Examining the use of Accounting Information in Planned Careers: A Group Project to more Fully Engage Students in Introductory Accounting Courses

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Abstract

Most undergraduate business students are required to complete one or two introductory accounting courses, but many fail to see the value that such coursework offers their career (Chen, Jones, and McIntyre 2004). However, engaging students in exercises that explicitly demonstrate the link between course content and planned areas of study enhances the student experience in introductory accounting courses (Turner, Lesseig, and Fulmer 2006). This article presents a group project for introductory accounting courses that links course content to planned areas of study across business disciplines. We discuss all elements of the semester-long project and offer several tools to help with implementation (e.g., project instructions, timeline, grading rubric, peer evaluation forms). Further, we provide insight into the advantages and disadvantages of different project administration approaches. Our pre and post-surveys reveal the project helps students across nearly all business majors see that accounting information is used in their planned careers at significantly higher levels than once believed. We also find that the project helps students either increase enthusiasm for their major/planned career or pushes them to consider other majors/career paths. Such insight is invaluable for students early in their business education.

Introduction and Background

Nearly all undergraduate business programs require one or two introductory accounting course(s) (Duchac and Amoruso, 2012), yet many students, both accounting and non-accounting majors, fail to see the value that such a course offers their careers (Chen, Jones, and McIntyre, 2004). To combat this problem, Turner, Lesseig, and Fulmer (2006) find that engaging students in an exercise that explicitly demonstrates the link between course content and students' planned areas of study enriches the student experience in introductory accounting courses. We use this lesson from Turner et al. (2006) to develop and implement a group project for use in principles classes. Specifically,

our project helps students discover the relevance of accounting information by having small groups study how professionals (in careers that align with the students' interests) use this information. Students also see the broad use of accounting information when groups from across all business disciplines share their findings. Upon completion of the project, students conclude from their research that accounting information is used in their planned careers more frequently than once believed. Further, similar proportions of students report that the project prompted them to reevaluate or be more enthusiastic about their career plans, a signal that the project pushed students to carefully (re)evaluate their future. In this article, we share our motivation for the project, supporting materials, implementation approach, and analyses of student feedback.

There have been numerous calls for changes in accounting education over the last 30 years, and some of these calls specifically target introductory level courses. In 1986, the Bedford Committee suggested that accounting be viewed as "an information development and distribution function for economic decision making" (AAA 1986, 169). Following this, the Accounting Education Change Commission recommended that the first accounting course "be a rigorous course focusing on the relevance of accounting information to decision making" (AECC 1992, 250). More recently, in 2012, the Pathways Commission called for a transformation of the first accounting course in a report titled "Charting a National Strategy for the Next Generation of Accountants." Here, the Pathways Commission offered that "non-accounting majors may take only one or two accounting courses in their academic pursuits, so learning outcomes for the first course must include the societal value and purpose of accounting" (Pathways Commission, 2012, 87). These developments suggest that academics and professionals agree that the content and pedagogy of introductory accounting courses are critical to educating all business majors on the value and relevance of accounting information. Perhaps not coincidentally, many schools have re-framed introductory accounting courses from a "preparers-approach" to a "user-approach" or "blended-approach" (Duchac and Amoruso, 2012).

Recognizing the shift in focus of introductory accounting courses and with the intent to more actively engage students across all business majors, we developed and implemented the project described in this article for students to research how individuals in their planned career paths use accounting information. As will be described, the project provides an opportunity for students in accounting principles courses to gain an appreciation for the relevance of accounting information, regardless of planned major/career. It also includes multiple skill-building components, such as written and oral communications, networking, and teamwork. We use the remainder of this paper to describe the project and report the results of surveys used to measure the impact and perception of the project.

The Project

The project runs nearly the full duration of the semester, although the intensity at any given time is highly dependent upon the phase of the project.[1,2] Near the beginning of the semester before providing any details on the project, students are asked to provide their instructor with their intended major(s).[3] Before formally introducing the project, instructors go on to cover the first chapters of the managerial text, which include an overview of managerial

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[1] This project is part of all in-person section offerings of the Accounting Principles II course at a liberal arts university in the Midwest. Here, Accounting Principles II is the second of two classes in the introductory accounting sequence, typically taken during a student's sophomore year.

[2] The project is intentionally run throughout the semester in order to require student groups to work together outside of class over an extended period of time as well as to provide interim deliverables and instructor feedback to keep projects on track. Alternatively, interim deliverables could be eliminated and a final memo could be due in three weeks from the introduction of the project.

[3] The students were asked to select from the following list in reporting their major(s): Accountancy, Economics, Finance, International Business, Management and Human Resources, Marketing, Supply Chain Management, Business Minor, College of Arts and Science Major (with major specified), or Graduate Student (with MBA or Masters of Accountancy specified).

accounting and the nature of costs. Only then do instructors provide students with project instructions (see Appendix A) and assign students to groups of three or four based on the students' self-reported planned area(s) of study.[4]

Once formed, each group selects a career pursued by individuals with its declared (or planned) major, gains an understanding of the job responsibilities of the chosen career, and then researches ways that accounting information is used by business professionals in that career. As part of this process, course instructors review chosen careers to ensure each is relevant to the planned major. Selecting a specific career gives students an opportunity to explore a potential career path and focuses their examination on the use of accounting information in their planned area of study. For example, a group of marketing majors selected a "Sales Manager" career and discovered that one responsibility of the position is to monitor the gross margin on products. By this point in the semester, students have learned to calculate gross margin and understand that the calculation and resulting interpretation require the use of accounting information. Table 1 presents other examples of careers selected, by area of study.

To complete the research component of the project, at a minimum, each group is required to identify and read three articles from professional or trade journals related to the use of accounting information in its chosen field and interview two individuals currently working in that field. Using provided guidance on relevant publications and suggestions for identifying interviewees (see the Resources section below), students submit a draft bibliography and proposed interviewees (indicating company name and position held). Course instructors (1) review draft bibliographies and provide feedback/further guidance, when necessary, on the relevance of the selected articles and publications, and (2) review the selected interviewees to ensure each meets the project requirements of full-time employment in the chosen career.[5] At this point in the project, students have learned about job costing, cost behavior, and cost-volume-profit analysis. These topics provide students a foundation from which to examine the use of accounting information in their chosen field.[6]

As final project deliverables, student groups are required to summarize their findings in both a business memo and a poster. The memo includes details on the group's planned major, typical job responsibilities for the career selected, summaries of each article read and each interview conducted, a conclusion regarding how accounting information is used in the selected career, and a complete bibliography. The memo gives students an opportunity to practice business writing. Student groups submit drafts of their memos through the course learning management system, which then automatically (and randomly) assigns two memos for each student to peer review.[7] This peer review process enables each student to review and provide written feedback on memos written by other groups, and gives students an opportunity to reflect on their own memo relative to those reviewed. Peer reviews are required to contain a minimum of 100 words to encourage an appropriate level of thoughtfulness. After receiving the peer review feedback, student groups are given additional time to edit and submit their final memos.

Posters include similar details as the memo, but we instruct students to combine the use of bulleted text and graphics to convey their findings in a clear and visually appealing manner. Near the end of the semester, each class section

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[4] Instructors intentionally obtain information about planned area of study at the start of the semester, prior to the students learning the specifics of the project. This reduces the chance that students "game the system" to be placed in a group with a friend. If there are an insufficient number of students pursuing a particular major in a course section to populate a group, we form cross-section groups.

[5] Subsequent to conducting the interviews, students are required to send emails thanking the individuals interviewed, and must carbon copy the course instructor on these emails.

[6] Several student groups have referenced budgeting and performance evaluation as job responsibilities that require the use of accounting information. We introduce these topics at the beginning of the course, but do not cover these in detail until late in the course. However, the lack of detailed coverage prior to project completion does not seem to hinder students.

[7] We use the Canvas learning management system, which includes functionality to assign students to peer review a designated number of memos. Because Canvas does not recognize group work in assigning peer reviews, some students have been assigned their own group's memo (e.g., they were assigned the memo submitted by another member of their group). Therefore, some instructor intervention may be required for this step.

that participates in the project holds a poster session during which groups present and discuss their findings. The poster sessions are not designed to be formal presentations, but rather an opportunity for attendees (described in the next paragraph) to peruse posters and ask groups about their findings (similar to poster sessions at academic meetings). We use poster presentations for this project rather than PowerPoint presentations to encourage dialogue between presenters and attendees in order to more actively engage students and improve learning outcomes.[8] Student presenters are expected to dress in business casual and to remain with their groups at designated poster stations. Poster sessions for all course sections occur during the same week.[9]

Students are required to attend one poster session in a class section other than their own. To ensure an equal distribution of attendees across class periods, students pre-register to attend another poster session via an on-line sign-up tool.[10] While attending the poster sessions, students complete written peer reviews of three poster presentations, and then submit the completed peer review form to a designated instructor prior to leaving the session.[11] We invite all business school faculty to attend the poster sessions, and at least two faculty members participating in the project are typically present for each session. In addition, some student groups invite interviewees to attend their poster session.

To facilitate timely completion of the project components and provide opportunities for additional learning and reflection, the project is broken down into several tasks that require submission throughout the semester for credit. See Table 2 for the relevant tasks, as presented by the week due during a 15-week semester.

Resources
Students receive a large number of resources to assist in completing the project, including[12]:
- A list of professional/trade journals for each major as well as business publications applicable to all majors, compiled by polling faculty across the business school
- Suggestions for identifying individuals for interviews, including instructions for accessing the University's alumni networking database (which contains names, titles, employers, and contact information of alumni volunteers willing to speak with students)
- Guidance for writing a business memo (consistent with guidelines provided in the students' required business communications course)
- Guidance on poster preparation, including suggested content and layout
- Sample posters

In addition, the Department of Accountancy purchases one tri-fold poster board for each student group.

Grading
Each instructor assigns 100 points to the project, which equates to 10% of the final course grade. We distribute points between the major requirements and interim submissions as detailed in Appendix A. For interim submissions, we award points for completion by the due date. For the final memo, poster, and poster session, we award points based on the quality of the submission. Points for each of these major requirements are assigned based on a rubric agreed upon by all of the course instructors participating in the project (provided in Appendix B). Some instructors choose to collect and grade posters prior to the poster sessions. However, because the posters are large and cumbersome, instructors with larger and/or multiple sections find it logistically prohibitive to collect posters prior to

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[8] If there are only one or two sections completing this project, PowerPoint presentations could be substituted for poster sessions.

[9] Examples of exemplary memos and posters are available from the corresponding author upon request.

[10] We use *SignUpGenius*, a free internet-based tool to create a sign-up schedule for meetings. For each course section, the sign-up sheet lists the careers to be presented so students can select a poster session of most personal interest. Course instructors provide students with a link to the online sign-up sheet.

[11] Appendix C contains the peer evaluation form developed for this project. The peer evaluation forms completed by students attending the poster sessions were used as a means to take attendance. Students who neglected to attend a poster session were given a zero for that portion of their grade.

[12] These resources are available from the corresponding author upon request.

the poster sessions. As such, we designed the poster-grading portion of the rubric to be used during the poster sessions, and thus focused on general understanding and delivery.

Results of Student Surveys

To gather information on the efficacy of the project, we employ a pre- and post- project student survey. Early in the semester, before introducing the specifics of the project, we distribute a survey to the students asking (1) their class year, (2) how often they believe accounting information is used by professionals with their (planned) major, and (3) how confident they are that they have selected the right major.[13] At the end of the semester following completion of the project, students complete a brief post-project survey focused on three key items: (1) perceptions about how often accounting information is used in their planned careers, (2) the impact of the project on their selection of major, and (3) the impact of the project on their planned career. Given we run this project in an introductory course with many majors represented, we examine the survey responses in total and detailed by major. Table 3 shows a breakout by major for spring 2018 and highlights that 25 of the 188 business students carried a double major. Of the 213 declared (or intended) business majors, the most common were Finance (29.1% or 62/213), Marketing (22.5% or 48/213), and Accountancy (19.2% or 41/213).[14] The majority of students participating in the project were sophomores (77.1%).

Planned Use of Accounting Information
The first goal of our exit survey was to measure students' updated perceptions regarding how often accounting information is used in their planned careers. To do so, we asked:
- What is your perception of how often accounting information is used by individuals holding a position in your planned career?

Students were offered seven response options to this question, which included: (1) Never; (2) A few times per year; (3) A few times per quarter; (4) Once per month; (5) A few times each month; (6) A few times each week; and (7) Daily. See Table 4 for our analyses of responses.

Table 4 shows that many students acknowledged a more frequent use of accounting information in their planned careers than they had originally expected (as established on the pre-project survey). Focusing on just non-accounting majors (as accounting majors *should* expect to frequently use accounting information), students initially believed they would use accounting information at a moderate frequency in their planned careers (average 4.751 out of 7, or once per month to several times per month). However, when asked to assess current perceptions, the frequency increases by 17.68% (average 5.592 out of 7, or a few times per week). This change is significant at $p < 0.01$ (two-tailed, paired sample t-test). When examining the change in perceived frequency by individual majors, the change is significant with at least $p < 0.10$ (two-tailed) for six of the seven non-accounting majors. The difference was not significant for International Business majors, who saw a large percentage increase applied across a relatively small sample (i.e., this test likely lacked the power to reach statistical significance for International Business majors). These findings suggest our project helps students see that accounting information is used in their planned careers at significantly higher rates than once believed, and therefore helps to address students' inability to see the relevance of the accounting principles course(s) cited in Chen et al. (2004).[15]

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[13] To ensure anonymity for survey respondents, each student received a card containing a unique (six-digit) number that was used to code the pre-and post-project survey. Students entered their names on the card and returned them to the instructor for redistribution when the post-survey was distributed.

[14] Seven course sections (across four instructors) completed the project in spring 2017, and eight sections (across five instructors) completed the project in spring 2018. While we focus our discussion, analyses, and observations on the most recent iteration of the project (spring 2018), we highlight any meaningful deviations between 2017 and 2018. Nearly 400 undergraduate students completed the project during this period.

[15] Results reported are from spring semester 2018, in which we used pre and post-project surveys to perform longitudinal analyses of within-subject responses related to students' perceptions of the use of accounting information in their planned careers. The pattern of responses and statistical inferences do not vary in a meaningful way from the responses collected during spring semester 2017, for which we only used an exit survey that asked

Impact on Major

As described, our project encourages students to closely examine a career associated with their major. Therefore, our exit survey asked two questions related to the students' majors and career choices. Specific to declared (or intended) majors, we asked:

1. How confident are you that you have selected the right major?
2. How did this project impact your perception of your planned major?

Responses to the first question were collected using a 7-point Likert scale with labeled endpoints 1, *Not Confident*, and 7, *Completely Confident*. Students were offered the following three options for the second question: (1) Caused me to consider another major, (2) Perception of major choice unchanged (project confirmed perception), and (3) Increased my enthusiasm for my major choice. See Table 5 for our analyses of responses.

Table 5 shows that many students perceived an increased confidence in their choice of major during the semester, and this project contributed to such gains by increasing enthusiasm for majors. While students believed they were confident in their choice of major entering the semester (average 5.386 out of 7), we observe a 7.16% aggregate increase in perceived confidence (average 5.771 out of 7), which is significant at $p < 0.01$ (two-tailed, paired sample t-test). This finding is also apparent at the individual major level, with over half of the majors reporting statistically significant increases in confidence. The largest percentage gain in confidence came from Finance majors (9.51%), while International Business majors reported the highest percentage of students that considered changing major (14.29%). Further, we find that 45.71% of students believe this project increased their enthusiasm for their major, a sentiment well reflected across majors. However, it is equally important to note that this project motivated 16/210 students (7.62%) to consider changing majors. This means our project helped more than 50% of the students (i.e., 45.71% + 7.62%) develop a distinctively positive or negative perception of their major. Such early insight into major selection saves students from pursuing the wrong major for too long into their collegiate careers.[16]

Impact on Planned Career

In addition to the questions about intended *major*, we also asked a series of questions about intended *careers*, and the impact of this project on the student's career choice. Specifically, we asked:

1. How confident are you that you have selected the right career?
2. How did this project impact your perception of your planned career?

Responses to the first question were collected using a 7-point Likert scale with labeled endpoints 1, *Not Confident*, and 7, *Completely Confident*. Students were offered the following four options for the second question: (1) I will be changing my planned career; (2) I am considering changing my planned career; (3) My perception of career choice is unchanged (project confirmed perception); and (4) Increased my enthusiasm for my career choice. See Table 6 for our analyses of responses.

Table 6 shows that students left this project with high confidence in their selected career, whether that be the career they had planned on before the project or a newly identified career. Further, while this project increased the enthusiasm for selected careers for 20.48% of the students, it prompted a similar subset to either change (2.38%) or consider changing (22.38%) their careers. This means our project helped over 45% of the students (i.e., 20.48% + 2.38% + 22.38%) develop a distinctively positive or negative perception of their career. These insights to stay the course or shift gears with respect to planned career are invaluable early in the students' formal business education.[17]

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students how (if) their perceptions on the use of accounting information in their planned careers changed between the beginning and end of the project.

[16] Again, results reported are from spring semester 2018, in which we used pre and post-project surveys to perform longitudinal analyses of within-subject responses related to students' perceptions of their planned major(s). The pattern of responses and statistical inferences do not vary in a meaningful way from the responses collected during spring semester 2017, for which we only used an exit survey that asked students how (if) their perceptions of their planned major(s) changed between the beginning and end of the project.

[17] Again, results reported are from spring semester 2018, but do not vary in a meaningful way from the responses collected during spring semester 2017.

Interestingly, Accountancy majors reported most often (31.7%) as compared to other majors that they were changing or considering changing their planned career. It does not appear that this results from the students viewing the major itself in a negative light (as reported in Table 5, almost 93% reported no change or an increased enthusiasm for their major selection). Rather, it appears that the project caused students to consider an alternative career path within accounting than originally planned, another positive outcome from the project.

In rounding out the exit survey, we also asked students to rate the usefulness of the project and asked how they identified two professionals to interview. To rate the usefulness of the project, students used a 7-point Likert scale with endpoints 1, *Waste of time*, and 7, *I learned a lot*. In untabulated analyses, we find that 74.76% of students found this project to be useful (i.e., a rating above the midpoint of 4), which increases to 87.14% if we include the neutral rating of 4. Further, we observe evidence that sophomores find this project to be more useful than juniors. More specifically, 77.78% of sophomores (126/162) and 62.50% of juniors (20/32) rated this project as useful (i.e., a rating above the midpoint of 4). When asked, "How confident are you that you have selected the right major?" sophomores reported a significant increase in confidence ($p < 0.001$, two-tailed, paired sample t-test) while juniors did not ($p = 0.402$, two-tailed, paired sample t-test).[18] These results suggests our project is well suited for students early in their formal business education, perhaps while they still have time to adjust a major or career path.

Finally, we asked how teams identified the two professionals from their field to interview. Survey responses (untabulated) indicate that the majority of interviewees were either relatives (~20%) or family friends (~30%). Results also show that students largely avoided the University's formal mentoring network (< 10%), which is a database of professionals (mostly alumni) who post their contact information and volunteer to talk with students about their field. Examples of other interviewees included co-workers, people met at on-campus events, people identified by LinkedIn searches, and faculty members.

Instructors' Observations

Overall, the instructors involved with the project have been pleased with the outcome and, anecdotally, the outside faculty who attended the poster sessions have been impressed by the students' engagement as both poster session presenters and poster session attendees. However, in a debrief session at the conclusion of the semester, the instructors identified several minor changes necessary to enhance the project's success. As part of the spring 2017 project, we were surprised by the number of groups that relied on relatives to serve as their interviewees (a number of groups exclusively used relatives). While this alleviated our initial concern that students may find it difficult to identify interviewees, it did not serve to build a student's business contacts network nor provide an opportunity to practice networking. For spring 2018 we allowed the use of only one group member relative as an interviewee and required that the group member related to the interviewee not lead that interview. This change resulted in roughly a 10% basis point decrease in the use of relatives from 2017 to 2018 (from ~30% down to ~20%); adopters of this project can decide if they would prefer to further decrease this rate. Next, for some groups, the interviews were not sufficiently probing. For example, some interviews progressed from questions related to job responsibilities to questions related to the use of accounting information in satisfying the identified job responsibilities. Other interviews focused on questions related to the use of accounting information by the interviewee without first gaining an understanding of the individual's job specifics. Clearly, the former approach resulted in a more informative and robust interview. In the future, along with providing guidance on identifying interviewees, we will provide guidance on interview flow to improve effectiveness and learning.

We observed wide variation in the level of detail provided in memos and posters related to the articles and interviews. Successful memos and posters concisely reported on each of the research components and concluded with a summary (the memos in paragraph form and the posters in bullet form). In spring 2018, we required the groups to submit an annotated bibliography and interview summaries prior to completion of the memo and poster, and saw some improvement in the final deliverables. In the future, we will provide additional guidance on

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[18] Students responded to this question using a 7-point Likert scale with labelled endpoints 1, *Not Confident*, and 7, *Completely Confident*.

converting these summaries to an effective memo and poster. Next, we found that if a group's memo was subpar (in general), the poster was also less than ideal. Therefore, in the future we will require submission of the memo for final grading two weeks prior to submission of the poster so that instructor comments may inform the final poster submission. In spring 2017, we also observed wide variation in the visual appeal of posters, such that some groups clearly challenged themselves to deliver a professional looking poster, while others exerted minimal effort (e.g., visible tape, imbalanced layout, hand-written content). In spring 2018 we shared examples of stronger versus weaker posters as groups designed and created their posters and saw some improvement in the professionalism of the posters. Some groups also submitted memos with an inconsistent voice (i.e., groups used a divide-and-conquer approach, but then never blended their writing styles). We will combat this in the future by stressing the importance of a single tone during the peer review and final submission process.

Conclusion

Given the problem that many students fail to see the value of an introductory accounting course to their planned careers (Chen et al., 2004), we build upon the work of Turner et al. (2006) and offer a course project that links accounting information to planned careers. Specifically, we detail a group project for use in introductory accounting courses to help business students examine the use of accounting information in their intended careers. We described the various project components, discussed how we implemented the project, and provided an analysis of student feedback on the potential benefits of the project. Further, we shared survey results that suggest our project helps students evaluate their planned/declared majors and careers, as nearly half of the students leave the project with either an increased enthusiasm for a major/career or with the intent to change a major/career. Such insight into majors and careers is invaluable early in students' formal business education. We also provided evidence that this project helps nearly all students see that accounting information is used in various careers at higher frequencies than once believed.

We welcome you to use our project and to share your experiences in efforts to more fully engage students, across business disciplines, in introductory accounting courses.

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Table 1
Examples of Careers Selected by Major

Major	Careers Selected
Accountancy	Auditor, Tax Accountant, Controller, Forensic Accountant
Economics	Economic Consultant
Finance	Financial Advisor, Financial Analyst, Investment Banker
International Business	International Advertising
Management and Human Resources	Human Resources Manager
Marketing	Advertising, Sales Manager, Digital Marketing Manager
Supply Chain Management	Logistics/Supply Chain Manager

Table 2
Project Deliverable Timeline (15 Week Semester)

Task	Due
1. Identify project career focus	Week 5
2. Identify individuals to be interviewed (including name, title, and employer)	Week 6
3. Draft bibliography	Week 9
4. Summary of each article and interview	Week 11
5. Draft memo	Week 12
6. Peer review Completed	Week 12
7. Final memo and poster	Week 13
8. Attend poster session	Week 14

Table 3
Declared or Planned Major(s)

	Majors [a]	Number of students with only this business major	Instances of students with this and a second business major [b]
Business Majors			
Accountancy	41	35	6
Economics	13	7	6
Finance	62	50	12
International Business	7	7	0
Management and Human Resources	25	24	1
Marketing	48	35	13
Supply Chain Management	17	5	12
Total Business Majors	**213**	**163**	**50**
Non-Business Majors	22		

Of the 228 students that completed the pre-project survey, only 210 (188 business majors and 22 non-business majors) could be analyzed in the final dataset. This is due to students that: (1) dropped the course before the post-project survey, (2) did not complete the post-project survey in its entirety, or (3) did not fill in the correct unique ID in the post-project survey (making it impossible to map their responses to their pre-project survey).

[a] This column sums to 235. Business students carrying two business majors are included in the tally for each of the majors therefore the total of this column (235) exceeds the number of unique student participants (210) by the number of business students carrying two majors (25). Some business majors also carry a non-business major as a second or third major but these are not tracked here.

[b] This column sums to 50, two times the number of business students carrying two business majors (25) (i.e., each would be double-counted in the break-out by business major).

Table 4
Perceived Use of Accounting Information: Accountancy versus Non-Accountancy Majors

	Count	Pre-Project Average	Post-Project Average	Percentage Change	Statistical Significance
		Perceived Use of Accounting Information			
Economics	13	5.231	6.077	16.18%	*
Finance	56	6.143	6.464	5.23%	*
International Business	7	5.000	5.857	17.14%	
Management and Human Resources	25	4.600	5.560	20.87%	***
Marketing	48	3.750	5.208	38.89%	***
Supply Chain Management	17	3.941	4.941	25.37%	*
Non-Business Major	22	3.455	4.455	28.95%	*
Overall without Accountancy Majors	**169** [a]	**4.751**	**5.592**	**17.68%**	***
Accountancy	41	6.927	6.927	0.00%	
Overall with Accountancy Majors	**210**	**5.176**	**5.852**	**13.06%**	***

This table presents the results of survey items used to measure students' perceived use of accounting information in their planned career. Note that the counts of individual majors (of students who do not also have Accountancy as a major), sum to 188, but the "Overall without Accountancy Majors" shows a count of 169. This is because the "Overall without Accountancy Majors" counts each participant only once, whereas the breakout by major includes responses from all participants with that major that do not also have an Accountancy major. Not including Accountancy majors, we had 19 students carrying two business major (i.e., 188 unique majors for non-Accountancy majors - 19 extra majors for the double majors = 169), and therefore capture their responses within each unique major. For example, a student majoring in Economics and Finance is only counted once in the "Overall without Accountancy Majors" results, but is included in both the Economics and Finance results. Further, we had 41 students majoring in Accountancy, six of which were double-majors (all in Finance). As such, the sum of "Overall without Accountancy Majors" (169) plus Accountancy majors (41) equals 210, the total number of students participating in this group project. Finally, the "Statistical Significance" column indicates whether the underlying responses to the *Pre-Project* versus *Post-Project* questions are statistically different based on paired sample t-tests, where * indicates $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$, two-tailed.

[a] This subtotal includes only those students without Accountancy listed as major. This also means that students with Accounting included as part of a double major are not shown here.

Pre-Project **question:** What is your perception of how often accounting information is used by professionals holding careers consistent with your (planned) major? The numeric coding for the seven survey options are as follows: (1) Never; (2) A few times per year; (3) A few times per quarter; (4) Once per month; (5) A few times each month; (6) A few times each week; and (7) Daily.

Post-Project **question:** What is your perception of how often accounting information is used by individuals holding a position in your planned career? The provided seven options included: (1) Never; (2) A few times per year; (3) A few times per quarter; (4) Once per month; (5) A few times each month; (6) A few times each week; and (7) Daily.

Table 5
Confidence in Major and Impact on Selected or Intended Major

| | Count | *Confidence in Major Selection* | | | | *Impact on Major Selection* | | |
		Pre-Project Average	*Post-Project* Average	Percentage Change	Statistical Significance	Considering Change	No Change	Increased Enthusiasm
Accountancy	41	5.561	5.878	5.70%	**	7.32%	46.34%	46.34%
Economics	13	5.615	6.000	6.85%		0.00%	84.62%	15.38%
Finance	62	5.258	5.758	9.51%	***	4.84%	53.23%	41.94%
International Business	7	5.429	5.714	5.26%		14.29%	42.86%	42.86%
Management and Human Resources	25	5.240	5.640	7.63%	**	8.00%	36.00%	56.00%
Marketing	48	5.250	5.708	8.73%	***	10.42%	37.50%	52.08%
Supply Chain Management	17	5.765	6.235	8.16%	*	5.88%	35.29%	58.82%
Non-Business Major	22	5.733	5.955	3.15%		4.55%	54.55%	40.91%
Overall	**210**	**5.386**	**5.771**	**7.16%**	***	**7.62%**	**46.67%**	**45.71%**

This table presents the results of items used to measure students' confidence in their selection of the right major and the impact of this project on perceptions of selected or intended majors. Note that the counts of individual majors sum to 235, but the "Overall" shows a count of 210. This is because the Overall row includes each participant only once, whereas the breakout by business major includes responses from all participants with that business major. We had 25 students with double business majors (i.e., 235 - 25 = 210), and therefore capture their responses within each unique major. For example, a student majoring in Accountancy and Finance is included only once in the Overall results, but is included in both the Accountancy and Finance results. The "Statistical Significance" column indicates whether the underlying responses to the *Pre-Project* versus *Post-Project* questions are statistically different based on paired sample t-tests, where * indicates $p < 0.10$, ** $p < 0.05$, and *** $p < 0.01$, two-tailed.

Pre-Project **question:** How confident are you that you have selected the right major? The provided 7-point scale included labeled endpoints 1 (Not Confident) and 7 (Completely Confident).

Post-Project **question:** How confident are you that you have selected the right major? The provided 7-point scale included labeled endpoints 1 (Not Confident) and 7 (Completely Confident).

Impact on Major Selection **question:** How did this project impact your perception of your planned major? The provided three options included: (1) Caused me to consider another major; (2) Perception of major choice unchanged (project confirmed perception); and (3) Increased my enthusiasm for my major choice.

Table 6
Confidence in Career and Impact on Selected or Intended Career

			Impact of Project on Planned Career			
	Count	Average Confidence	Changing Career	Considering Change	No Change	Increased Enthusiasm
Accountancy	41	5.463	0.00%	31.71%	56.10%	12.20%
Economics	13	5.231	0.00%	30.77%	61.54%	7.69%
Finance	62	5.403	1.61%	19.35%	62.90%	16.13%
International Business	7	5.429	0.00%	14.29%	57.14%	28.57%
Management and Human Resources	25	5.320	4.00%	16.00%	52.00%	28.00%
Marketing	48	5.292	6.25%	20.83%	43.75%	29.17%
Supply Chain Management	17	5.824	0.00%	11.76%	35.29%	52.94%
Non-Business Major	22	5.455	0.00%	22.73%	59.09%	18.18%
Overall	**210**	**5.367**	**2.38%**	**22.38%**	**54.76%**	**20.48%**

This table presents the results of items used to measure students' confidence in their selection of the right career and the impact of this project on perceptions of selected or intended careers. Note that the counts of individual majors sum to 235, but the "Overall" shows a count of 210. This is because the Overall row counts each participant only once, whereas the breakout for the business majors includes responses from all participants with that major. We had 25 students with double business majors (i.e., 235 - 25 = 210), and therefore capture their responses within each unique business major. For example, a student majoring in Accountancy and Finance is only included once in the Overall results, but is included in both the Accountancy and Finance results.

Post-Project question: How confident are you that you have selected the right career? The provided 7-point scale included labeled endpoints 1 (Not Confident) and 7 (Completely Confident).

Impact of Project on Planned Career question: How did this project impact your perception of your planned career? The provided four options included: (1) I will be changing my planned career; (2) I am considering changing my planned career; (3) My perception of career choice is unchanged (project confirmed perception); and (4) Increased my enthusiasm for my career choice.

<div align="center">**APPENDIX A – Project Instructions**</div>

Accounting is often referred to as the language of business and business professionals, regardless of specialization, generally use accounting information daily in their work. In AC 201 you learned about financial accounting and reporting and in AC 202 you are learning about managerial accounting and reporting. This semester's project will entail students, in groups composed of 3-4 students with a common planned major or career path, researching and reporting out on some of the ways that accounting information is used by business professionals in the students' planned area of study. Groups will be assigned by the course instructor based on the results of a survey of students' planned majors. If there are an insufficient number of students in a particular section of AC 202 to form a group for a planned-major, students will be grouped with students from another section.

The internet should not be your sole research source. Research must include at least 3 articles from professional/trade journals and/or business magazines related to the group's planned major and interviews with at least 2 individuals holding full-time positions in careers using the skills learned in the major. Only one of the individuals interviewed can be related to a group member. If you select a relative of a group member as one of your interviewees, the interview should be conducted by group members that are not related to the interviewee. A list of possible professional journals, suggestions for identifying individuals for interviews and conducting the interviews, and additional specifications related to the interviews are provided on Canvas. Following each interview, one member of the group should send a thank you email to the interviewee, with a cc to your course instructor.

To complete the project, you will first need to identify the career or position within your planned area of study on which your project will focus and identify the typical job responsibilities the position entails.   For example, if you plan to major in marketing, you could focus your career on sales, advertising, or product management (these are 3 of many possibilities). A good **starting point** for this part of the project is www.onetonline.org.

Student groups will report the results of their research through the use of a poster and the preparation of a business memo (details on the format for each of these is provided on the reverse of this document).   A poster session will be held during a class period toward the end of the semester (date indicated on course syllabus). In addition to serving as a presenter during your class section's poster session, students are required to attend at least one other poster session (in another section of AC 202) and report out on at least 3 other posters (reporting form to be provided). Poster sessions are not designed to be a formal presentation but rather an opportunity for attendees to peruse your poster and ask questions about your results. All group members must be sufficiently familiar with the content of the poster to participate in this process. Dress for poster presenters is business casual (no jeans, no t-shirts, no baseball caps, no flip-flops).

The following interim due dates will ensure that student groups stay on track.

Task	Due Date	Points
Identify career/position of focus	February 15	2
Identify individuals to be interviewed (name, employer, position)	February 22	2
Bibliography (articles you will read)	March 13	2
Summary of each article and interview (no more than 1 page for each)	April 5	3
Draft memo for peer review	April 5	3
Peer review completed	April 10	3
Final poster and memo	April 17	65
Poster session	April 24	15
Poster session reporting form	April 26	5

Memo Requirements

As a component of the project, each group will complete a memo (maximum length 2-pages). The purpose of the memo is to communicate the results of the group's research. Memos will be submitted for peer review prior to final submission (each student will peer review two memos, assigned via Canvas, by submitting written comments of at least 100 words).

The memo must include the following:

- Planned area of study (major)
- Career selected and description of job responsibilities
- Summary of research from publications
- Summary of interviews
- Conclusion regarding how accounting information is used by business professionals in the planned area of study
- Complete bibliography (submitted as an attachment)

The memo must be formatted consistent with the guidance provided and should be revised based on peer feedback. For additional guidance on preparing an effective memo see "Memo format example" and "Professional email and memo checklist" on Canvas. Please note, this memo is fairly extensive and therefore the often cited guidelines that business memos should only be one page does **not** apply for this assignment.

Elements of an Effective Poster

An effective poster is a visual communications tool. It is not just a standard research paper stuck to a board. A poster uses a different, visual grammar. It shows, rather than tells. Your goal is to convey a clear message and support it with a compelling combination of images and short blocks of text. A poster session advertises your research. It combines text and graphics to make a visually pleasing presentation. Preparing a well-organized, visually-pleasing poster requires you to plan well in advance. You should expect to create draft forms along the way. Software packages are available including a template on PowerPoint. However, it is not necessary to use a sophisticated Software package.

Unlike a research-based paper, which might run from 10 to 15 (or more) page , a standard poster will include only about the equivalent of 3-4 pages of single-spaced text or graphics in 12 point font (i.e., **before formatting for the poster**). The key to crafting a good poster is to focus as narrowly as possible on the central ideas you need to convey.

The content of a poster is similar to a slide presentation. It should include bulleted text (rather than paragraphs of text) and should include graphics to assist in conveying your message. The poster should flow from left to right and top to bottom. Your audience is your colleagues and professor(s). An effective poster can be read in under five minutes. It can adopt a variety of layouts. As long as you maintain sufficient white space, keep column alignments logical, and provide clear cues to your readers as to how they should travel through your poster, you can and should get <u>creative</u>. Templates abound on the Internet. Conduct some Google searches and take a look!

Several documents are provided on Canvas related to developing an effective poster.

Poster boards will be provided by the Department of Accountancy (1 board per group). Your instructor will inform you when the boards can be picked up from the Department office.

Appendix B – Memo, Poster, and Poster Session Grading Rubric

AC 202 Group Project - Memo and Poster Grading Rubric

<u>**Team:**</u>   <u>**Selected Career:**</u>

MEMO:

Grading Criteria	Possible Points	Points Awarded							
Does the memo clearly identify the planned area of study (major), specific career selected, and description of job responsibilities in this career?	3	**0** None of the three requirements were presented		**1** Only one of the three requirements was presented		**2** Only two of the three requirements were presented		**3** All three requirements were presented	

Grading Criteria	Possible Points	0	1	2	3	4	5	6	7
Article #1 - Is this identified and described in the memo, including a concise summary of the key points and how these relate to the team's chosen career?	7	Completely skipped / not performed / not included	Largely skipped over					Article was clearly described and the main points were well articulated as to how these relate to the chosen career	
Article #2 - Is this identified and described in the memo, including a concise summary of the key points and how these relate to the team's chosen career?	7	Completely skipped / not performed / not included	Largely skipped over					Article was clearly described and the main points were well articulated as to how these relate to the chosen career	
Article #3 - Is this identified and described in the memo, including a concise summary of the key points and how these relate to the team's chosen career?	7	Completely skipped / not performed / not included	Largely skipped over					Article was clearly described and the main points were well articulated as to how these relate to the chosen career	
Interview #1 - Is this identified and described in the memo, including a concise summary of the key points and how the interviewee uses accounting information in his/her career?	7	Completely skipped / not performed / not included	Largely skipped over					Interview was clearly described and the main points were well articulated as to how the interviewee uses accounting information in his/her career	
Interview #2 - Is this identified and described in the memo, including a concise summary of the key points and how the interviewee uses accounting information in his/her career?	7	Completely skipped / not performed / not included	Largely skipped over					Interview was clearly described and the main points were well articulated as to how the interviewee uses accounting information in his/her career	

Grading Criteria	Possible Points	1	2	3	4	5	6
Conclusion - Does the memo include a conclusion that clearly brings together how accounting information is used by business professionals in the planned area of study?	6	Conclusion largely skipped over		Moderate conclusion		Thoughtful conclusion that brings the main points together and provides closure to the memo	

Grading Criteria	Possible Points	0	1
Bibliography - Does the memo include a complete bibliography of the required three articles and two interviews?	1	Bibliography not included or not complete	Bibliography included and complete

Grading Criteria	Possible Points	1	2	3	4	5
Memo Format and Writing - Does the memo adhere to the provided guidance on format? Is the writing professional and concise, with no clear grammar or spelling mistakes?	5	Format, writing, and grammar are poor and not reflective of the quality expected in a business memo		Moderate issues with format, writing, or grammar		Format, writing, and grammar are strong and reflect the quality expected in a business memo

POSTER:

Grading Criteria	Possible Points	1	2	3	4	5	6	7	8	9	10
Format and Flow - Is the poster visually appealing and follow an understandable layout with content progressing from top-to-bottom, left-to-right?	10	Poster is not laid out clearly and is hard to understand				Poster is moderately laid out appropriately, but has clear issues with flow and presentation				Poster is clearly laid out and visually appealing, with the correct flow of content	

Grading Criteria	Possible Points	1	2	3	4	5
Content - Is all required content presented on the poster, including the chosen career, summary of articles, summary of interviews, overall conclusion, and bibliography?	5	Poster is missing most of the required content		Poster includes some of the required content		Poster includes all of the required content

POSTER SESSION:

Presentation and Discussions - Were all group members able to discuss the project details (i.e., articles and interviews) and able to provide a summary of what they learned?

10	1	2	3	4	5	6	7	8	9	10
	Clear disconnect between the project and what the individual team members were able to articulate				Some team members could articulate the details of the project and what they learned, but some team members lagged				All team members were well prepared to discuss the project and could articulate the key points and take-aways	

Professional Appearance - Were all group members dressed appropriately (business casual) and did they present themselves professionally to the attendees?

5	1	2	3	4	5
	Group did not adhere to the dress code and did not discuss their poster in a professional manner		Some group members did not adhere to the dress code or did not present the poster in a professional manner		Group adhered to the dress code and clearly discussed their poster in a professional manner

Appendix C – Poster Session Peer Evaluation Form

Your Personal Information

Your Name	AC 202 Instructor	Normal Class Day / Time

Information Regarding the Poster Session Attended

Instructor	Day of Poster Session	Time of Poster Session

Please use the remainder of this document to report on three (3) posters from your selected poster session. Once complete, please turn this in to the *instructor of the session you attended*.

Poster #1

Name(s) of Group Member(s) You Talked To	Career Researched by Group

1. What question(s) did you ask about the career, and what response(s) did you receive?

2. How do people in this career use accounting information?

3. On a scale from 1 – 10 (with 10 being the best), how would you rate the group's research and presentation of their findings? Please provide a justification for your rating.

4. How much time did you spend talking with member(s) of this group and reviewing their poster (note that it would be *very* difficult to discuss the career and review the poster in less than 5 – 10 minutes)?

Poster #2

Name(s) of Group Member(s) You Talked To	Career Researched by Group

1. What question(s) did you ask about the career, and what response(s) did you receive?

2. How do people in this career use accounting information?

3. On a scale from 1 – 10 (with 10 being the best), how would you rate the group's research and presentation of their findings? Please provide a justification for your rating.

4. How much time did you spend talking with member(s) of this group and reviewing their poster (note that it would be *very* difficult to discuss the career and review the poster in less than 5 – 10 minutes)?

Poster #3

Name(s) of Group Member(s) You Talked To	Career Researched by Group

1. What question(s) did you ask about the career, and what response(s) did you receive?

2. How do people in this career use accounting information?

3. On a scale from 1 – 10 (with 10 being the best), how would you rate the group's research and presentation of their findings? Please provide a justification for your rating.

4. How much time did you spend talking with member(s) of this group and reviewing their poster (note that it would be *very* difficult to discuss the career and review the poster in less than 5 – 10 minutes)?