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ACCOUNTING STUDENTS AND COMMUNICATION APPREHENSION: A STUDY OF
SPANISH AND UK STUDENTS

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ACCOUNTING STUDENTS AND COMMUNICATION APPREHENSION: A STUDY OF SPANISH AND UK STUDENTS

Abstract.

Accounting is about measuring and communicating. Accounting bodies and employers have expressed opinions, which have been supported by research results, advocating that greater emphasis is placed on the development of communication skills throughout the education and training of accountants. Consequently, an increasing number of accounting programs now include communication skills as educational objectives or learning outcomes, and have integrated activities into the curriculum specifically to develop these skills.

It is important to recognise that certain factors can severely restrict the development of communication skills; a major factor is communication apprehension. Research suggests that the existence of high levels of communication apprehension will make efforts to improve communication skills ineffective. Previous research findings indicate that accounting students have high levels of communication apprehension.

This paper compares and contrasts the levels and profiles of communication apprehension exhibited by accounting students at the (UK University) and those at the (ESP University). The levels of communication apprehension are also compared with those of students from other disciplines at the same institutions. The results confirm the high levels of communication apprehension in European accounting students. There are notable differences between the two countries however in certain underlying factors.

Keywords: accounting education, communication skills, communication apprehension

INTRODUCTION

There has been much pressure from within the accounting profession, and from external sources, to widen the scope of the accounting curriculum. The International Federation of Accountants, IFAC (2002) believes that the role of the Finance Manager is shifting dramatically from one of transaction manager to that of communicator and strategist. IFAC states that in order to assume these new roles, finance managers of the future will need to possess strong communication skills. A common demand is for the curriculum to include 'communication skills', both as a specific skill in its own right and also because of the central role that it can play in the development of other desirable skills.

Current thinking in communication research has indicated a divide between communication apprehension and communication development. The former is the fear of actually communicating whilst the latter is the ability to maintain and improve an individual's ability to communicate effectively. In order for the effective development of communication skills to take place it is first necessary to diminish communication apprehension.

This study compares and contrasts the levels and profiles of communication apprehension of accounting students in Spain and the UK, and then attempts to identify factors that will be influential when trying to reduce their communication apprehension. In the first part of this paper the importance of communication for the accountant is considered. The second part concentrates on the concept of communication apprehension and its relevance. In the third part the research method and context is presented. Finally, the levels and profiles of communication apprehension are explored and analysed using descriptive and comparative approaches.

THE IMPORTANCE OF COMMUNICATION FOR THE ACCOUNTANT.

Albrecht and Sack (2000) suggest that the main drivers of change in the current business environment are technology and globalisation. These drivers have combined to create increasingly inexpensive information and increased competition in all markets. This is evidenced by:

- An increased pace of change

- Shorter product life cycles and shorter competitive advantages
- A requirement for better, quicker and more decisive action by management
- Emergence of new companies and new industries
- Increasingly complex business transactions
- Increased focus on customer satisfaction

The profiles of Financial Managers will need to change so that they are equipped to meet the challenges posed by the new environment. The International Federation of Accountants, IFAC (2002) believes that the role of the Finance Manager is shifting dramatically from one of transaction manager to that of communicator and strategist, and that finance managers will increasingly become guardians of the corporate conscience. IFAC states that in order to assume these new roles, finance managers of the future will need to possess:

- Strong communication skills
- The ability to interpret complex financial data
- Broad knowledge of global economic markets and cultural issues

A major US survey of management accounting by Siegel and Sorenson (1999) notes the changing role of management accountants. Their survey also asked employers to identify the most important knowledge, skills and abilities necessary for success. These were:

- Communication (oral written and presentation) skills
- Ability to work on a team
- Analytical skills
- Solid understanding of accounting
- Understanding of how a business functions

In order to respond to the changing environment and to react to employers' requirements, the specific needs of the employers must be identified. Professional and academic associations, predominantly in the USA, have through published reports and statements made public their views of the desired profile of a professional accountant (see Table 1).

Table 1 goes here

One of the most interesting aspects to have arisen from these statements is the increasing importance given to non-accounting capabilities and skills. These capabilities and skills are important because they “enable the professional accountant to make successful use of the knowledge gained through education” (IFAC, 1996, 16). A recent report in this area (Albrecht and Sack 2000) noted that there is continuing criticism of accounting programs by employers and educators. Their report identified six major categories of perceived problems:

- Course content and curricula
- Pedagogy
- Skill development
- Technology
- Faculty development and reward systems
- Strategic direction

The importance of skill development is indicated by Albrecht and Sack (2000, 55). They argue that

“Students forget what they memorise. Content knowledge becomes dated and is often not transferable across different types of jobs. On the other hand critical skills rarely become obsolete and are usually transferable across assignments and careers.”

Research carried out by Albrecht and Sack (2000, 56) indicated agreement between educators and practitioners on which skills are the most important. The three skills identified by both educators and practitioners were written communications, analytical/critical thinking and oral communications.

Empirical research into the views of practising accountants on the skills required by accounting graduates supports this view. Bhamornsiri and Guinn (1991), Deppe, Sonderegger, Stice, Clark and Streuling (1991) and Novin and Tucker (1993) surveyed partners in accounting and consulting firms to determine the importance of various capabilities. Their results suggest that communication is the most important capability. Novin and Pearson (1989), Novin, Pearson and Senge (1990) and LaFrancois (1990; 1992) gathered data from

CPA's and industry-based accountants respectively on the importance of various skills, and the strengths and weaknesses, exhibited by entry level accountants. These studies suggested that communication skills were viewed as important but they were clearly perceived as a skill that is deficient in entry level accountants. Three studies, Northey (1990), Nelson, Moncada and Smith (1996), and Catanach and Golen (1996) specifically stress the importance of written language skills.

Zaid and Abraham (1994) found that accounting graduates experience communication-related problems early in their working lives: 50% of employers and graduates (as opposed to only 29% of academics) perceived these problems to be a consequence of the accounting curriculum. A UK perspective is provided by Morgan (1997). His survey of UK employers confirms the relative importance of communication skills and the deficiencies exhibited by accounting graduates. Specifically in the area of management accounting education, Arquero et al. (2001) identified from the views of employers that priority should be given to the development of oral and written communication skills. It is not only professional accountants and employers that are aware of the skills deficiencies: more than 90% of the teaching staff surveyed by May, Windal and Sylvestre (1995) agreed that more emphasis should be placed on written and oral communication in the accounting curriculum. There are also indications in Hassall et al. (2003) that accounting students themselves recognise that a skills expectation gap exists in the areas of oral and written communication skills.

Views such as those highlighted above created pressure for change in accounting education. There is a common framework throughout these reports: both specific vocational skills and knowledge were considered necessary in accountancy education and training and, among the skills identified in the reports, communication skills were specifically highlighted. Although some authors (Barefield 1991, Poe and Bushong 1991, Mathews 1994 and Davis and Sherman 1996) raise the possible existence of biases and hidden interests, such as geographical location and specific industry/vocational sector, in the process of curricular change, the published research on this topic supports the views and opinions issued in the reports and statements of the AECC, AAA and IFAC. In fact, from the first calls of the American Institute of Certified Public Accountants (1969), to the issue of the IES 3 (IFAC 2003) almost every professional accounting body and academic organisation has pointed out the importance of communication skills.

In response to these perceived needs an increasing number of accounting educators are paying more attention to communication skills and have consequently integrated specifically designed development activities into their curriculum.

COMMUNICATION APPREHENSION.

There have been many attempts to improve the communication skills of accounting students as reported by Smythe and Nikolai (2002), Rosner (2000), Ng et al (1999) Catanach and Golen (1997) and McIsaac and Seppe (1996). An important insight is given by Stanga and Ladd (1990) and Ruchala and Hill (1994) who state that despite the importance of communication skills, relatively little is known about the obstacles that accounting students face when attempting to develop their communication abilities. The early research by Gilkinson (1942), Clevenger (1955) and Philips (1968) on barriers to communication skill development focused on stage fright as typically experienced in a public speaking context. These researchers believed that an understanding of the feelings of fright was fundamental to improving the communication experience. The researchers also noted the presence of fear in other communication situations. The construct of communication fear was therefore widening to include a range of contexts in which individuals exhibited a predisposition to avoid communication. One of the major obstacles to communication skills development may be communication apprehension (CA). Communication apprehension is an area that has been the focus of substantial attention from communication scholars. Payne and Richmond (1984) found nearly a thousand studies in the area. Whilst individual findings regarding CA have been the subject of academic dispute the broad concept has been accepted within the discipline area without major criticism. Perhaps the major area of contention is that only self reports of an individuals' CA are considered as potentially valid measures (McCroskey 1984) and that measures of psychological activation and observation are seen as only indirect evidence.

McCroskey (1984) defines CA as “an individual’s level of fear and anxiety associated with either real or anticipated communication with another person”. Individuals who are apprehensive about participating in communicative situations are less able to communicate effectively. Richmond and McCroskey (1989) described people who had high levels of

communication apprehension as being afraid to communicate and, because it is natural to avoid things they fear, as being 'quiet'.

Research has focused on the consequence for the individual and organisations of this communication phenomenon. McCroskey et al. (1976) and McCroskey and Richmond (1976) identified that there is a major effect on the perceptions of others that are affected by the failure to communicate by an apprehensive individual. There are then several implications for the apprehensive communicator in individual and group situations. The level of an individual's communication apprehension may shape the overall nature of their interpersonal relationships. McCroskey et al. (1976) indicated that individuals with high levels of communication apprehension tend to be less interpersonally attractive and attracted to others. This may lead to individuals being less likely to be welcomed as a member of a task-orientated group. The volume and quality of contribution is important in terms of membership acceptance (Borgatta and Bales, 1956; Riecken, 1958). Sorenson and McCroskey (1977) found that communication apprehension was a significant indicator of small group interaction. There is evidence to suggest that the effect that communication apprehension has on interpersonal relationships may influence education, recruitment and professional development. In the traditional educational system based on a lecture/seminar approach, communication apprehension may not create a significant problem. However where voluntary student participation, such as group work, is required McCroskey and Anderson (1976) reported that communication apprehension is a factor that influences the attitude of individuals. There appears to be no correlation between apprehension levels and intelligence. Although McCroskey et al. (1976), using a wide range of personality and intelligence measures, found no evidence of a relationship with communication apprehension; high levels of communication apprehension may lead to avoidance behaviours such as sitting at the back of classrooms, choosing modules that do not require participation/interaction, and not seeking tutor assistance. These behaviours will restrict the relationship between student and tutor, hinder the recognition of the student's progress and needs, and may impair educational performance (McCroskey, 1978; Fordham and Gabbin, 1996).

In the same way, there is evidence that communication apprehension was significantly related to the perceived desirability of certain professions (Daly and McCroskey, 1975; Daly and Millar, 1975). Traditionally, the most common method used by organisations when selecting

new employees is to interview them. It is likely that individuals with high levels of oral communication apprehension will experience difficulties in this situation (Daly et al., 1979). Ayers et al., (1993) found that existing employees with high levels of communication apprehension but otherwise as qualified in all other respects as their colleagues were less likely to be granted job interviews. They were also seen as needing more training and were perceived as less likely to get along with co-workers. Communication apprehension has been found to be a predictor of lack of advancement (Ayers and Crosby, 1995), employee turnover (Scott et al., 1978) and having a significant inverse relationship to overall job satisfaction (Falcione et al., 1977; Thomas et al., 1994).

Current thinking in communication has indicated a split between communication apprehension and communication development. There are clear conceptual differences between the two: individuals may overcome their apprehension and then go on to develop in terms of communication skills. There are indications, for example Allen and Bourhis (1996) and Spitzberg and Cupach (1984), that techniques aimed at the development of communication skills will not resolve communication apprehension and that if an individual has a high level of communication apprehension the techniques will not result in improved communication performance. Boorum, Goolsby and Ramsey (1998) argue that communication apprehension is not a communication competence, but a low level of apprehension is considered to be a necessary, but not sufficient condition, for achieving communication competence.

When McCroskey (1984) advanced the construct of communication apprehension, he made no explicit mention of whether it is a trait of an individual or a response to the situational elements of a specific communication transaction (a state). It was Richmond and McCroskey (1989) who typified CA as being “trait” or “state”. An individual’s general unease in communication situations is seen as being a personal “trait”, whereas the fear of communicating in specific situations is referred to as “state”. The trait typology is supported by Biggers and Masterson (1984) who indicate that this would predispose certain individuals to higher levels of anxiety. The state typology is seen as being situational and is a “transitory orientation toward communication with a given person or group of people” (McCroskey, 1984). It is not personality based but it is a response to situational constraints generated by perceptions of the other person or persons in a communication situation. Beatty et al. (1998)

reconceptualised communication apprehension identifying it as a “communbiological” phenomenon. This approach saw communication apprehension primarily as mostly a result of biological functioning. This distinction is important because of its implications for possible intervention strategies to modify personal levels of CA.

There are two approaches to reducing CA; these are behavioural and pedagogic. Behavioural approaches include techniques such as systematic desensitisation (Friedrich and Goss, 1984), cognitive restructuring (Fremouw, 1984), assertiveness training (Adler, 1977; Zuker, 1983), and visualisation techniques. There is evidence (Berger et al., 1982; Berger and McCroskey, 1982), that these techniques can reduce CA. Pedagogic approaches focus on the use of pedagogical strategies, such as restructuring programmes to reduce apprehension (Daly and Miller, 1975). These techniques are complex, contextual and potentially resource intensive and more research is necessary in order to identify specific techniques that are effective in practical situations.

Specifically within an accounting context, Stanga and Ladd (1990) concluded that accounting majors in the USA appear to have above average levels of oral communication apprehension (OCA). Research by Simons, Higgins and Lowe (1995) on USA students confirms this finding for OCA and also reported written communication apprehension (WCA). A study by Fordham and Gabbin (1996) also confirmed the high level of CA in accounting majors and emphasised the need for accounting educators to pay special attention to communication apprehension separate from, and in addition to, communication skills. Classroom interventions used by Ruchala and Hill (1994) achieved some success in reducing CA in accounting students. However, Aly and Islam (2003) conducted a longitudinal study that found no significant differences in the levels of CA in students entering and leaving an accounting course. All of these studies are North American and a note of caution was raised by McCroskey (1990) who observed that much of the research in the area of CA had been monocultural and that care must be taken in terms of its generalizability. One of the purposes of the current study is to explore the incidence of CA in a European context. This is done by comparing the results obtained from Spanish and UK accounting undergraduates. The two countries chosen for this study have differing approaches to both accounting and accounting education.

The accounting profession internationally has been involved in a process of harmonisation created by the global financial market. The creation and implementation has been the focus of considerable professional and academic activity. However, it is clear that comparably little interest has been shown in the harmonisation of standards for the education of accountants. Needles (1992) states: "Gaining an understanding of the various practices in the education of accountants throughout the world may provide insight into the differences in applying accounting and auditing standards." More importantly Needles then continues: "But a fundamental issue arising in the efforts to harmonise standards for accounting and auditing relates to the extent to which the differences in the application of these standards may exist due to the differences in the education and qualifications of accountants and auditors."

Whilst both countries in this study are European there are some interesting differences between the two. Nobes (1998) develops a model that attempts explain the differences in international financial reporting. The model splits accounting systems into two classes. The application of this model places the UK and Spain in different classes. One of the factors established as causing these differences is the educational processes of these countries. However Blake et al (1998) note that because of the rapid incorporation of EU directives Spain is experiencing major changes in respect of its national accounting regulation. This may mean a future re-classification for Spain. The area of comparative management accounting is summarised in surveys undertaken by Bhimani (1996) and Lizcano (1996). These surveys are summarised in Blake et al. (2000) which also notes the variety of approaches to education and development of management accountants in different countries. Blake et al. (2003) puts forward five distinct aspects of national management accounting culture where they believe comparisons can be made. The second of these dimensions is the training and qualifications of a management accounting profession. In terms of approaches to both financial and management accounting education the two European countries in this study take differing approaches. A further objective of the current study is to compare the two countries in terms of the incidence of CA in students in the respective accounting education systems.

RESEARCH METHOD

Based on the preceding research and literature review, the following hypotheses have been

developed for the present study and are as follows:

1. Students choosing accounting degrees have higher levels of CA than other students.
2. There are differences in the levels and profiles of accounting students in UK and Spain.
3. The different aspects of communication apprehension are inter-related and therefore students that score high in one construct are likely to score high in the others.
4. CA is related to personal variables. These variables are:
 - Gender. There are differences on CA profiles based on gender.
 - Academic performance. Based on the results by Allen and Bourhis (1996), Bourhis and Allen (1992) lower performance is expected to be related with high CA levels.
 - Previous educational background: students with a scientific/mathematical based education present higher levels of CA.

The instrument used to test the stated hypothesis is based on two questionnaires: the Personal Report of Communication Apprehension (PRCA-24) developed by McCroskey (1984) to measure OCA, and the WCA instrument developed by Daly and Miller (1975). The resulting instrument includes two major sections. The main section was devoted to the communication survey and consisted of a 48-item questionnaire with the questions split equally for the PRCA and the WCA. The second section was designed to gather relevant personal data. The responses indicate the level of anxiety felt by the students about participating in various communication situations.

Each item in the main section is a statement about communicating with others¹. The respondents must indicate the degree to which each statement is applicable to them on a 5-point Likert scale that ranges from strong agreement to strong disagreement. The instrument allows two main measures to be calculated: one for written communication (WCA) and one for oral communication (OCA). As shown in Diagram 1, the OCA score consists of four basic constructs, each having six items on the questionnaire. This enables a deeper analysis to be carried out. For example two individuals may record equal total scores but have differing sub-

¹ Examples of the questions are as follows: “I have no fear of my writing being evaluated”, “Participating in a group discussion with new people makes me tense and nervous”, “While giving a presentation, I get so nervous I forget facts I really know”.

scores. It is the specific subset of scores that defines the profile of the individual. Two of the constructs are about formal settings (interviews and presentations) and the other two are for informal settings (group discussions and conversations). In order to avoid any confusion or misunderstanding of these contexts a definition of each relevant term was stated on the questionnaire².

Diagram 1 goes here

The questionnaire was administered to 616 students at (UK University) (236 accounting students and 380 on other degrees) and 574 at the (ESP University) (235 majoring in accounting subjects and 339 on other degrees). The questionnaire was distributed to students from other disciplines in order to substantiate the findings of previous studies that reported the incidence of high levels of CA in accounting students.

The Spanish version of the instrument was the one used in Arquero et al (2003). The reliability analysis of the instrument shows a Cronbach's alpha value of 0.86. Also the stability of the results was tested in the referenced study showing no differences on average values over time. Given that the Spanish version of the instrument used was previously tested and the simplicity of the style and wording used for each item, any potential differences due to translation can be dismissed.

RESULTS.

Responses were gathered from 496 male and 693 female students (Table 2) having an age ranging from 18 to 40 years in the UK and from 18 to 42 in Spain. The mean age was 21 years for the respondents from both countries.

Table 2 goes here

As can be drawn from Table 2, the percentage of female students enrolled on accounting

² For example: "For the purpose of this questionnaire "presentation" means a formal verbal communication given to an audience (e.g. speech)".

courses in Spain is much higher than in the UK (58% vs. 40%)³.

In Table 3 shows the number of students in the sample with relevant experience in their area of study. For accounting students, 21% of UK students completed a work placement or have relevant experience. This falls to 7% for Spanish accounting students (where placements within degrees are not common).

Table 3 goes here

Table 4 goes here

Table 5 goes here

Testing the hypotheses.

The first hypothesis stated that students taking accounting degrees record higher levels of CA than other students. Table 6 presents the mean scores and the significance of the difference of means (t-test, two tail significance) for communication apprehension constructs by country and discipline.

Table 6 goes here

As can be drawn from Table 6, accounting students record higher scores in all constructs than the students from other disciplines. These differences are statistically significant in almost all cases. When the accounting scores are split by country, there is only one instance where the accountants have a lower score but it is not a significant difference (this is for presentation scores for UK students). It is interesting to highlight that for the Spanish accounting students there are greater differences between the accounting students and those from other disciplines. Therefore it can be seen that the data the data allows the acceptance of the first hypothesis.

Focusing on accounting students, the second hypothesis is that there are differences in the levels and profiles between accounting students in the UK and Spain. Table 7 presents the scores by country and the significance of the difference of means for the accounting students.

³ As the composition of each sub-sample, on the main personal characteristics, is different (see table 1), in order to avoid undesired effect of such composition in statistical tests, each case was assigned a weight that allowed to proxy for a perfect stratified sample.

Table 7 goes here

It can be seen that the UK accounting students record higher levels of total communication apprehension. They have a predominantly higher score for writing apprehension. The scores for oral communication apprehension are almost identical. However, the underlying profiles for those scores are clearly different: Spanish students score higher in formal settings but yet feel less apprehensive in the more informal setting (conversation) than their UK counterparts. This runs contrary to the lower scores for writing apprehension that the Spanish students scored. Perhaps for the Spanish students this is as a result of ‘traditional’ class room education experiences, i.e. a lot of writing but very little interaction. Overall, the results endorse the second hypothesis

The third hypothesis proposes that the different aspects of communication apprehension are inter-related; therefore students that score high in one construct are likely to score high in the others. This hypothesis can be tested through correlation analysis. Table 8 presents the correlation coefficients using all cases in the sample. All correlation coefficients are significant at a level lower than 1%.

Table 8 goes here

Apart from the correlations between basic constructs and their aggregates XXXX (which are necessarily inter-related) there is a strong association between the writing apprehension score (WCA) and the oral communication score (OCA). Also, apprehensions in the formal contexts (presentations and interviews) are highly related.

The same pattern of results was obtained when the same analysis was performed on just the accounting students (Table 9). It can be seen that the relationship between formal constructs and writing apprehension scores are even stronger. This confirms the third hypothesis.

Table 9 goes here

The fourth hypothesis is that certain personal variables are associated with the presence of higher levels of CA. Table 10 presents the mean values for male and female students for the

whole sample and also just for accountants (and the results of t-test for the differences).

Table 10 goes here

It can be seen that female students record higher total apprehension scores. This is mainly due to the higher scores recorded for OCA. There are no significant differences between the genders for writing apprehension scores. The higher recorded scores for females in OCA are primarily caused by the significantly different scores in formal settings. Therefore it can be concluded that gender is a significant variable for oral communication apprehension in formal settings and the hypothesis is accepted for that area. However, it must be rejected for writing apprehension and oral apprehension in informal settings.

The results of the study by Allen and Bourhis (1992) showed that lower academic performance is related to high CA levels. It was not possible to investigate the link between CA and assessed academic performance here because the questionnaires for this paper were anonymous. However the students were asked to rate their own individual academic ability in relation to that of their peers. Table 11 presents the mean scores for CA by self rating. It can be seen that there is an inverse relationship between CA and academic self rating.

Table 11 goes here

The questionnaire asked the students to classify their previous educational background as being numeric/scientific, humanities/arts or a mix. This was to facilitate an investigation of the impact of educational background on CA. The scores are presented in Table 12.

Table 12 goes here

It can be seen that in terms of overall CA both Spanish and UK students from a numeric/scientific backgrounds have statistically significant higher levels of apprehension than those from a humanities/arts or mixed backgrounds. For written communication apprehension there are also significant differences in terms of academic background except for the Spanish accounting students. Educational background can be seen to have an impact on oral communication apprehension for Spanish students. This is specifically in the area of formal oral communication apprehension where Spanish accounting students show

statistically significant differences in relation to educational background for the sub-sections interviews and presentations. These results indicate that in specific areas previous educational background can be an influence and also that there are variations in its impact between Spain and the UK. There is therefore support for the fourth hypothesis.

DISCUSSION AND CONCLUSIONS

The need for accountants to possess communication skills and the current deficiency in this area has been clearly identified from within the profession and by external stakeholders. There is an identified and increasing need (IFAC 2002) for accountants of the future to possess a high level of communication skills ability. This represents a change in focus for the accounting profession from transaction management to business advisor. This change will have major implications both in terms of recruitment and future education and development. This call for change has encouraged accounting educators to include the development of communication skills as an educational objective. However, the extent to which an individual is free of communication apprehension will determine the effectiveness of their communication (McCroskey 1984) and also the effectiveness of any efforts devoted to the development of such skills (Allen and Bourhis 1996 and Spitzberg and Cupach 1984).

The primary aim of the paper was to test whether the previous work in this area (Stanga and Ladd 1990, Simons, Higgins and Lowe 1995 and Fordham and Gabbin 1996) which concluded that accounting majors in the USA appear to have above average levels of communication apprehension was in fact generalisable to other countries. Within a European context an objective of this paper was to test the levels of communication apprehension in accounting students in comparison with their colleagues studying other disciplines. The results of this study confirm our hypothesis. Accounting students recorded levels of CA that were significantly higher, in both countries (Spain and the UK), than students studying other disciplines at the same universities.

Although accounting students from both countries have high levels of CA, there are notable differences between the students in the two countries in the specific CA profile in terms of written communication apprehension and both formal and informal oral communication (second hypothesis). This adds substance to the warning offered by McCroskey (1990), and

supported by Bourhis (1993) and Watson and Dodd (1984) that there may be a danger that the previous monocultural research on this topic (CA) had limited generalizability. It is necessary to highlight that all CA reducing techniques are contextual, and require a deep knowledge of the exact CA profile in order to develop the adequate strategies. The mere translation of pedagogical strategies could even worsen the problem when CA profiles differ. These differences are probably created by cultural differences, both in general terms and more specifically in the educational processes involved. A major area for further research is therefore identified in terms of comparative accounting education studies. This is necessary because there is little research in any depth on the way in which accountants are educated in differing countries. When this is more firmly established it will then enable a deeper study of the specific effects of these different approaches. This may go some way to address the concerns of Needles (1992) in terms of the interpretation and application of accounting standards and accounting practice within an increasingly harmonised framework.

There are also other specific factors such as gender, educational background and academic performance (self-rating) where differences are identified in this study (fourth hypothesis). Simons *et al.* (1995) found evidence of gender differences in the levels of communication apprehension. The initial observation of Daly and Miller (1975) was that women have significantly higher OCA but lower WA than male counterparts. Simons *et al.*'s results indicate that while females written communication apprehension was lower, it was not significantly so. Female students did, however, have significantly higher overall oral CA scores and higher scores associated with formal speaking contexts; namely, the meeting and public speaking subscale scores. The results of this study confirm these findings, female students in both Spain and the UK exhibited significantly higher levels of OCA in formal situations than their male counterparts. Given the increasing number of females entering the accounting profession this may be a cause for concern. It will be interesting to see if in fact the problem reduces as more females take senior positions in the accounting profession and the gender position in formal situation changes.

Educational background appears to influence, both in general and in the specific case of accounting students in both Spain and the UK, the overall level of CA. UK accounting students from a numerate/scientific background have a higher level of writing apprehension than those from a literate/arts background. This is not replicated in the case of Spanish

accounting students where no significant difference is found for WCA is evident from their educational backgrounds. There are significant differences in both countries in terms of OCA, particularly in terms of formal situations. In order to understand the factors that may give rise to these differences it is again important to fully understand the specific contexts in which they are initiated. There may be implications for the accounting profession in terms of recruitment.

There is clearly a very significant relationship between academic self rating and communication apprehension. The results of the study by Allen and Bourhis (1992) showed that lower academic performance is related to high CA levels. In order to maximise participation the questionnaires for this paper were anonymous. Therefore, it was not possible to investigate the link between CA and assessed academic performance. What might be being measured here in terms of academic self confidence may be related to the concept of self-efficacy (Bandura 1997). Previous studies in accounting (Christensen, Fogarty and Wallace 2002) have examined the relationship between self –efficacy and academic achievement. The relationship between self-efficacy and computer anxiety exhibited by accounting students has also been researched (Stone, Arunachalam and Chandler 1996). The relationship between CA and self-efficacy is an area that is potentially an area for future research.

If communication is a problem for accountants and that there is an identified need to specifically develop communication skills during accounting programmes, this study suggests that it is important to deal initially with CA. Many accounting courses now contain skills development units which have amongst their aims the development of communications skills. The findings of Bourhis and Allen (1992) indicate that it is necessary to reduce CA before communication skills can be improved. Consequently, given the high levels of communication apprehension recorded in accounting students it may be necessary to redirect the approach taken in these skills development units in order to effect an overall improvement. Ruchala and Hill (1994) suggest that redirection to initially reduce OCA can be achieved but suggest that further research is necessary to guide developments. The results of this paper suggest that in searching for specific solutions to CA it may be important to also consider specific contextual differences. This is supported by the findings of this study which show that the accounting students in the two countries concerned have identifiably different levels of CA in different contexts. There is a clear need to understand the contextual differences between accounting

education in different countries. An understanding of these contextual differences could then help in considering the individual differences between students that will be fundamental to trying to reduce communication apprehension for accounting students.

Aly and Islam (2003) identified that there were no significant differences between the levels of CA in students entering and leaving an accounting course. This infers that current approaches to the teaching, learning and assessment in accounting courses are having little or no effect on the levels of CA of the students. The high levels of CA exhibited by accounting students in comparison to other students (Stanga and Ladd 1990, Simons, Higgins and Lowe 1995 and Fordham and Gabbin 1996) must therefore be present when they join accounting courses. The high levels of CA reported by the accounting students in this study support the findings of Daly and McCroskey (1975) and Daly and Millar (1975) that communication apprehension was related to the perceived desirability of certain professions. Currently, student's perceptions of the role of the accountant are such that those of them with high CA are attracted to the vocational area. However, the profession views its future role as being predominantly focussed on communication. There is clearly a miss-match here and potential for future frustration. The need to identify the factors that determine vocational choice in attracting students to careers in accounting is important given the mismatch between the accounting professions view of communication skills requirements and those of potential students. Further research is needed into the determinants of vocational choice of accounting students. How are the students' perceptions of accounting as a career developed? What factors influence their choice of vocational area?

REFERENCES

- Accounting Education Change Commission (1990) *Objectives of Education for Accountants (Position Statement No. 1)*, New York: Accounting Education Change Commission.
- Adler, R.B. (1977) *Confidence in Communication: A Guide to Assertive and Social Skills*, New York, Holt, Rinehart and Wilson.
- Albrecht, W.S. and Sack, R.J. (2000) *Accounting Education: Charting the Course through a Perilous Future*, Accounting Education Series Volume No. 16, American Accounting Association.
- Allen, M. and Bourhis, J. (1996) The relationship of communication apprehension to communication behaviour: A meta-analysis, *Communication Quarterly*, 44 (2), 214-226.
- Aly, I.M. and Islam, M. (2003) Audit of accounting program on oral communications apprehension: a comparative study among accounting students, *Managerial Auditing Journal*, 18 (9), 751-760.
- American Accounting Association Committee on the Future, Content, and Scope of Accounting Education (1986) *Future of accounting education: preparation for the expanding profession*, *Issues in Accounting Education*, I (1), 169-195.
- American Institute of Certified Public Accountants (Comité Beamer) (1969) *Report of the Committee on Education and Experience Requirements for CPA's*, New York, AICPA.
- American Institute of Certified Public Accountants, Future Issues Committee. (1987). *On Achieving Changes in Accounting Education*. New York, AICPA.
- American Institute of Certified Public Accountants (1988). *Education Requirements for Entry Into the Accounting Profession (Revisión del Informe del Comité Albers)*. New York, AICPA.
- American Institute of Certified Public Accountants (1992) *Academic Preparation to Become a Certified Public Accountant*. New York, AICPA.
- American Institute of Certified Public Accountants. (1999). *The AICPA Core Competency Framework for Entry into the Accounting Profession*. New York, AICPA.
- Arquero Montaña J.L., Donoso Anes J.A., Hassall T. and Joyce J. (2001) Vocational Skills in the Accounting Professional Profile: The Chartered Institute of Management Accountants (CIMA) Employers Opinion, *Accounting Education: An International Journal*, 10 (3), 299-313.
- Arthur Andersen and Co. (1989) *Perspectives on Education: Capabilities for Success in the Accounting Profession*, New York.
- Ayers, J. and Crosby, S. (1995) Two studies concerning the predictive validity of the personal report of communication apprehension in employment interviews, *Communication Research Reports*, 12, 145-151.

- Ayers, J., Ayers, D.M. and Sharp, D. (1993) A progress report on the development of an instrument to measure communication apprehension in employment interviews, *Communication Research Reports*, 10, 87-94.
- Barefield, R.M. (1991). A critical view of the AECC and the converging forces of change. *Issues in Accounting Education*, 6(2), 305-312.
- Beatty, M.J., McCroskey, J.C. and Heisel, A.D. (1998) Communication Apprehension as temperamental expression: a communiobiological paradigm, *communication monographs*, 65, 197-219.
- Berger, B.A., Baldwin, H.J., McCroskey, J.C. and Richmond, V.P. (1982) Implementation of a systematic desensitization program and classroom instruction to reduce communication apprehension in pharmacy students. *American Journal of Pharmaceutical Education*, Fall, 227-234.
- Berger, B.A. and McCroskey, J.C. (1982) Reducing communication apprehension in Pharmacy students, *American Journal of Pharmaceutical Education*, Summer, 132-136.
- Bhamornsiri, D and Guinn, R.E. (1991) The road to partnership in the 'Big Six' firms: implications for accounting education, *Issues in Accounting Education*, 6(1), 9-24.
- Biggers, T. and Masterson, J.T. (1984) Communication Apprehension as a personality trait: An emotional defence of a concept, *Communication Monographs*, 51(4), 381-390.
- Blake, J., Amat, O., Gowthorpe, C., and Pilkington, C. (1998) International accounting harmonisation - a comparison of Spain, Sweden and Austria. *European Business Review*, 98(3), 144-150.
- Boorom, M.L., Goolsby, J.R., and Ramsey, R.P. (1998) Relational communication traits and their effect on adaptiveness and sales performance, *Academy of Marketing Science Journal*, 26(1), 16-30.
- Borgatta, E.F. and Bales, R.F. (1956) Sociometric status patterns and characteristics of interactants, *Journal of Social Psychology*, 43, 289-297.
- Bourhis, J. (1993) A comparison of and commentary on cross cultural communication apprehension research: a preliminary assessment, A paper presented to the 1993 Annual Meeting of the Speech Communication Association, Miami, Florida.
- Bourhis, J. and Allen, M. (1992) Meta-analysis of the relationship between communication apprehension and cognitive performance, *Communication Education*, 41(1), 68-76.
- Catanach, A.H. and Golen, S. (1996) A user orientated approach to evaluating Accountants writing skills, *Business Communication Quarterly*, 59(4), 111-121.
- Clevenger, T.A. (1955) A definition of stage fright, *Central States Speech Journal*, 7, 26-30.

- Daly, J.A. and McCroskey, J.C. (1975) Occupational choice and desirability as a function of communication apprehension, *Journal of Counselling Psychology*, 22, 309-313.
- Daly, J.A. and Millar, M.D. (1975) Further studies on writing apprehension: SAT scores, success expectations, willingness to take advanced courses and sex differences, *Research in the teaching of English*, 9, 249-253.
- Daly, J.A., Richmond, V.P. and Leth, S. (1979) Social communicative anxiety and the personnel selection process: testing the similarity effect in selection decisions, *Human Communication Research*, 6, 18-32.
- Davis, S.W. and Sherman, R. (1996). The Accounting Education Change Commission: a critical perspective. *Critical Perspectives on Accounting*, 7, 159-189.
- Deppe, L.A., Sonderegger, E.O., Stice, J.D., Clark, D.C. and Streuling, G.F. (1991) Emerging competencies for the practice of accountancy, *Journal of Accounting Education*, 9(1), 257-290.
- Falcione, R., McCroskey, J.C. and Daly, J.A. (1977) Job satisfaction as a function of employees' communication apprehension, self esteem and perceptions of their immediate supervisor. In Ruben, B. (Ed.) *Communication Yearbook I*, New Brunswick, N. J.: Transaction.
- Fordham, D.R., and Gabbin, A.L. (1996) Skills versus apprehension: Empirical evidence on oral communication, *Business Communication Quarterly*, 59(3), 88-98.
- Fremouw, M.J. (1984) Cognitive-behavioural therapies for modification of communication apprehension, in Daly, J.A. and McCroskey, J.C. (Eds), *Avoiding Communication*, Beverly Hills, California, Sage Publications.
- Friedrich, G. and Goss, B. (1984) Systematic desensitization, in Daly, J.A. and McCroskey, J.C. (Eds), *Avoiding Communication*, Beverly Hills, California, Sage Publications.
- Gilkinson, H. (1942) Social fears as reported by students in college speech classes. *Speech Monographs*, 9, 141-160.
- Hassall T., Joyce J., Arquero Montaña J.L., and Donoso Anes J.A (2003) The Vocational Skills Gap For Management Accountants: The Stakeholders Perspectives, *Innovations in education and Teaching International*, 40 (1), 78-88.
- International Federation of Accountants. Education Committee. (1994) *2000 and Beyond. A strategic framework for prequalification education for the accountancy profession in the year 2000 and beyond*. N.Y., IFAC.
- International Federation of Accountants. Education Committee. (1996). *IEG 9 Prequalification Education, Assessment of professional competence and experience requirements of professional accountants*. N.Y., IFAC.
- International Federation of Accountants - Financial and Management Accounting committee

(2002) *The Role of the Chief Financial Officer in 2010*, N.Y., IFAC.

International Federation of Accountants. (2003). *International Education Standard (IES) 3. Professional Skills Content*. N.Y., IFAC.

LaFrancois, H.A., (1990) Dear (CPA Firm): How do the skills of your new-graduate-accountants match the skills you need? *Journal of Career Planning and Employment*, 51(1), 71-73.

LaFrancois, H.A. (1992) The marketing of an accounting graduate: Characteristics most desired by CPA firms, *Journal of Education for Business*, 67(4), 206-209.

May, G.S., Windal, F.W. and Sylvestre, J. (1995) The need for change in accounting education: an educator survey, *Journal of Accounting Education*, 13(1), 21-43.

Mathews, M.R. (1994). An examination of the work of the Accounting Education Change Commission, 1989-1992. *Accounting Education*, 3(3), 193-204.

McCroskey, J.C., (1978) Validity of the PRCA as an index of oral communication apprehension, *Communication Monographs*, 45 192-203.

McCroskey, J.C. (1984) The communication apprehension perspective, in Daly, J.A. and McCroskey, J.C. (Eds), *Avoiding Communication*, Beverly Hills, California, Sage Publications.

McCroskey, J.C., (1990) Correlates of quietness: Swedish and American perspectives, *Communication Quarterly*, 38(2), 127-137.

McCroskey, J.C. and Anderson, J.F. (1976) The relationship between communication apprehension and academic achievement among college students, *Human Communication Research*, 3, 73-81.

McCroskey, J.C., Daly, J.A., Richmond, V.P. and Cox, B. (1976) The effects of communication apprehension on interpersonal attraction, *Human Communication Research*, 2, 51-65.

McCroskey, J.C., Daly, J.A. and Sorenson, G. (1976) Personality correlates of communication apprehension: a research note, *Human Communication Research*, 2, 376-380.

McCroskey, J.C., and Richmond, V.P. (1976) The effects of communication apprehension on the perceptions of peers, *Western Speech Communication*, 40, 14-21.

McDowell, E.E. and McEwan, T. (1994) An investigation of trait, context and state communication apprehension between freshman sophomore college students in England, *University of Minnesota Research Report*, (143).

McIsaac, C.M. and Seppe, J.F. (1996) Improving the writing skills of accounting students: A co-operative venture, *Journal of Accounting Education* (Winter), 13, 515-535.

- Morgan, G.J. (1997) Communication skills required by accounting graduates: practitioner and academic perceptions, *Accounting Education*, 6(2), 93-107.
- Needles, B.E., Kantor, J., Shoenthal, E.R., (1992) Global compliance with international accounting education guidelines, *Accounting Education* 1(3) 211 - 224.
- Nelson, S.J., Moncada, S., and Smith D.C. (1996) Written Language skills of entry-level accountants as assessed by experienced CPA's, *Business Communication Quarterly*, 59(4), 122-127.
- NG, J., Lloyd, p., Kober, R. and Robinson, P. (1999) Developing writing skills: a large class experience: a teaching note, *Accounting Education*. 8(1) 47-55.
- Nobes, C.W. (1998) Towards a general model of the reasons for international differences in Financial Reporting, *Abacus*, 34(2), 163-187.
- Northey, M. (1990) The need for writing skill in accounting firms, *Management Communication Quarterly*, 3(4), 474-495.
- Novin, A. and Pearson, M. (1989) Non-accounting-knowledge qualifications for entry level public accountants, *The Ohio CPA Journal*, 12-17.
- Novin, A. M., Pearson, M.A., and Senge, S.V. (1990) Improving the curriculum for aspiring management accountants: The practitioner's point of view, *Journal of Accounting Education*, 8(2), 207-224.
- Novin, A.M., and Tucker, J. M. (1993) The composition of 150-hour accounting programs: An empirical investigation, *Issues in Accounting Education*, 8(2), 273-291.
- Payne, S.K. and Richmond, V.P. (1984) A bibliography of related research and theory. In J.A. Day and J.C. McCroskey (Eds.), *Avoiding Communication*, Beverly Hills, California, Sage Publications.
- Philips, G.M. (1968) Reticence: Pathology of the normal speaker. *Speech Monographs*, 35, 39-49.
- Poe, C.D. and Bushong, J.G. (1991) Let's stop pretending all accountants are alike. *Management Accounting* (U.S.). August, 66-67.
- Riecken, H.W. (1958) The effects of talkativeness on ability to influence group solutions to problems, *Sociometry*, 21, 309-321.
- Richmond, V.P., and McCroskey, J.C. (1989) *Communication Apprehension, Avoidance and Effectiveness*, Scottsdale, AZ, Gorusch.
- Rosner, R.L. (2000) The dreaded oral presentation, *Accounting Education*, 9(4), 409-411.
- Ruchala, L.V. and Hill, J.W. (1994) Reducing accounting students' oral communication apprehension: empirical evidence, *Journal of Accounting Education*, 12(4), 283-303.

Scott, M.S., McCroskey, J.C. and Sheehan M.E. (1978) Measuring communication apprehension, *Journal of communication*, 28, 104-111.

Siegel, G. and Sorenson, J.E. (1999) Counting more, counting less. *The 1999 Practice analysis of Management Accounting*, IMA.

Simons, K; Higgins, M. and Lowe, D. (1995) A profile of communication apprehension in accounting majors: Implications for teaching and curriculum revision, *Journal of Accounting Education*, 13(3), 299-318.

Smythe, M.J., Nokolai, L.A. (2002) A thematic analysis of oral communication concerns with implications for curriculum design. *Journal of Accounting Education*, 20(3), 163-182.

Sorenson, G. and McCroskey, J.C. (1977) The prediction of interaction behaviour in small groups, *Communication Monographs*, 44, 73-80.

Spitzberg, B.H., and Cupach, W.R. (1984) *Interpersonal Communication Competence*, Beverly Hills, California, Sage.

Stanga. K.G., and Ladd, R.T. (1990) Oral communication apprehension in beginning accounting majors: an exploratory study, *Issues in Accounting Education*, 5(2), 180-194.

Thomas, G.F., Tymon, W.G. and Thomas, K.W. (1994) Communication apprehension, interpretive styles, preparation and performance in oral briefing, *Journal of Business Communication*, 31(4), 311-326.

United Nations Conference On Trade And Development (1998). *Guideline for a global accounting curriculum and other qualifications requirements*. UNCTAD secretariat. Geneva

Watson, A.K. and Dodd, C.H. (1984) The effects of communication apprehension and cultural differences on selected communication behaviours, A paper presented to the 1984 Annual Meeting of the Speech Communication Association, Chicago, Illinois.

Zaid, O.A., and Abraham, A. (1994) Communication skills in accounting education: perceptions of academics, employers and graduate accountants, *Accounting Education*, 3(3), 205-221.

Zuker, E. (1983) *Mastering Assertiveness Skills*, New York, AMACOM.

Table 1: Published Statements

American Institute of Certified Public Accountants	1969	Report of the Committee on Education and Experience Requirements for CPA's.
American Accounting Association	1986	Bedford Report (Future Accounting education: Preparing for the Expanding Profession)
American Institute of Certified Public Accountants	1987	Future Issues Paper
American Institute of Certified Public Accountants	1988	Education Requirements for Entry into the Accounting Profession (Review of the Albers Report)
Arthur Andersen and Co et al.	1989	Perspectives on Education: Capabilities for Success in the Accounting Profession
Accounting Education Change Commission	1990	Position Statement No. 1. Objectives of Education for Accountants
American Institute of Certified Public Accountants	1992	Academic Preparation to Become a Certified Public Accountant.
International Federation of Accountants	1994	2000 and Beyond. A strategic framework for prequalification education for the accountancy profession
International Federation of Accountants	1996	I.E.G. 9: Prequalification Education, Assessment of professional competence and experience requirements of professional accountants
United Nations Conference on Trade and Development	1998	Guideline for a global accounting curriculum and other qualification requirements
American Institute of Certified Public Accountants	1999	The AICPA Core Competency Framework for entry into the accounting profession
Albrecht and Sack American Accounting Association, American Institute of Certified Public Accountants, Institute of Management Accountants, Arthur Andersen, Deloitte and Touche, Ernst and Young, KPMG, Price Waterhouse Coopers.	2000	Accounting Education: Charting the Course through a Perilous Future
International Federation of Accountants	2003	International Education Standard (IES)3. Professional Skills Content

Table 2. Gender by country and discipline

		UK	Spain	Total
Accounting	Male	141	99	240
	Female	95	136	231
	Total	236	235	471
Others	Male	160	96	256
	Female	220	242	462
	Total	380	338	718

Table 3. Relevant experience by country and discipline

			UK	Spain	Total
Accounting	Completed a work placement	Yes	51	16	67
		No	185	218	403
	Total		236	234	470
Others	Completed a work placement	Yes	118	130	248
		No	255	205	460
	Total		373	335	708

Table 4. Educational background by country and discipline

	Educational background	UK	Spain	Total
Accounting	Mainly numerate/scientific	75	150	225
	Mainly literate/humanities/arts	20	6	26
	Mix of the above	140	77	217
	Total	235	233	468
Other	Mainly numerate/scientific	23	87	110
	Mainly literate/humanities/arts	98	111	209
	Mix of the above	258	137	395
	Total	379	335	714

Table 5. Academic self rating by country and discipline

			UK	Spain	Total
Accounting	Academic self rating compared to peers.	Much better	12	6	18
		Better	42	23	65
		Average	168	185	353
		Worse	10	18	28
		Much Worse	0	2	2
		Total	232	234	466
Others	Academic self rating compared to peers	Much better	11	11	22
		Better	66	38	104
		Average	291	274	565
		Worse	6	12	18
		Much Worse	2	1	3
		Total	376	336	712

Table 6. CA scores

	AREA	All		SPAIN		UK	
		Mean	sig	Mean	sig	Mean	sig
CA total score	accounting	133.72	0.000	132.00	0.000	135.47	0.000
	non_acc	122.65		119.33		125.92	
Writing apprehension	accounting	65.94	0.000	64.22	0.000	67.70	0.000
	non_acc	59.10		55.55		62.46	
Total score for oral skills	accounting	67.78	0.000	67.78	0.000	67.77	0.000
	non_acc	63.82		63.99		63.65	
Total Formal	accounting	38.80	0.000	39.54	0.000	38.03	0.014
	non_acc	37.01		37.32		36.68	
Interview	accounting	19.40	0.000	19.85	0.000	18.94	0.000
	non_acc	18.04		18.59		17.50	
Presentation	accounting	19.39	0.050	19.69	0.001	19.09	N.S.
	non_acc	18.97		18.72		19.22	
Total Informal	accounting	28.98	0.000	28.23	0.000	29.74	0.000
	non_acc	26.87		26.70		27.04	
Group	accounting	14.96	0.000	15.16	0.036	14.76	0.000
	non_acc	14.17		14.61		13.73	
Conversation	accounting	14.02	0.000	13.07	0.000	14.98	0.000
	non_acc	12.72		12.13		13.31	

Table 7. CA for accounting students by country

	Country	Mean	St Dev.	sig
CA Total Score	UK	135.47	21.30	0.010
	Spain	132.00	20.61	
Writing apprehension	UK	67.70	12.05	0.000
	Spain	64.22	11.39	
Total score for oral skills	UK	67.77	13.38	N.S.
	Spain	67.78	12.60	
Formal	UK	38.03	8.31	0.004
	Spain	39.54	8.04	
Interview	UK	18.94	4.67	0.002
	Spain	19.85	4.37	
Presentation	UK	19.09	4.71	0.044
	Spain	19.69	4.59	
Informal	UK	29.74	7.01	0.001
	Spain	28.23	6.81	
Group	UK	14.76	3.80	N.S.
	Spain	15.16	4.10	
Conversation	UK	14.98	4.29	0.000
	Spain	13.07	4.24	

Table 8. Correlation analysis for all respondents.

Spearman's Rho	OCA	Formal	Informal	Group	Convers.	Interv.	Present.
WCA	0.383	0.329	0.332	0.222	0.350	0.289	0.296
Formal			0.432	0.382	0.360	XXXX	XXXX
Informal				XXXX	XXXX	0.401	0.370
Group					0.441	0.347	0.342
Convers.						0.334	0.302
Interv.							0.559

Table 9. Correlation analysis. Accounting students.

Spearman's Rho	OCA	Formal	Informal	Group	Convers.	Interv.	Present.
WCA	0.400	0.341	0.337	0.246	0.339	0.305	0.313
Formal			0.420	0.384	0.340	XXXX	XXXX
Informal				XXXX	XXXX	0.414	0.341
Group					0.446	0.370	0.333
Convers.						0.336	0.267
Interv.							0.589

All correlation coefficients are significant at 1%

Table 10. Scores by gender.

		UK All		SP All		UK Acc		SP Acc	
		Mean	Sig.	Mean	Sig.	Mean	Sig.	Mean	Sig.
CA total	Male	129.11	0.007	124.29	0.007	133.86	0.094	130.24	0.055
	Female	132.91		128.07		137.11		133.81	
WCA	Male	64.90	N.S.	60.01	N.S.	67.51	N.S.	64.14	N.S.
	Female	65.42		60.34		67.88		64.30	
OCA	Male	64.16	0.000	64.26	0.000	66.35	0.018	66.10	0.003
	Female	67.41		67.65		69.22		69.51	
Formal	Male	35.91	0.000	36.41	0.000	36.88	0.002	37.30	0.000
	Female	38.86		40.52		39.20		41.85	
Interview	Male	17.42	0.000	18.10	0.000	18.35	0.005	18.61	0.000
	Female	19.03		20.38		19.55		21.14	
Presentation	Male	18.48	0.000	18.30	0.000	18.53	0.009	18.70	0.000
	Female	19.83		20.14		19.65		20.71	
Informal	Male	28.23	N.S.	27.90	0.052	29.47	N.S.	28.80	0.063
	Female	28.58		27.06		30.02		27.65	
Group	Male	14.07	N.S.	15.07	N.S.	14.47	0.092	15.39	N.S.
	Female	14.42		14.71		15.05		14.93	
Conversation	Male	14.14	N.S.	12.86	0.050	15.00	N.S.	13.40	0.077
	Female	14.17		12.35		14.97		12.73	

Table 11. Scores by academic self rating

		UK All		UK Acc		SP All		SP Acc	
		Mean	Sig	Mean	Sig	Mean	Sig	Mean	Sig
CA total	Much better	119.65	0.000	119.12	0.000	111.29	0.000	122.67	0.019
	better	120.98		123.80		122.40		135.18	
	average	132.90		137.75		126.79		131.23	
	(much) worse	153.87		153.62		134.42		138.92	
WCA	much better	59.09	0.000	59.30	0.000	54.96	0.000	61.33	0.010
	better	61.65		64.19		57.12		64.66	
	average	65.72		68.36		60.36		63.60	
	(much) worse	77.97		77.68		68.08		70.47	
OCA	much better	60.60	0.000	59.82	0.000	56.33	0.000	61.33	0.088
	better	59.42		59.61		64.83		70.51	
	average	67.22		69.39		66.39		67.62	
	(much) worse	73.67		75.94		66.91		68.45	
Formal	much better	33.75	0.000	33.86	0.000	30.30	0.000	32.50	0.004
	better	33.77		33.85		37.20		40.94	
	average	38.16		38.76		38.92		39.68	
	(much) worse	42.92		44.32		38.53		39.32	
Interview	much better	16.00	0.000	16.11	0.000	14.70	0.000	16.50	0.005
	better	16.53		16.75		18.60		20.41	
	average	18.62		19.39		19.57		20.05	
	(much) worse	20.97		22.18		18.45		18.82	
Presentation	much better	17.75	0.000	17.75	0.000	15.61	0.000	16.00	0.005
	better	17.30		17.09		18.60		20.53	
	average	19.53		19.37		19.36		19.64	
	(much) worse	21.82		22.14		19.98		20.50	
Informal	much better	26.74	0.000	25.96	0.000	25.85	N.S.	28.83	N.S.
	better	25.72		25.77		27.60		29.57	
	average	29.06		30.64		27.46		27.94	
	(much) worse	30.90		31.62		28.56		29.13	
Group	much better	12.61	0.000	12.48	0.000	15.39	0.063	16.83	0.014
	better	13.16		13.20		15.47		16.20	
	average	14.60		15.16		14.71		14.84	
	(much) worse	15.18		15.44		15.81		16.12	
Convers.	much better	13.84	0.000	13.48	0.000	10.47	0.006	12.00	N.S.
	better	12.54		12.57		12.02		13.37	
	average	14.47		15.48		12.78		13.09	
	(much) worse	15.59		16.19		12.75		13.01	

Table 12. CA scores by previous educational background

		UK All		UK Acc		SP All		SP Acc	
		Mean	Sig	Mean	Sig	Mean	Sig	Mean	Sig
CA total	Num/scient	137.51	0.000	138.43	0.076	130.57	0.000	132.27	0.030
	Human/arts	125.09		131.26		119.64		116.89	
	Mix	130.46		134.53		123.69		133.10	
WCA	Num/scient	70.65	0.000	70.96	0.000	63.62	0.000	64.55	N.S.
	Human/arts	61.01		64.20		55.01		61.12	
	Mix	64.61		66.58		58.42		64.01	
OCA	Num/scient	66.78	N.S.	67.47	N.S.	66.89	0.081	67.72	0.002
	Human/arts	64.78		67.06		64.55		55.77	
	Mix	65.73		67.95		65.43		69.08	
Formal	Num/scient	37.89	N.S.	38.13	N.S.	39.18	0.009	39.32	0.000
	Human/arts	36.57		37.06		37.00		30.14	
	Mix	37.40		38.13		38.27		40.84	
Interview	Num/scient	18.76	N.S.	19.02	N.S.	19.87	0.000	19.86	0.001
	Human/arts	17.71		18.07		18.17		15.51	
	Mix	18.18		19.02		18.99		20.28	
Presentation	Num/scient	19.17	N.S.	19.11	N.S.	19.32	N.S.	19.46	0.000
	Human/arts	18.89		18.99		18.79		14.62	
	Mix	19.20		19.10		19.30		20.57	
Informal	Num/scient	28.85	N.S.	29.34	N.S.	27.70	N.S.	28.40	N.S.
	Human/arts	28.37		30.01		27.69		25.63	
	Mix	28.31		29.82		27.11		28.24	
Group	Num/scient	14.09	N.S.	14.42	N.S.	14.77	N.S.	15.20	N.S.
	Human/arts	14.74		15.34		15.27		15.11	
	Mix	14.22		14.82		14.87		15.16	
Convers.	Num/scient	14.81	0.023	14.92	N.S.	12.93	0.062	13.20	0.098
	Human/arts	13.64		14.67		12.46		10.52	
	Mix	14.07		15.00		12.27		13.08	

Diagram 1

