students (Weil *et al.* 2003). Working in teams, also known as co-operative learning, has been advocated as a method of enabling students to acquire skills such as interpersonal and meeting management skills.

This article investigates students' perceptions of the effectiveness of an annual report project in developing accounting-related skills and knowledge. Students were chosen as the target group as they are able to express an opinion on the relative usefulness of the project. The article also investigates whether differences in gender and language affect students' perceptions. A questionnaire was used to obtain data, which were then analysed to determine the usefulness of an annual report project in developing accounting-related skills and knowledge (as perceived by the students).

An analysis of the results revealed significant differences between students' perceptions, including gender and language differences. These findings can help accounting educators who use annual report projects, as the findings reveal which areas of skills and knowledge may have to be addressed elsewhere in the curriculum. Accounting educators may also decide to include an annual report project in their programmes in order to ensure that students develop these accounting-related skills.

The rest of the article is organised as follows: literature relevant to the subject area is reviewed; the research methodology is discussed, followed by the results; and finally, a conclusion and suggestions for further research are presented.

2 Literature review

The research described in this article is an investigation into the usefulness of an annual report project for the development of skills and knowledge. The literature review in this regard therefore focused on three areas. First, literature relevant to the usefulness of annual report projects was examined. This was followed by an examination of literature concerning two teaching methods (requiring students to work in teams and the use of case studies) and their usefulness in developing accounting-related skills and knowledge in accounting students. Often, these two methods are used in conjunction with one another and the skills acquired are therefore a combination of these two methods. Lastly, literature regarding gender and language differences was examined. Although recent accounting literature does not discuss any studies which test the usefulness of an annual report project in developing accounting skills and knowledge, the literature examined below is relevant to this article.

The use of annual reports in teaching accounting has been documented by Bloom and Schirm (2000:148), who commented that students derive 'considerable knowledge and insight' from such an assignment. Pasewark (1997) argues that annual reports are important to an understanding of the accounting process. Stainbank (2003) found that the majority of

students who participated in an annual report project agreed that the project was a desirable component of the accounting course and that they had benefited from the project.

A number of studies also document the perceived benefits of requiring students to work in teams or learning in a group (co-operative learning). Lindquist and Abraham (1996) report that the benefits of co-operative learning include positive self-esteem, perceived achievement and interpersonal skills-building. Sullivan (1996:107) reports that co-operative learning 'emphasizes the development of critical thinking via discussion, debate and group work' and that co-operative learning techniques 'allow the instructor to make students "managers" of their own knowledge' (Sullivan 1996:111). Kern (2000) used both a project and co-operative learning to enhance the development of students' critical thinking skills. Bonk and Smith (1998) contend that a consultative model of teaching can address the challenge of developing curricula for higher-order thinking skills. Friedlan (1995) found that in an introductory financial accounting course, the teaching approach used can have significant effects on students' perceptions. Students who were exposed to a non-traditional course (mini-cases, classroom discussions, contextual materials, and less emphasis on technical material) tended to have more realistic perceptions, compared to students exposed to a traditional course (lectures and a highly technical approach).

With regard to case studies, Campbell and Lewis (1991) argue that analytical skills and judgment skills are developed by case studies. Hassal, Lewis and Broadbent (1998:326) state that the aim of using case studies is to 'develop and apply an integrated approach to problem solving and to provide students with an understanding of the problems inherent in the application of discipline based knowledge to practical situations in a period of change'. Bonner (1999) identifies cases as suitable for the development of complex cognitive skills; and Kimmel (1995) regards cases as being very useful for developing critical thinking skills in students.

The study by Weil *et al.* (2003), which forms the main frame of reference for the current study, investigated students' perceptions of the usefulness of case studies in developing finance and accounting-related skills and knowledge. Students worked in study groups. Weil *et al.*'s study found that students perceive the main benefit of case studies to be exposure to real-world complexity, particularly decision-making. Their study also found cross-gender differences, as well as prior academic performance differences. Weil *et al.* (2003) point out that empirical research on the use of case studies in accounting education is limited. Hassal *et al.* (1998) investigated students' perceptions of the benefits of case studies. Their results, amongst others, indicate that 85% of the participating students agreed that case studies were the most appropriate tool for developing knowledge, 90% agreed in respect of skills and 62% agreed in respect of personal qualities.

Brazelton (1998) provides a summary of studies investigating the role of gender in accounting education. Brazelton (1998) notes that these studies indicate that unexplained variables emerge when one is assessing the career success of accounting graduates. He adds that female accounting students frequently outperform male accounting students. The role of language in accounting education has been researched from the perspective of whether English (and mathematics) has a positive impact on a student's performance in a first year accounting course (Wong & Chia 1996). The study reported on in this article is the first study which attempts to link language with students' perceptions of the usefulness of an annual report project for the development of skills and knowledge.

In summary, there is prior evidence that students and educators perceive annual report projects to provide some benefit in accounting courses, as does working in teams or co-

operative learning. Using case studies is also useful in developing accounting-related skills and knowledge. This study aims to contribute to the literature by assessing students' perceptions of the benefits of an annual report project in developing accounting-related skills and knowledge.

3 Background to the study

In the third year of an Accounting major programme, students are required to participate in a team-based project. The project attempts to bring together aspects of four courses – financial accounting, managerial accounting and finance, auditing and taxation. The project requires students to select a Top 150 company listed on the JSE Securities Exchange and to answer questions which bring together aspects of the four courses. The students work in teams and prepare a written answer to the project. The students are also required to present their findings orally in front of their fellow students and a panel of adjudicators who award prizes for the best project and presentation. The objective of the project is to provide the students with detailed exposure to the final audited product of financial reporting and some of the uses thereof. Specific learning outcomes of the annual report project are to assist students in integrating their knowledge of the different courses they take in the last year of their undergraduate degree and to develop their written and oral communication skills. A full description of this annual report project is found in Stainbank's (2003) study.

4 Methodology

The study investigates whether a team-based project focusing on an annual report contributes to the development of accounting-related skills and knowledge, according to the perceptions of the target population, third-year Accounting students. The students were required to complete a questionnaire designed to gauge their perceptions. This questionnaire is based on a questionnaire developed by Weil *et al.* (2003) for their investigation of the usefulness of case studies in the development of financial and accounting-related skills and knowledge. Some adjustments were made to the questionnaire to cater for the difference in the teaching approach being investigated and the fact that the respondents were all undergraduate students. Several background questions were asked in order to collect demographic information about the students, such as how many times they met outside the class, the mark they received for the project, their gender and whether or not English was their first language. A set of 26 questions were taken from the list of 31 questions used by Weil *et al.* (2003); and the skill of 'oral communication' was added, resulting in a total of 27 questions. The main part of the questionnaire focused on 27 questions which listed various skills, abilities and knowledge which could be enhanced by the project.

Respondents were asked to rate their opinions on a number of questions which assessed to what extent the project had helped them in respect of the listed skills, using a Likert scale of 1 ('not at all') to 5 ('extensively'). The students also had to rank the three most valuable benefits of the project and how valuable they found the project as a learning method.

As in the Weil *et al.* (2003) study, in order to focus on specific skills, the 27 skills were then organised under the headings of (1) Visualisation (skills which provide familiarity with the business decision-making environment); (2) Dealing with uncertainty (the ability to cope with incomplete and/or ambiguous information); (3) Problem elaboration (skills

used to develop an approach to a problem); (4) Communication skills; (5) Consolidation and integration (skills used to combine different knowledge components); (6) Judgment (being able to assess and choose between different alternatives); (7) Data exploration; and (8) Active participation. This classification is set out in Appendix 1.

Data was collected by handing out the questionnaire to approximately 350 students who attended lectures in the last week of the course. Completion of the questionnaire was voluntary. Usable questionnaires were received from 284 students. The data was entered onto a spreadsheet using SPSS 11.5 for Windows.

5 Data analysis

Using SPSS, the mean, median and standard deviation for each of the 27 skills was computed, first for all respondents (Table 2), and then according to gender and language (Tables 3 and 4). The results are ranked according to their means.

To identify statistically significant differences in the students' opinions on a gender or language basis, taking into account the nature of the data, the non-parametric Mann-Whitney U test for independent samples was used. Only the results where there were significant differences are shown in Tables 5 and 6.

The responses to the question asking students to rank the three most valuable benefits of the annual report project were summarised according to the sub-scaled benefits (Appendix 1) and they were ranked according to their frequency (Table 7).

The data relating to the sub-scaled benefits were analysed further in order to investigate the perceived ability of the annual report project to develop particular skills. To investigate differences in students' overall perceptions, the Friedman test was used (see Table 8). The Mann-Whitney U test for independent samples was used to investigate gender and language differences in students' perceptions of their attaining the sub-scaled benefits (Tables 9 and 10).

6 Results and discussion

The demographics of the target group are shown in Table 1. Of the 284 students, 166 (58%) were female, and 81 (29%) did not speak English as a first language. A follow-up question revealed that, of the 81 students whose home language was not English, 75 considered English their second language, and four students considered English their third language. One student considered English his/her fourth language and one student did not answer the follow-up question.

To understand more about the number of times students met in order to complete the project, the first question asked how many times they met outside normal class hours. Their responses showed that 219 (77%) students met outside normal class hours more than four times. No further analysis was done with regard to the number of student meetings. However, this aspect of the annual report project will be explored in future research.

Table 1 Respondent demographics

		Gender				Total	%
		Female		Male			
Mark	50%-59%	18	11%	7	6%	25	9%
	60%-69%	77	46%	57	48%	134	47%
	70%-79%	66	40%	46	39%	112	39%
	80%-89%	5	3%	8	7%	13	5%
		166	100%	118	100%	284	100%
Language	English	124	75%	79	67%	203	71%
	Not English	42	25%	39	33%	81	29%
		166	100%	118	100%	284	100%

The results for the total target group's ranking of the perceived benefits of the project are shown in Table 2. All the means are greater than 3.00. The top five are (1) 'insight into practical business operations', (2) 'relate theory to real-life practice', (3) 'take responsibility for your own learning', (4) 'apply knowledge to new situations', and (5) 'develop oral communication skills'. As was found in the Weil *et al.* (2003) study, three of these benefits belong in the Visualisation category. Amongst the lowest ranked items were 'written communication skills' (ranked 22nd) and 'integrate your technical knowledge' (ranked 23rd). The latter two items were among the specific outcomes sought by the project, but they were not rated high by the students. On the other hand, 'integrate your understanding of the course' was ranked ninth.

Table 2: Ranking of skills (all students)

Rank	No	To what extent did the project...	Mean	Median	S.D.
1	24	give you the <i>insight</i> into practical business operations?	3.96	4.00	0.935
2	22	help you <i>relate</i> theory to real-life practice?	3.89	4.00	0.939
3	32	encourage you to <i>take responsibility</i> for your own learning?	3.85	4.00	1.029
4	23	encourage you to <i>apply</i> your knowledge to new situations?	3.70	4.00	0.890
5	21	develop your <i>oral communication</i> skills?	3.66	4.00	0.950
6	19	encourage you to be an <i>active participant</i> in the learning process?	3.63	4.00	1.020
7	26	develop your ability to <i>organise</i> data?	3.60	4.00	0.882
8	25	develop your ability to <i>identify</i> the relevant data in a question?	3.58	4.00	0.902
9	7	help you to <i>integrate your understanding</i> of the different components of the course?	3.57	4.00	0.933
10	15	enable you to take decisions with <i>incomplete information</i> ?	3.56	4.00	1.006
11	30	develop your ability to <i>summarize</i> the available information?	3.54	4.00	0.963
12	9	help you to develop your ability to <i>think critically</i> about issues?	3.52	4.00	0.920
13	16	develop your skill in <i>evaluating</i> ideas?	3.52	4.00	0.842
14	10	improve your <i>analytical skills</i> (defined as <i>the ability to think in a logical and enquiring manner</i>)?	3.50	4.00	0.943
15	8	help you to develop skills in <i>interpreting</i> (defined as <i>the ability to understand and decipher data</i>)?	3.48	4.00	0.893
16	29	encourage you to <i>distinguish</i> facts from opinions?	3.47	4.00	0.983
17	13	help you <i>consolidate</i> your prior knowledge of the discipline?	3.45	3.50	0.916
18	11	develop your ability to <i>synthesize (combine) the essential elements of a given situation</i> ?	3.42	3.00	0.937
19	27	develop your <i>problem identification</i> skills?	3.41	3.00	0.872

continued

Rank	No	To what extent did the project...	Mean	Median	S.D.
20	28	encourage you to <i>think conceptually</i> ?	3.37	3.00	0.939
21	18	develop your skill in <i>asking pertinent questions</i> ?	3.32	3.00	1.073
22	20	develop your <i>written communication skills</i> ?	3.31	3.00	1.027
23	31	teach you to <i>integrate</i> your technical knowledge of the discipline?	3.31	3.00	0.900
24	14	help you to develop your <i>problem-solving skills</i> ?	3.29	3.00	0.905
25	12	develop your <i>listening skills</i> ?	3.28	3.00	1.170
26	17	increase your <i>motivation</i> to study the course?	3.13	3.00	1.218
27	6	improve your <i>judgement skills</i> (defined as <i>identifying and choosing between available alternatives</i>)?	3.10	3.00	0.902

An examination of the gender-based rankings (see Table 3) shows that the rankings given by female respondents are very similar to the overall rankings. In fact, the first three perceived benefits are identical, except that the order of the second and third benefits is reversed. An examination of the lower rankings also reveals some similarity. However, in their rankings, male respondents included 'help integrate your understanding of the different components of the course' in fourth place in their 'Top 5' ranking (the item was only ranked 16th by females). The ranking of 'develop your oral communication skills' in fourth place by the female respondents and in 10th place by male respondents was also a large difference. A comparison to the study by Weil *et al.* (2003) shows that some of their results were similar, but it must be remembered that, because their study was based on skills developed through the use of case studies, in that study, the questionnaire listed 31 skills, whereas this study only used 26 of those 31 skills and added the skill of oral communication.

Table 3 also indicates that every skill, with the exception of 'integrate your understanding', is rated higher by the female students than by the male students. This suggests that, overall, the female students perceive themselves as deriving a greater benefit from the project than the male students do. Brazelton (1998) found that female students communicated less than male students in accounting classes, and the Weil *et al.* (2003) study confirmed this with regard to case studies using the 'ask pertinent questions' benefit. The current study confirms this finding with regard to the 'ask pertinent questions' benefit; however, female students rated 'develop your oral communication skills' much higher than the male students did.

Table 3 Gender-based ranking (Female)

F	M	To what extent did the project...	Female		Male	
			Mean	S.D.	Mean	S.D.
1	1	give you the <i>insight</i> into practical business operations?	4.01	0.867	3.88	1.023
2	3	encourage you to <i>take responsibility</i> for your own learning?	3.95	0.986	3.72	1.077
3	2	help you <i>relate</i> theory to real-life practice?	3.91	0.892	3.86	1.004
4	10	develop your <i>oral communication</i> skills?	3.80	0.856	3.47	1.044
5	5	encourage you to <i>apply</i> your knowledge to new situations?	3.77	0.853	3.60	0.935
6	9	encourage you to be an <i>active participant</i> in the learning process?	3.75	0.899	3.47	1.152
7	7	develop your ability to <i>organise</i> data?	3.68	0.831	3.49	0.941
8	11	develop your ability to <i>identify</i> the relevant data in a question?	3.65	0.836	3.47	0.979
9	16	develop your skill in <i>evaluating</i> ideas?	3.64	0.736	3.35	0.946
10	15	help you to develop your ability to <i>think critically</i> about issues?	3.63	0.896	3.36	0.933
11	6	enable you to take decisions with <i>incomplete information</i> ?	3.59	0.962	3.51	1.067
12	8	develop your ability to <i>summarize</i> the available information?	3.59	0.900	3.48	1.044
13	14	improve your <i>analytical skills</i> (defined as <i>the ability to think in a logical and enquiring manner</i>)?	3.58	0.904	3.39	0.987
14	19	help you <i>consolidate</i> your prior knowledge of the discipline?	3.56	0.881	3.30	0.946
15	13	help you to develop skills in <i>interpreting</i> (defined as <i>the ability to understand and decipher data</i>)?	3.54	0.830	3.41	0.927
16	4	help you to <i>integrate your understanding</i> of the different components of the course?	3.54	0.857	3.61	1.034
17	18	develop your ability to <i>synthesize (combine) the essential elements of a given situation</i> ?	3.51	0.833	3.30	1.057
18	27	develop your <i>listening skills</i> ?	3.50	1.065	2.97	1.240
19	12	encourage you to <i>distinguish</i> facts from opinions?	3.48	0.941	3.45	1.043
20	17	develop your <i>problem identification</i> skills?	3.47	0.825	3.34	0.932
21	24	develop your <i>written communication</i> skills?	3.45	1.005	3.12	1.031
22	20	encourage you to <i>think conceptually</i> ?	3.44	0.847	3.28	1.052
23	22	teach you to <i>integrate</i> your technical knowledge of the discipline?	3.39	0.870	3.21	0.933
24	23	help you to develop your <i>problem-solving skills</i> ?	3.38	0.858	3.16	0.956
25	21	develop your skill in <i>asking pertinent questions</i> ?	3.37	1.021	3.25	1.141
26	26	increase your <i>motivation</i> to study the course?	3.21	1.150	3.03	1.306
27	25	improve your <i>judgement skills</i> (defined as <i>identifying and choosing between available alternatives</i>)?	3.16	0.916	3.03	0.879

With regard to the language-based rankings (see Table 4), an examination of the means shows that, with the exception of four items ('apply your knowledge to new situations', 'develop your ability to organise data', 'develop your skill in evaluating ideas', and 'encourage you to distinguish facts from opinions'), all the items were consistently ranked higher by the category of respondents whose home language was not English. With regard to the top three rankings ('give you insight into practical business operations', 'help relate theory to real-life practice', and 'take responsibility for your own learning'), the rankings are the same, except that the order of the items ranked second and third was reversed.

An examination of the rankings also shows that respondents whose home language was English did not rate 'distinguish facts from opinions' (ranked 12th) as low as those whose home language is not English and who ranked it 25th (the overall ranking of the item is

16th). A reason for this may be that those whose home language is not English are more interested in skills which also have a language component. For example, the students who do not speak English at home ranked the benefit of 'listening skills' 13th (students who speak English at home ranked it 25th) and 'asking pertinent questions' 18th (compared to a ranking in 23rd position by those who speak English at home). One problem with this analysis may be that the choices of students who do not speak English as a first language related to what could be more clearly understood. More research is required in this area.

Table 4 Language ranking (Respondents who do not speak English at home)

Eng	Not Eng	To what extent did the project...	English		Not English	
			Mean	S. D.	Mean	S. D.
1	1	give you the <i>insight</i> into practical business operations?	3.90	0.979	4.11	0.795
3	2	encourage you to <i>take responsibility</i> for your own learning?	3.77	1.053	4.06	0.938
2	3	help you <i>relate</i> theory to real-life practice?	3.87	0.903	3.94	1.030
7	4	encourage you to be an <i>active participant</i> in the learning process?	3.54	1.049	3.86	0.905
5	5	develop your <i>oral communication</i> skills?	3.60	0.972	3.83	0.877
4	6	encourage you to <i>apply</i> your knowledge to new situations?	3.70	0.891	3.69	0.894
11	7	help you to integrate your understanding of the different components of the course?	3.52	0.914	3.69	0.976
8	8	develop your ability to <i>identify</i> the relevant data in a question?	3.54	0.896	3.67	0.916
13	9	develop your ability to summarize the available information?	3.50	0.974	3.66	0.932
9	10	enable you to take decisions with <i>incomplete information</i> ?	3.53	1.007	3.64	1.004
16	11	improve your <i>analytical skills</i> (defined as <i>the ability to think in a logical and enquiring manner</i>)?	3.45	0.962	3.64	0.885
18	12	help you <i>consolidate</i> your prior knowledge of the discipline?	3.38	0.897	3.63	0.946
25	13	develop your <i>listening skills</i> ?	3.14	1.181	3.63	1.072
14	14	help you to develop your ability to <i>think critically</i> about issues?	3.48	0.960	3.61	0.807
6	15	develop your ability to <i>organise</i> data?	3.60	0.886	3.60	0.876
15	16	help you to develop skills in <i>interpreting</i> (defined as <i>the ability to understand and decipher data</i>)?	3.45	0.879	3.58	0.854
19	17	develop your ability to <i>synthesize</i> (<i>combine</i>) the essential elements of a given situation?	3.37	0.956	3.56	0.880
23	18	develop your skill in <i>asking pertinent questions</i> ?	3.23	1.084	3.55	1.015
24	19	teach you to <i>integrate</i> your technical knowledge of the discipline?	3.23	0.890	3.52	0.898
10	20	develop your skill in <i>evaluating</i> ideas?	3.53	0.840	3.49	0.853
27	21	increase your <i>motivation</i> to study the course?	3.00	1.207	3.49	1.180
20	22	encourage you to <i>think conceptually</i> ?	3.34	0.944	3.45	0.929
17	23	develop your <i>problem identification</i> skills?	3.41	0.866	3.44	0.891
21	24	develop your <i>written communication</i> skills?	3.26	1.033	3.44	1.004
12	25	encourage you to <i>distinguish</i> facts from opinions?	3.50	0.974	3.40	1.008
22	26	help you to develop your <i>problem-solving skills</i> ?	3.25	0.913	3.39	0.881
26	27	improve your <i>judgement skills</i> (defined as <i>identifying and choosing between available alternatives</i>)?	3.02	0.883	3.32	0.919

To provide more information about the differences in opinion held by the different respondent groups, the results of the Mann-Whitney U test are shown in Tables 5 and 6. Table 5 indicates that there are statistically significant differences in nine of the skills on a gender basis; and Table 6 indicates that there are statistically significant differences in nine of the skills on a language basis.

Table 5 Mann-Whitney U test of difference in students' perceptions of the positive impact of the project

Gender-based differences				
Skills	Mean rank		Corrected for ties	
	Female	Male	Z	M-W sig. (p)
Think critically	149.82	127.51	-2.426	0.015 ²
Listening skills	156.55	120.58	-3.781	0.000 ¹
Consolidate knowledge	151.33	127.84	-2.538	0.011 ²
Problem-solving skills	146.77	129.50	-1.887	0.059 ³
Evaluating ideas	149.31	128.41	-2.292	0.022 ²
Active participant	149.31	132.92	-1.747	0.081 ³
Written communication	152.23	126.59	-2.736	0.006 ¹
Oral communication	152.23	128.81	-2.522	0.012 ²
Take responsibility	148.25	132.11	-1.727	0.084 ³
1 – significant at the 1% level #				
2 – significant at the 5% level				
3 – significant at the 10% level				

Table 6 Mann-Whitney U test of difference in students' perceptions of the positive impact of the project

Language-based differences				
Skills	Mean rank		Corrected for ties	
	English	Not-English	Z	M-W sig. (p)
Judgment	133.18	157.56	-2.475	0.013 ²
Listening skills	132.12	165.18	-3.175	0.001 ¹
Consolidate knowledge	134.89	158.20	-2.302	0.021 ²
Motivation	132.26	164.83	-3.116	0.002 ¹
Asking pertinent questions	134.39	156.33	-2.123	0.034 ²
Active participant	135.03	161.23	-2.561	0.010 ¹
Oral communication	137.17	155.86	-1.844	0.065 ³
Integrate technical knowledge	133.81	158.14	-2.403	0.016 ²
Take responsibility	135.36	157.28	-2.135	0.033 ²
1 – significant at the 1% level				
2 – significant at the 5% level				
3 – significant at the 10% level				

With regard to gender-based differences (see Table 5) significant at the 1% level, female students perceive the annual report project to be more useful in developing the skills of 'listening' and 'written communication'. At the 5% level, the skills of 'think critically', 'consolidate knowledge', 'evaluating ideas', and 'oral communication' are ranked higher by female students than by male students. At the 10% level of significance, female students

rank 'problem solving skills', 'active participant' and 'take responsibility' higher than male students do. Weil *et al.* (2003) only found four significant differences out of 31 skills. More significant differences in perception between the female and male students were therefore found in this study with regard to the perceived benefits of an annual report project compared to the perceived benefits of using case studies.

An examination of Table 6 which shows that when the students are grouped according to language differences, at the 1% level of significance, there is a difference between students who do not speak English at home (and who rate the skills of 'listening', 'motivation' and 'active participant' higher) and their counterparts who do speak English at home. At the 5% level of significance, 'judgment', 'consolidate knowledge', 'asking pertinent questions', 'integrate technical knowledge', and 'take responsibility' are rated higher by those who do not speak English at home. At the 10% level, 'oral communication' is rated higher those who do not speak English at home.

Table 7 shows the students' mean responses and the rankings of the three most valuable aspects of the project summarised according to the subscales shown in Appendix 1.

Table 7 Student mean responses and rankings of the three most valuable aspects of the project according to subscales

Sub-scales	Mean	Most valuable		Second most valuable		Third most valuable	
		Frequency	Rank	Frequency	Rank	Frequency	Rank
Visualisation	3.8519	69	1	70	1	58	1
Dealing with uncertainty	3.5587	12	6	11	6	9	8
Data exploration	3.5403	5	=7	15	5	15	6
Active participation	3.4883	46	2	27	=4	46	2
Problem elaboration	3.4772	29	4	28	3	27	4
Consolidation and integration	3.4551	30	3	34	2	31	3
Communication skills	3.4149	28	5	27	=4	22	5
Judgment	3.2968	5	=7	10	7	12	7
		224		222		220	

According to Table 7, students perceive the annual report project to be most useful in the 'visualisation' of real-life business practices. In second place is 'dealing with uncertainty'. These two findings are consistent with the results reported in the study by Weil *et al.* (2003). In third place is 'data exploration', (ranked last in Weil *et al.*'s (2003) study). As in Weil *et al.*'s (2003) study, 'communication skills' were ranked 7th. As these results are based on students' perceptions of the benefits derived from an annual report project (and not the usefulness of case studies), it is not surprising that there are differences.

The result of Friedman's test of overall differences (see Table 8) indicates statistical differences between students' opinions as to the usefulness of the annual report project in developing the eight sub-scaled benefits. This indicates that students are able to differentiate between the level of benefits and the different benefits they obtain from the annual report project.

Table 8 Tests of differences in students' mean rating of the sub-scaled benefits of the project

Friedmans's test of overall differences		
Sub-scales		Mean rank
Communication skills		4.01
Dealing with uncertainty		4.86
Active participation		4.44
Judgment		3.59
Consolidation and integration		4.17
Data exploration		4.58
Problem elaboration		4.43
Visualisation		5.92
Test statistics	Chi-square (df)	Significance
Chi-square	148.857 (7)	0.000 ¹
1- significant at the 1% level		

Table 9 M-W U test of differences by gender

Sub-scales	Means		Corrected for ties	
	Female	Male	Z	M-W Sig. (p)
Communication skills	3.5793	3.1864	-3.574	0.000 ¹
Dealing with uncertainty	3.5939	3.5086	-0.395	0.693
Active participation	3.5699	3.3761	-1.447	0.148
Judgment	3.3606	3.2087	-1.629	0.103
Consolidation and integration	3.5174	3.3726	-1.350	0.177
Data exploration	3.6132	3.4377	-1.793	0.073 ³
Problem elaboration	3.5745	3.3443	-2.409	0.016 ²
Visualisation	3.9018	3.7816	-1.193	0.233
Value of the project	3.73	3.53	-1.398	0.162
1 – significant at the 1% level				
2 – significant at the 5% level				
3 – significant at the 10% level				

With regard to gender-based differences (see Table 9), at the 1% level, there is a significant difference in the responses on 'communication skills', at the 5% level, there is a significant difference in the response on 'problem elaboration skills', and at the 10% level, there is a significant difference in the response on 'data exploration'. Female students rate all three these skills higher than male students do. With regard to 'communication skills', this finding confirms the previous finding of this study with regard to 'communication skills'. Although female students perceive the project as more valuable than male students do, the difference is not statistically significant.

An examination of the language-based differences shown in Table 10 indicates that at the 1% level, there is a significant difference in the responses on 'communication skills' and 'active participation', at the 5% level there is a significant difference in the responses on 'consolidation and integration', and at the 10% level, there is a significant difference in the responses on 'judgment'. The students who do not speak English at home rated the value of the project higher than the students who do speak English at home; and this is statistically significant at the 10% level.

Table 10 M-W U test of differences by language

Sub-scales	Means		Corrected for ties	
	English	Not English	Z	M-W Sig. (p)
Communication skills	3.3300	3.6292	-2.610	0.009 ¹
Dealing with uncertainty	3.5250	3.6420	-0.852	0.394
Active participation	3.3856	3.7565	-3.470	0.001 ¹
Judgment	3.2554	3.4110	-1.753	0.080 ³
Consolidation and integration	4.2475	4.5101	-2.499	0.012 ²
Data exploration	3.5283	3.5714	-0.563	0.574
Problem elaboration	3.4505	3.5486	-0.659	0.510
Visualisation	3.8267	3.9177	-0.986	0.324
Value of the project	3.60	3.78	-1.845	0.065 ³

1 – significant at the 1% level
2 – significant at the 5% level
3 – significant at the 10% level

7 Conclusion

This study indicates that, based on the opinions of students, an annual report project can be considered beneficial in enhancing a number of skills that are considered important in the literature (IFAC 2003; Weil *et al.* 2003) on the education of professional accountants. The major benefits are related to how such a project gives students insight into practical business operations and enables them to relate theory to real life practice. Three of the skills belong to the 'visualisation' sub-scale and this corroborates one of the objectives in introducing such a project into a course. The skills of 'encouraging students to take responsibility for their own learning' (third overall) and 'develop oral communication skills' (fifth overall) were also outcomes sought by the project. According to the opinions of the students, these objectives are met by such a project.

With regard to gender differences, female students ranked all skills and knowledge higher than the male students, with the exception of 'integrate your understanding'. Furthermore, a number of significant differences were found, two (namely 'listening skills' and 'written communication skills') were significant at the 1% level.

With reference to language differences, with the exception of four items ('apply your knowledge to new situations', 'develop your ability to organise data', 'develop your skill in evaluating ideas', and 'encourage you to distinguish facts from opinions'), students who do not speak English at home rated all skills higher than those students who do speak English at home. In addition, at the 1% level of significance, statistically significant differences were found in respect of 'listening skills', 'motivation', and 'active participation'.

These results suggest that female students and those whose home language is not English perceive the annual report project to be more beneficial to them than male students and those whose home language is English.

Once the skills and knowledge had been summarised into the eight sub-scales, 'visualisation' was the most highly ranked benefit. Significant differences at the 1% level were found for 'communication skills' for students categorised in terms of gender and language. 'Active participation' was also statistically significant at the 1% level in respect of language differences. In all the sub-scaled benefits, female students showed a more

positive perception of the benefits of the annual report project than male students, and students who do not speak English at home showed a more positive perception of the benefits of the annual report project than students who speak English at home.

These results suggest that students perceive the annual report project to enhance the acquisition of accounting-related skills and knowledge. Setting out the objectives of the annual report project in terms of the required outcomes would enable more rigorous commentary to be made.

8 Further research

This study was based only on the use of the annual report project. Future research could investigate the usefulness of other teaching methods in developing the required skills. For example, anecdotal evidence suggests that accounting students in South Africa have poor written communication skills. If the annual report project does not enhance this skill, then it is unclear where in the accounting curriculum this skill could be enhanced.

This study also found that in a language-based comparison, students whose home language is not English invariably rated the skills higher than those whose home language is English. This may suggest that this particular group may benefit more from the use of mini-projects, or more team-based learning in acquiring their accounting knowledge. More investigation is needed in this area.

There are other variables which may influence the acquisition of accounting-related skills. For instance, Weil *et al.* (2003) mentions that personality, culture, and learning style preferences may have an impact on student perceptions. All of these variables could be examined with reference to the usefulness of an annual report project and the acquisition of accounting-related skills.

Note:

Copies of the project and the questionnaire can be obtained from the author via e-mail.

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Appendix 1

Subscales of skills, abilities and knowledge (adapted from Weil *et al.* 2003)

Communication skills	Dealing with uncertainty	Active participation	Judgment
Listening skills (12) Written communication skills (20) Oral communication skills (21)	Take decisions with incomplete information (15)	Increase motivation to study (17) Ask pertinent questions (18) Participate actively in the learning process (19) Responsibility for own learning (32)	Improvement judgment skills (6) Develop problem-solving skills (14) Distinguish facts from opinions (29)
Consolidation and integration	Data exploration	Problem elaboration	Visualisation
Integrate understanding of the different components of the course (7) Synthesise the essential elements of the problem (11) Consolidate prior knowledge of the discipline (13) Summarize the available information (30) Integrate technical knowledge of the discipline (31)	Identify the relevant data in a question (25) Ability to organise data (26) Problem identification skills (27)	Interpret data (8) Think critically (9) Analytical skills (10) Evaluate ideas (16) Think conceptually (28)	Relate theory to real-life practice (22) Apply knowledge to new situations (23) Insight into practical business operations (24)

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