

Promoting Employer-Desired Competencies through a Multi-Phase “Workgroup” Project

Ashly Bender Smith
Department of General Business and Finance
Sam Houston State University

Corresponding Author: Ashly Bender Smith, als121@shsu.edu

Abstract

Employers and business leaders have long been advocating for the importance of career readiness skills like critical thinking/problem solving, information literacy, teamwork/collaboration, professionalism/work ethic, and oral/written communication (NACE, 2019; Partnership, 2008). While faculty and students see value in projects that develop these skills, such projects can be some of the most challenging to incorporate effectively into business courses (Chapman et al., 2010; Detmering & Johnson, 2012; Lee et al., 2016; Marks & O’Connor, 2013). This article reports on a multi-phase group project that aims to strengthen a selection of these employer-desired skills while ameliorating student concerns about the research process and group work by combining a collaborative process with individually graded major products. The project design provides students with opportunities to strengthen their interpersonal communication, teamwork, and information literacy skills. Through anonymous surveys, students (n=33) indicated a positive response to the project design and that they perceived improvement in their information literacy skills. They indicated less improvement in their interpersonal communication and teamwork skills, prompting some recommended adjustments to the workgroup project for more effective implementation in a business course.

Keywords: business communication; information literacy; teamwork; interpersonal communication; collaborative projects; research projects

Employers are always looking for applicants who can differentiate themselves from other candidates. Since the early 2000s, business leaders and business education scholars have consistently pointed to a similar set of skills sought by employers, and these skills are often referred to as “career readiness,” “21st Century,” and/or “soft” skills (Campbell & Kresyman, 2015; Cimatti, 2016; NACE, 2019). The National Association of Colleges and Employers (NACE) (2019) regularly reports that employers rate the following “career readiness” skills as “essential”: critical thinking/problem solving, teamwork/collaboration, professionalism/work ethic, and oral/written communication. Meanwhile, the Partnership for 21st Century Skills, an influential advocacy non-profit started by business professionals to advance education curriculum in the U.S., describes “21st Century skills” as those needed to compete in a quickly evolving economy, including the skills NACE indicates as essential career readiness skills and adding skills related to information literacy and technology use (Partnership, 2008). In the research on the professional importance and development of soft skills, researchers’ lists of “soft skills” can vary but generally identify skills that overlap with career readiness and 21st Century skills, such as ethics,

communication, teamwork, interpersonal skills, information gathering, critical thinking, and many other skills that require interpersonal or intrapersonal intelligence (Cimatti, 2016; Robles, 2012; Royo, 2019).

Multiple business education associations also emphasize the importance of such skills in their curricular standards or recommendations. For example, the Association to Advance of Colleges and Schools of Business (2018) recommends that coursework develop students' skills with written and oral communication, interpersonal relations, teamwork, ethical reasoning, analytical thinking, ethical use of information, and more. The National Business Education Association (2020) also promotes curricular standards for developing students' decision-making, communication, and other intra- and inter-personal skills.

Whether these skills are labeled as "career readiness," "21st Century," or "soft" skills, there is notable overlap in the kind of skills that employers and business educators see as essential for new graduates seeking employment in current and future organizations. There is a consistent focus on various communication skills, including oral, written, interpersonal, and team communication. Teamwork and/or collaboration skills are also frequently identified. Finally, there is a consistent inclusion of critical thinking and other related skills, like problem-solving; finding, selecting, and ethically using information; and analytical thinking. For consistency, herein these skills are referred to as *career readiness* and *employer-desired skills*. A review of these "skills" shows that many of them may also be referred to as "skill sets," since each "skill" typically refers to a collection of related skills. For example, "teamwork" requires facility with skills like interpersonal communication (which itself refers to many skills), coordination of work, collaboration, giving constructive feedback, and more (Cardon, 2018).

Business faculty often recognize the value of assigning course projects that develop students' career readiness skills, but they are sometimes hesitant to do so if they assume high levels of student resistance. Course projects that incorporate these skills may require research to strengthen critical thinking and information literacy skills; collaboration with other students to strengthen interpersonal communication and teamwork skills; and written or oral products to strengthen communication skills. Students can be resistant to completing projects with these requirements due to negative prior experiences with research, teamwork, writing, and/or oral presentations (Chapman et al., 2010; Detmering & Johnson, 2012; Lee et al., 2016; Marks & O'Connor, 2013). Yet, as noted previously, employers and business educators attest to the importance of these skills for new employees. Thus, to help business educators consider options for course projects that strengthen employer-desired skills, this article presents a project designed to provide students further practice with some of these essential skills and discusses students' responses to the project, since minimizing student resistance is helpful in improving their engagement in a course and its projects.

The project described herein, the Research Workgroups project, required students to collaboratively research a topic and then compose two independent communication products (a report and a multimodal message) based on their collaborative research. The project design provided students with the opportunity strengthen their information literacy skills, which also strengthen some of their critical thinking skills, through the research aspect; their teamwork skills through the collaborative aspect; and their written and oral communication skills through the creation of the two independent products. In

addition, the project design aimed to minimize the research-supported concerns students have about projects that require research and teamwork while emphasizing some of the student-reported benefits of such projects, including workload distribution and peer learning (Brandyberry & Bakke, 2006; Marks & O'Connor, 2013; Fittipaldi, 2020; Wesner et al., 2018).

The Research Workgroups project was assigned in a collegiate, upper-level business communication course. The course includes learning objectives that focus on developing students' ability to communicate professionally and effectively in writing, speech, and other formats; to select appropriate information for specific audiences in specific formats; and to select and use credible information to support their messages. These learning objectives connect with two employer-desired skills: 1) critical thinking (through information evaluation, selection, and use) and 2) written and oral communication. Team projects are also frequently assigned in the course to provide further practice with teamwork and interpersonal communication skills. This project may also be adapted to other business education courses that ask students to research and report on concepts related to the course.

In addition to describing the project, this article reports students' responses to a survey asking them to compare the project to their prior team project experiences and to self-evaluate the relevant skills they felt they improved through the project. Their responses offer some insight into students' potential responsiveness to such a project and whether students felt more confident about their skills after completing the project. Students' responses also indicate whether the project met the design goal of minimizing students' concerns with research and group work while maximizing the potential benefits in team projects.

This article first offers a brief review of connection between critical thinking, information literacy, and research skills and their value for business students and a review of the research on students' perceptions of advantages and disadvantages of team projects. These reviews provide a frame that guided the development of the described project, which is subsequently described. Students' survey responses showing their perceptions of the project and their skill development are also provided. Considerations and recommendations for strengthening the research workgroup design are discussed at the end.

Considerations for Developing Business Students' Critical Thinking and Information Literacy Skills through Research

Critical thinking is one of the most frequently identified essential skills for students and job candidates (AACSB, 2018; NACE, 2019; Partnership, 2008; Touloumakos, 2020). However, definitions of critical thinking tend to include a variety of related skills. In literature reviews of critical thinking definitions, researchers find that most definitions tend to include skills related to recognizing, analyzing, and evaluating information and applying acquired knowledge to make inferences, solve problems, and/or make decisions (Lai, 2011; Thonney & Montgomery, 2019; Liu et al., 2014). While these skills refer to some specific thinking processes, students can strengthen these critical thinking skills through a variety of tasks or assignments, such as examining and categorizing information, recognizing connections

between evidence and conclusions, analyzing arguments, extrapolating information to make arguments and decisions, and more (Liu et al., 2014).

Since critical thinking processes often ask a person to work with information from outside sources, there is a strong connection between information literacy skills and critical thinking skills. In their *Framework for Information Literacy for Higher Education*, the Association of College and Research Libraries (2015) recognizes that *information literacy* refers to a complex set of interconnected skills, but that these skills generally enable an individual to create new knowledge based on one's ability to recognize the need for and then identify, evaluate, and use various kinds of information in an ethical manner. These information literacy skills match or are closely connected to the common critical thinking skills previously described. Therefore, while information literacy skills are somewhat more specific, when students strengthen these skills, they are also strengthening some of their critical thinking skills. Moreover, although business professionals more often name critical thinking skills as necessary for the workplace, research shows that they also place a high value on information literacy skills and/or consider information literacy skills as kinds of critical thinking skills (Conley & Gill, 2011; Hart Research Associates, 2018; Mezick & Hiris, 2016; Partnership, 2008). Mezick and Hiris (2016) find that business leaders value employees with strong information literacy skills because these employees are more efficient with their time and can more effectively influence the company's bottom line. In business classrooms and workplaces, the *information literacy skills* label is rarely used. Multiple studies of employers' expectations for graduates' information literacy skills find that professionals instead refer to these skills as functions of other employer-desired skills, such as critical thinking, problem-solving, and written and oral communication (Conley & Gill, 2011; Cyphert & Lyle, 2016; Solokoff, 2012).

To understand information literacy skills in business contexts, though, it is important to recognize that business professionals use these skills with some unique considerations and constraints. Workplace information literacy skills require a person to be responsive to constraints on information seeking, including responding to the fast-paced business environment and considering the value and reliability of free or low-cost information sources (ACRL, 2011; Conley & Gill, 2011; RUSA, 2019; Sokoloff, 2012). Also, business professionals are often relying on primary source information like company and industry reports, financial data, demographic data, and various kinds of qualitative feedback. Some of these information sources may come from internal company sources, but professionals also often rely on sources from the internet, which raises the importance of their information literacy and critical thinking skills related to evaluating the credibility and reliability of information sources (Lucinescu, 2018).

Another consideration to keep in mind is that surveys of employers and job advertisement analyses show that entry-level employees generally are not expected to be engaging in independent information gathering (Cyphert & Lyle, 2016; Klusek & Bornstein, 2006; Sokoloff, 2012). Instead, entry-level employees often are expected to evaluate the available information and to identify when additional information is needed, what type of information might be needed, who might be able to secure such information. Entry-level employees may also be expected to assist more experienced employees in information gathering and analysis (Conley & Gill, 2011; Sokoloff, 2012). These findings suggest that business students benefit from understanding the basics of information seeking and collection so that

they may develop those skills in the workplace and that they are expected to have facility with evaluating and using available information to solve problems and make decisions.

The preceding research regarding critical thinking and information literacy skills shows that these two skills are closely related, and it suggests that the development of students' information literacy skills prepares them for the workplace by improving their ability to find, evaluate, and use information from sources and by improving their critical thinking skills. When developing course tasks or assignments, it can be reasonable to consider critical thinking and information literacy skills as mutually reinforcing (Katz et al., 2010; Lucinescu, 2018). Thus, business faculty may consider how skills like critical thinking; problem-solving; and information evaluation, selection, and use may be included in their course assignments.

One way to incorporate these skills into a course is by assigning a "research" project, since doing research requires students to consider a problem or situation and find relevant information to make an argument or decision about the problem or situation. For faculty, developing an effective research project requires considering students' responses to such projects in addition to considering learning objectives and the skills targeted for development. Most studies of students' perceptions of the research process find that students see research as challenging (Bauer, 2018; Detmering & Johnson, 2012; Wojahn et al., 2016). Across the studies, students report challenges with finding sources related to their selected topic, understanding academic sources, and misunderstanding the value of pay-walled sources (Bauer, 2018; Detmering & Johnson, 2012; Rempel et al., 2013; Wojahn et al., 2016). Stewart-Mailhiot (2014) posits that students may have negative perceptions of the research process because they are often doing research as part of a major, high-stakes assignment, which increases the students' stress level. Detmering and Johnson (2012) also found that students' frustration was often due, at least in part, to feeling as though the assignment tasks did not allow students to incorporate their perspective or voice.

To address these concerns, some scholars recommend incorporating research in more frequent and lower stakes assignments that can provide students with scaffolded practice (Austin et al., 2020; Bauer, 2018; Wojahn et al., 2016). Detmering & Johnson (2012) also recommend broader interpretations of credible sources to include more than just peer-reviewed, academic sources. Especially in business courses, encouraging the use of publicly available sources will give students more experience finding and using the kind of information they will be expected to use in the workplace (RUSA, 2019; Sokoloff, 2012).

The preceding review shows that critical thinking and information literacy skills have notable overlap and that both are highly desired by employers. Faculty can assign research projects to incorporate the development of these skills into business courses, but faculty should keep in mind students' potential resistance in addition to the learning objectives when designing the assignment. These findings informed the development of the project described in this article, as did the research on the use of team projects that is discussed in the following section.

Employer and Student Perceptions of Teamwork and Collaboration

Surveys of employers regularly find effective teamwork, collaboration, and interpersonal communication skills among the lists of highly desired or essential competencies for employees and new graduates (Hart Research Associates, 2018; NACE, 2019; Partnership, 2008). As the Partnership for 21st Century Skills (2008) explains, these skills are essential for new graduates because economic changes have led organizations to increasingly use flatter organizational structures and teams to decentralize decision-making. They also point out that increasingly diverse and globalized workplaces require workers to be able to interact effectively and professionally with co-workers and clients from diverse backgrounds (Partnership, 2008). In response to employer expectations, faculty across the disciplines often advocate for group projects that strengthen these highly desired skills by giving students more practice using them (e.g., Hansen, 2006; Fittipaldi, 2020). Student-identified benefits of group projects also suggest that such projects may also be useful for developing other career readiness skills, in this case, namely critical thinking and information literacy skills. This section reviews the research on students' positive responses and concerns with group projects while considering how student response could shape the design of a group project targeting these career readiness skills.

Research shows that students are generally receptive to team projects and that they have better impressions of and experiences with teamwork than faculty assume (Chapman et al., 2010; Lee et al., 2016; Marks & O'Connor, 2013). Students report that some benefits of teamwork include rewarding social interaction (Marks & O'Connor, 2013) and the opportunity for workload distribution (Chapman et al., 2010; Lee et al., 2016). Some students also self-report that they learn more through group work, but the research findings on this aspect are mixed (Betta, 2016; Chapman et al., 2010; Thom, 2020; Wesner et al., 2018).

The student-identified benefits of group projects and the previously discussed research on students' concerns about research projects suggest that it would be effective to design research projects as group projects. Specifically, since students see group projects useful for mitigating overwhelming workloads and for improving learning from one another (Chapman et al., 2010; Lee et al., 2016), group projects may help reduce students' sense that they are overwhelmed by research projects (Bauer, 2018; Detmering & Johnson, 2012; Wojahn et al., 2016). Since research projects can be valuable tools for developing students' information literacy and critical thinking skills, as noted earlier, reducing student hesitancy or resistance by assigning research to groups may improve student engagement and therefore the strengthening of those skills.

Students do have some concerns and dissatisfactions regarding group work, even if those concerns are not as dominant as some faculty believe. These student concerns are valuable to consider when designing a group project. While students see group work as an opportunity to reduce workload burden, they are also concerned about potentially unfair distributions of the workload (Lee et al., 2016) and members who under-contribute, often referred to as social loafers (Brandyberry & Bakke, 2006; Marks & O'Connor, 2013). In response, students indicate a preference for instructor guidance and contracts that help them to establish workload responsibilities and expectations (Fittipaldi, 2020; Lee et al., 2016; Wesner et al., 2018; Wolfe, 2010).

Students also report concerns about unfair grading (Marks & O'Connor, 2013). This concern is likely related to concerns about having to do an unequal amount of work and to potential social loafers. Still, students report mixed results on whether they prefer to be graded individually or receive a group grade (Marks & O'Connor, 2013; Wesner et al., 2018). Business majors in at least one study indicate a higher tolerance for group grades, but they also had a higher preference than other majors for the option to remove an ineffective group member (Marks & O'Connor, 2013). Beyond group versus individual grades, students consistently report a preference for peer evaluation in the group process (Brandyberry & Bakke, 2006; Fittipaldi, 2020; Lee et al., 2016; Marks & O'Connor, 2013). Even with these concerns, students still hold generally positive or neutral attitudes toward group work (Chapman et al., 2010; Marks & O'Connor, 2013), and their concern level is lower than faculty perceive it to be (Chapman et al., 2010).

Although not treated together in many studies, the research on student perceptions of the research process and the value of groupwork suggests that group projects could be designed to help students strengthen multiple employer-desired skills. If designed effectively, group projects can help students distribute and reduce the overall workload of the research-intensive projects that they perceive to be overwhelming. An effective design for such a project should take care to avoid the elements of group projects that students report to be frustrating, including confusion of responsibilities, the potential effects of social loafing, and unfair grading (Fittipaldi, 2020; Lee et al., 2016; Marks & O'Connor, 2013). Such a project may help students develop the teamwork, collaboration, interpersonal communication, information literacy, and critical thinking skills that employers place a high value on when evaluating new graduates (Hart Research Associates, 2018; NACE, 2019; Partnership, 2008).

The project described herein was informed by previously discussed research about the skills that are highly desired by employers and students' perceptions of the kinds of projects often assigned to strengthen those skills, namely research and group projects. The goal of the project design was to strengthen students' skills with a selection of course-appropriate employer-desired skills while leveraging students' perceived advantages of group projects and mitigating their common concerns about both research and group projects. In addition, with these project goals in mind, the students were surveyed to answer three questions about the project:

- Did students feel that they strengthened their interpersonal communication, teamwork, and information literacy skills?
- Did students feel that the project design was better or worse than their prior group projects?
- What aspects of the project design would students keep or change?

These questions focus on students' perceptions based on the belief that low student resistance to projects improves their engagement and thus their learning.

The following section describes the project design and explains of how the design strengthens the targeted skills and connects to the previously discussed research. Then, the survey soliciting student perceptions about the project design and their skill improvement is described along with the results.

Research Workgroup Project Design, Phases, and Targeted Skills

Briefly, the Research Workgroup project involves three phases that each focus on the creation of a significant product, and each phase includes supporting tasks to help scaffold the completion of the significant product. Students complete three main products in the following order:

1. A collaboratively developed collection of credible sources about the group's topic
2. An independently written short report informed by the group's collected sources
3. An independently created multimodal message based on the research and report

Students also engage in some peer teaching and peer review at certain points throughout the project phases. At the end of the project, they complete peer evaluations. Appendix A includes the project overview provided to students, and this section provides information about the purposeful development of main products and supporting activities in the project phases.

As alluded to in the previous paragraph, through the project phases, students work in “workgroups.” The workgroups are designed to mimic teams or departments in a workplace in which members work collaboratively but are evaluated independently. Students choose their group by signing up for the topic that they are interested in researching. Following recommendations for small student group sizes (Bacon et al., 1999; Koppenhaver & Shrader, 2003), the groups for this project are capped at five students, with some exceptions for groups of four or six students. The professor creates the research topic list, with voluntary student input, and it includes topics such as workplace mentorship models, employee resource groups, remote work communication practices, and more. Topics like these fit with the course's focus on business communication but allow students with various business majors to focus their research on topics that may fit their major. In another course, the list of topics could be adapted to fit the course or instructor goals.

The following imagined scenario provides the “case” or context for their work in their research workgroup:

For this scenario, you will imagine that your group's supervisor asked your group to research a topic that the supervisor heard is a concern for companies who hire new graduates. Your supervisor wants to better understand the different aspects and implications of the topic. Therefore, your supervisor asked your group to research the topic and, individually, write reports summarizing different aspects of the topic that managers should understand—especially if those managers supervise entry-level employees.

Although the initial description of the scenario suggests that the report is the culminating project, students continue to work in their workgroups as they create their multimodal messages. Each phase of the research workgroup project focuses on certain employer-desired skills while meeting the course learning objectives, mitigating student concerns, and leveraging student preferences. Table 1 shows each phase's major product and the targeted skills.

Table 1
Research Workgroup Phases, Projects, and Targeted Skills

Phase & Product	Targeted Skills
<i>Phase 1: Collaborative Source Collection</i>	<ul style="list-style-type: none"> • Source Evaluation (Information Literacy) • Written Communication • Collaboration
<i>Phase 2: Executive Brief Report</i>	<ul style="list-style-type: none"> • Written Communication • Information Selection & Use (Information Literacy) • <i>Optional: Peer Feedback</i>
<i>Phase 3: Multimodal Message</i>	<ul style="list-style-type: none"> • Multimodal Communication • Information Selection (Information Literacy) • Format Selection (Critical Thinking) • Supporting Peer Teaching (Teamwork) • Peer Feedback

In Phase 1, students work collaboratively to create a collection of relevant, credible sources for their group’s topic. Each student adds five sources to a shared cloud space (e.g., wiki; cloud file, etc.). For each source, the student adds the appropriate APA citation, a brief annotation, and a PDF or link to the source. Groups must ensure that each source appears only once in the group’s collection. Once completed, the group has created an annotated bibliography of approximately 20 credible sources on their group’s research topic which they can all use for their subsequent products.

Phase 1 primarily develops students’ ability to find and evaluate sources, two key information literacy skills with the evaluation component also honing students’ critical thinking skills. The sources that students include in the collection must be both relevant and credible, which they prove through annotations that describe the credibility of the source, summarize its points, and offer suggestions of how that information might be useful to the group. There are no set requirements for certain kinds of sources, except that an included source must be considered credible based on the relevance, adaptability, and reliability of its content and the authority or expertise of the author and publisher. Eliminating the requirement for certain kinds of sources, such as only peer-reviewed sources or banning all “.com” sites, encourages students to carefully assess what makes a source or author credible and prepares them to evaluate the kinds of sources they may use in the workplace (Cyphert & Lyle, 2016; Mezick & Hiris, 2016; RUSA, 2019). The collaborative nature of the source collection phase responds to the research findings highlighting the overwhelming nature of the research process (Detmering & Johnson, 2012), and the recommendation to include more low-stakes research activities (Austin et al., 2020; Stewart-Mailhiot, 2014; Wojahn et al., 2016). Students share to research burden rather than having to find and evaluate all the sources that they need on their own.

The first phase of the project also strengthens students' communication skills as they write their annotations and coordinate adding sources to the collection. They must also develop and use their teamwork skills because each source may only appear once in the source collection, requiring students to communicate and coordinate with one another. Providing PDF or linked access to their sources encourages students to consider how they can make useful contributions to a team, as well. Although students work collaboratively the most during the first phase, each source contribution is graded individually for each student. If a member does not contribute their sources, the other group members may need to do a little more research for their subsequent projects, but their grade is not directly affected. This design accommodates students' appreciation for fair, balanced workload distribution and for learning from their peers while minimizing the potential negative influence of a social loafer (Lee et al., 2016; Marks & O'Connor, 2013).

In Phase 2, each student draws on the collected sources about their group's broad topic to independently write a more focused short formal report, named an Executive Brief, for their imagined supervisor. For example, if the group was researching workplace dress code policies, the group members' separate reports might address sub-topics like legal considerations for developing and enforcing dress codes, the advantages and disadvantages of requiring standard uniforms, and best practices for giving critical feedback about an employee's hygiene. The report requires students to further narrow their selection of relevant information from the source collection and to clearly and ethically incorporate the selected information to support their message to their supervisor. There is no formal length requirement, but students' reports tend to be 3-4 pages.

The report written in the second phase primarily strengthens students' written communication skills due to the creation of the formal report that follows professional writing style and standards. Students further strengthen their information literacy and critical thinking skills in this phase because they must consider the available information and their supervisor's needs to focus their report's message. The short report requires more sources than a student contributes individually to the source collection, but it does not require the full set of sources to be used. The requirements related to source quantity and narrowing of the topic encourage students to strengthen their ability to evaluate available information and identify what kinds of information are needed, some of the entry-level information literacy skills that employers expect (Conley & Gill, 2011; Sokoloff, 2012).

Although teamwork is not required in the second phase, students continue to benefit from the workload distribution that was included in the first phase since they should be using sources from their group's collection (Lee et al., 2016; Marks & O'Connor, 2013; Wesner et al., 2018). If a group member is a social loafer or contributes unequal work, the additional work that is redistributed to any individual group member is minimal. While writing the report, students are incentivized but not required to engage in group or one-to-one idea development and peer review meetings. Overall, this phase encourages the best parts of student teams, such as workload distribution and the ability to network and learn from peers (Lee et al., 2016; Marks & O'Connor, 2013; Wesner et al., 2018).

In the final phase, students begin a follow-up, individually graded project for which they create a multimodal message that communicates four to six key recommendations based on their report

findings. Students may choose to develop their multimodal messages for managers or entry-level employees. As they did in writing the report, students continue to strengthen their communication and information literacy skills during this phase. Students choose their multimodal format, so depending on the format they may strengthen written, oral, and/or visual communication skills. They also further hone their information selection and use skills by further narrowing the relevant information that they incorporate in their message.

The multimodal project also requires students to practice their critical thinking skills because they must make and defend purposeful decisions about the format, audience, and included information. To support their decision making, students complete a format analysis activity that asks each group member to select a different multimodal format (e.g., podcast, infographic, animated video, etc.), describe the format's conventions to their group members, and provide a link to an effective example of the format. This activity draws on students' analytical skills while also requiring peer teaching, a useful teamwork skill. This supporting assignment also leverages students' appreciation for learning from their peers (Lee et al., 2016; Marks & O'Connor, 2013). They strengthen their teamwork skills by providing peer feedback on their group members' multimodal message drafts.

After submitting all products, students submit a self- and peer evaluation form. The peer evaluation asks students to evaluate each workgroup member based on the usefulness of their contributions, their communication efforts, reliability, timeliness, and overall communication skills. These criteria are synthesized from lectures at the beginning of the project about effective interpersonal and team communication, as covered in the course textbook (Cardon, 2018). They also encourage students to focus on the members' reliability and contributions to the collaborative aspects of the projects, rather than simply whether they liked a group member.

Overall, the research workgroup project enables students to practice their information literacy, teamwork, communication, and critical thinking skills with some support from group members without their group members' contributions directly affecting their individual grades. Its design provides opportunities for students to reap the benefits of their best team experiences and mitigates common concerns with social loafing and unfair grading (Chapman et al., 2010; Lee et al., 2016; Marks & O'Connor, 2013; Wesner et al., 2018) and concerns regarding the daunting nature of research (Detmering & Johnson, 2012; Stewart-Mailhiot, 2014; Wojahn et al., 2016). Since the project was designed to strengthen desired and relevant skills while addressing students' preferences, students were surveyed to gather their perceptions and feedback on the research workgroup project design. The survey tool and results of the students' responses are discussed in the following section.

Student Feedback Collection Methods

The research workgroup project was assigned in two sections of the business communication course previously described. One section was an online-only course, and the other was a hybrid course that held optional synchronous sessions via Zoom three times each week. Approximately 15 students attended each optional synchronous session, but it was not always the same students. All course content, assignment instructions, due dates, and submission processes were the same for both sections.

Thus, while the hybrid course had scheduled opportunities to meet with the instructor to ask questions while the online-only students had to request synchronous meetings, the two sections were otherwise administered in functionally the same manner.

At the end of the semester, students were invited to complete a short anonymous, IRB-approved survey (See Appendix B). The survey focused on soliciting students' perceptions of the project design and which skills related to interpersonal communication, teamwork, and information literacy the students felt that they had improved through the project. Students were asked to also indicate their perceptions of the advantages and disadvantages of group projects to better understand whether their perceptions aligned with the existing research. These responses were gathered through 12 multiple-choice questions. The survey also included two open-ended questions about what they would keep or change about the project design if the project design were revised. These short-answer responses provided further insight into their preferences for group research projects and which parts of the project design helped strengthen certain targeted skills.

There were 64 students in the two participating sections, and 33 completed the survey, a roughly 52% response rate. The survey results were assessed to identify the proportion of students who selected each answer option for each question. The focus of each open-ended response and the frequency of the focus was identified through textual analysis, described in more detail in the next section.

Survey Results

The survey results presented in the following sub-sections describe the respondents' demographics and group experience level and their perceptions of group projects in general, the skills they felt they developed through the project, and their reactions to the project design.

Demographics & Experience Level

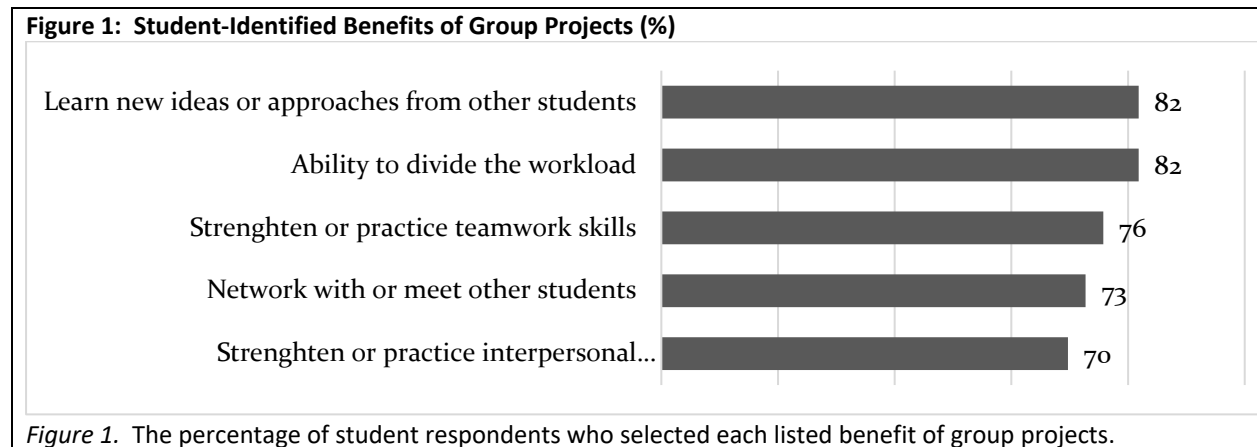
Most respondents (82%) were between the ages of 18 and 30, with only 18% over the age of 30. Sixty-seven percent of the respondents were female, and 33% were male. No students selected "nonbinary" or "prefer not to answer" when responding to the question about gender.

All participants reported having prior experience with group work in their courses, with 75% of respondents indicating that they had completed 3 or more group projects. Yet 58% of the students indicated that they had completed only 1-2 online or hybrid group projects.

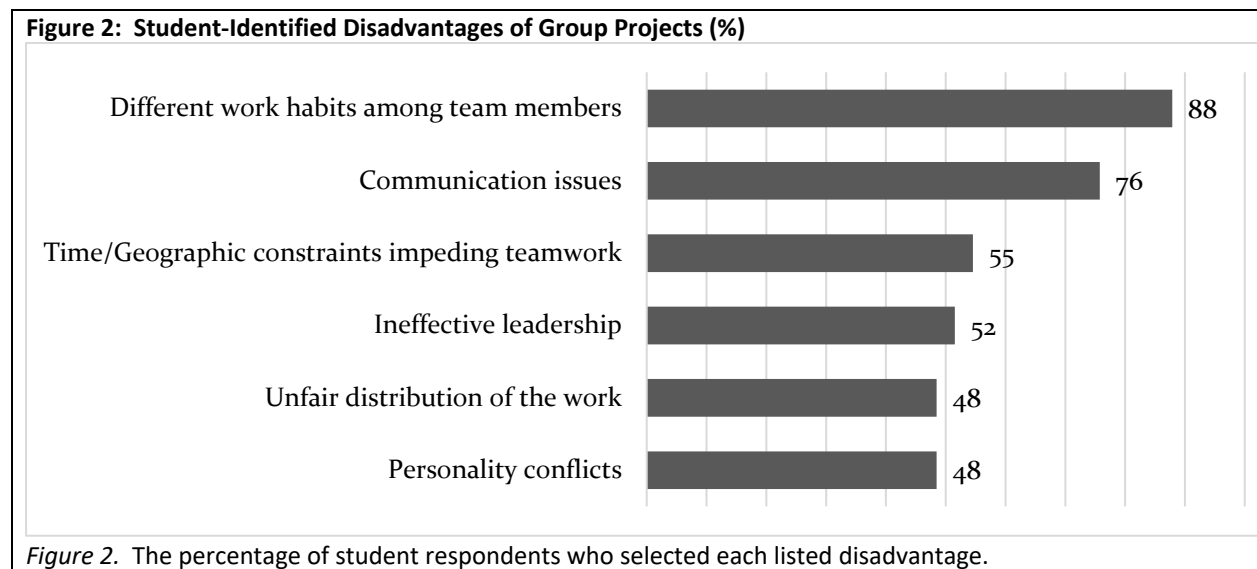
Perceptions of Group Work, Generally

Like prior studies of the advantages of teamwork and student teams (Chapman et al., 2010; Marks & O'Connor, 2013; Wesner et al., 2018), students were asked to indicate which options they believed were advantages for group work in courses. Students were able to select multiple options. Generally, most respondents agreed that each provided option was an advantage of group projects. However, the top

two selected options tied for first place, with a 6 percentage-point advantage over the third-place option. Figure 1 shows the proportion of students who selected each option.



When asked a similar multiple-selection question about the disadvantages of group work, student respondents indicated that differing work habits (88%) and communication issues (76%) were the two main disadvantages of group work in courses. The other four disadvantages were selected by 48-55% of the respondents, as shown in Figure 2.



Regarding grading, students overwhelmingly preferred to individual grades (66%), while 36% indicated a preference for a combination of instructor and peer evaluation grading. Surprisingly, one respondent indicated a preference to be graded only by peer evaluation. Zero students indicated a preference for team grades.

Perceptions of Skill Development through the Research Workgroup

The research workgroups and associated assignments were designed to develop students' interpersonal communication, teamwork, and information literacy skills while responding to students' preferences and concerns. The survey included a set of three questions that asked students to indicate which skills in each of those categories they felt that they improved through the research workgroup projects. The selection options for each question were developed using key concepts and terms covered in the course lectures and textbook chapters (Cardon, 2018) associated with each skill to ensure that students understood the tasks and sub-skills related to the primary skill in question.

Within interpersonal communication, the skills that students most frequently indicated that they improved were their ability to clarify and answer questions for others (84%) and to communicate via written messages (66%). The other five skills were selected by only 19-34% of the participants: accommodate personality differences (34%); listen effectively (31%); self-regulate one's emotions (28%); communicate via audio/visual channels (19%); and resolve miscommunications (19%).

Among the teamwork skills, the three most frequently selected improved skills were providing relevant contributions (78%), giving constructive feedback (75%), and taking initiative (66%). The other four skills were selected by about half or fewer of the respondents: coordinating work with others (53%), collaborating with others to complete tasks or solve problems (47%), providing demonstrations to others (34%), and motivating others (31%).

Most students indicated that they improved most of the listed information literacy skills. Almost all the respondents (91%) indicated that they improved their ability to find credible sources. Similarly, most students indicated improvement in their ability to use sources to support their claims (84%), use multiple sources to support their claims (75%), evaluate sources (75%), and identify themes across multiple sources (63%). The information literacy skill that the fewest students selected was "visualizing evidence" (e.g., using figures or tables), with only 59% believing they improved their ability with this skill.

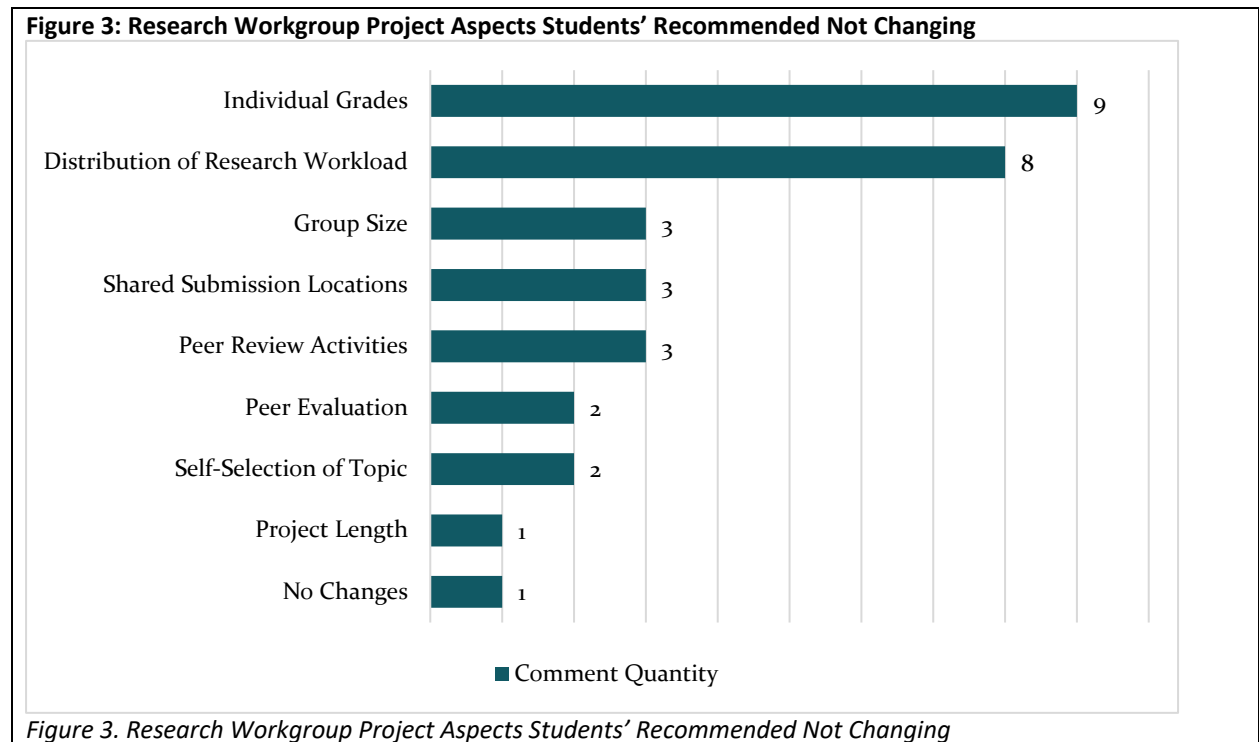
Student Perceptions of the Research Workgroup Project Design

Almost half of the student respondents (49%) felt that the research workgroup design for group work in courses was better than other projects they had completed, while 42% felt that the research workgroup was about the same as their other group projects. One student indicated that it was worse than other group projects, and one other student indicated that they had not completed other group projects. One respondent did not answer this question.

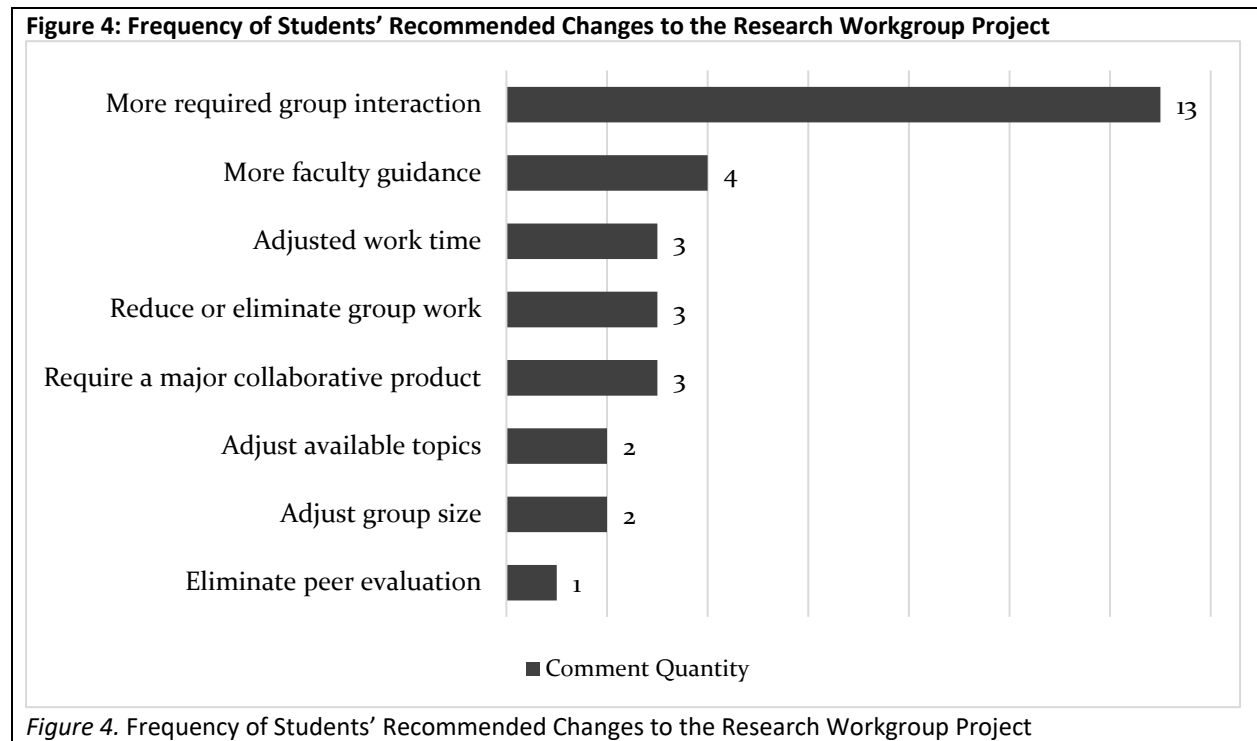
Students were asked two short-answer questions in which they indicated first which aspects of the research workgroup project should be kept if the projects were adjusted and second, what changes should be made. All survey respondents (33) left a brief response for each question, with responses ranging in length from a brief fragment to five sentences. For each question, some responses were eliminated from the analysis due to unclear phrasing or identification of aspects related to other

projects or parts of the course. Thematic analysis was used to analyze the students’ short-answer responses. Through thematic analysis, first, key ideas are identified in written responses. For example, responses like “individual grades” and “The grades of the individuals should still be graded independently from others and based on their merits” were labeled with the key idea “Grading.” Subsequent rounds of review are then used to identify related ideas that form the trend categories (Starks & Trinidad, 2007; Creswell, 2008; Nowell et al., 2017). For example, key ideas like “required professor check-in,” “faculty assigned roles,” and “provide assignment samples” were combined into the “More Faculty Guidance” trend category.

When asked which aspects of the research workgroups should be kept if the design were to be changed, nine aspect categories were identified from 32 identified aspects in 30 student responses (See Figure 3). Students overwhelmingly recommended that the individual grading (9 comments) and distribution of the research workload (8 comments) be retained if the project were changed. Each of the following aspect categories was mentioned by three students: group size, shared submission locations for activities (e. g. source annotations), and peer review activities. Keeping the peer evaluation aspect and the self-selection into groups aspect were also each identified by two students. Finally, one student indicated that the timeline for all relevant projects should be retained, and another student recommended that no changes be made. Three responses were eliminated from the analysis; one was unclear, and the other two identified aspects specific to their group rather than to the project (e. g. “my group members were very good”).



Analysis of the 33 responses recommending adjustments to the research workgroup project resulted in 31 identified comments that were categorized into eight recommendation themes. Two responses were eliminated because one recommended no changes and the other was too vague for its recommendation to be interpreted (“interpersonal skills”). The most common recommendation theme was to require more group interaction, with 13 comments suggesting more required group communication, peer review, or general interaction. All other categories received four or fewer comments recommending the identified change. Figure 4 shows the frequency of comments recommending each kind of change to the project design.



Overall, these results offer insight into how the research workgroup project design supported students’ skill development and the extent to which it met their expectations and preferences for research-intensive group projects. The implications of these results are discussed in the following section.

Discussion

This course project was designed with two broad goals in mind: 1) strengthen students’ employer-desired career readiness skills and 2) leverage student preferences and mitigate their concerns regarding group work. As noted previously, the survey therefore aimed to gain insight into students’ perceptions about how well the project achieved these goals.

In response to the first broad goal, the workgroup projects and the survey focused on three skills in particular: interpersonal communication, teamwork, and information literacy skills. Students' survey responses showed that they perceived much more development of their information literacy skills than their interpersonal communication and teamwork skills. Five of the six information literacy skills were selected by 60% or more of the respondents, and the sixth related skill was selected by 59%: ability to find credible sources (91%), use sources to support claims (84%), use multiple sources with support a claim (75%), evaluate sources (75%), identify themes across sources (63%), and visualizing evidence (59%).

These results reinforce earlier findings that research projects, particularly projects that allow online searches and a variety source types, can be helpful for improving business students' information literacy skills (Bauer, 2018; Lucinescu, 2018; RUSA, 2019). These information literacy skills also overlap with many of the critical thinking skills described by business educators and employers (Conley & Gill, 2011; Cyphert & Lyle, 2016; Solokoff, 2012) because they involve critical evaluation, argument analysis, extrapolation of information, and argument development (Liu et al., 2014).

In contrast, the students did not perceive particularly notable improvements in their interpersonal communication and teamwork skills. Less than 35% of the respondents selected five of the interpersonal communication skills: accommodating personalities (34%), active listening (31%), regulating emotions (28%), resolving conflict (19%), and communicating via audiovisual channels (19%). Similarly, fewer than 55% of the respondents indicated improvement in four of the seven teamwork skills: coordinating work (53%), collaboratively solving problems (47%), providing helpful demonstrations (34%), and motivating others (31%). Yet, existing research about the value of group projects in business courses indicates that such projects should improve interpersonal communication and teamwork skills, such as collaboration, social interaction, coordination, and emotional regulation (e.g., Betta, 2016; Hansen, 2006; Sigmar et al., 2012). The discrepancy between the skills that should have been strengthened through the project and those that students' felt were improved is likely the result of the project design. The project was designed to minimize research-supported complications of groupwork, such as unfair workload distribution, unfair grading, and social loafing (Brandyberry & Bakke, 2006; Lee et al., 2016; Marks & O'Connor, 2013). Against the intentions, the design seemed to facilitate students' ability to avoid practicing rather than developing their interpersonal communication and teamwork skills. The students' responses to survey questions about the project design offer insight into why these skills were not as effectively developed.

In response to questions about the workgroup project design, students showed a strong appreciation of certain aspects that align with the research on student preferences for group projects and aspects the mitigate student concerns. Overall, nearly all students also indicated that the research workgroups were better than (48%) or as good as (42%) other group projects. Their appreciation of certain aspects can be seen in both the closed- and open-ended questions.

Like students in previous studies (Chapman et al., 2010; Marks & O'Connor, 2013), these students' survey responses indicated that some of the strongest benefits of group projects are learning from peers (82%) and workload distribution (82%). These two benefits strongly informed the design of the

collaborative source collection product created in the first phase of the project that was used as the foundation for the independent report and multimodal message. Correspondingly, students' short answer responses related to these benefits focused on the initial source collection product. For example, one student wrote, "... Dividing the sources between each member really helped with the workload. This is probably my favorite part of this research. It is effective and less stressful." Students also indicated they felt they were able to learn from their group members, such as one respondent who wrote, "I think it is very effective to have multiple people in groups because it allows for different sources and ideas to be shared." Students' appreciation for the research workload distribution also reinforces earlier findings that students' find research to be a daunting process (Detmering & Johnson, 2012; Wojahn et al., 2016) and that scaffolded, low-stakes assignments can help students more effectively complete such assignments (Austin et al., 2020; Stewart-Mailhiot, 2014).

Students' responses to the project design questions showed that the research workgroup design did mitigate some common student complaints about group projects, namely unfair grading and social loafing (Brandyberry & Bakke, 2006; Marks & O'Connor, 2013). Like students in prior studies (Marks & O'Connor, 2013; Fittipaldi, 2020; Wesner et al., 2018), these students indicated a preference for and appreciation of individual grades in group work. Sixty-one percent of the students selected individual grading as their preference for all group projects, and 28% wrote that the individual grades aspect of the research workgroups should be retained in their short answer responses. Students also suggested that the collaborative source pool and individual grading aspects were effective ways to mitigate social loafing, such as in this short answer response, "By having a submission area for each student it eliminated the issue where if one person does not participate the group is not harmed."

Although students appreciated learning from their peers while earning independent grades, the students' responses to the two short-answer questions offer insight into why they did not feel that their interpersonal communication and teamwork skills were significantly improved. Responses to both what should be kept and what should be changed about the project design indicated that group interaction was a desired feature. Of the aspects that students recommended keeping, four aspects (53% of the comments) related to group interaction: sharing of the research workload, group size, shared submission locations, and peer review. For example, one student explained that "Peer reviewing major assignments is very effective and asking questions about what the other students might want to know about the topic really helps a student get deeper into their topic." Correspondingly, students' recommendations for change to the research workgroup projects suggested changes that would require more group member interaction, such as team meetings and peer review, and the addition of a major collaborative project. Together these two categories account for 52% (16 comments) of the recommended changes. Despite common faculty anecdotes that students are resistant to group work (Betta, 2016; Wesner et al., 2018), these survey responses and prior research (Chapman et al., 2010) suggest that students value group projects.

Students' suggestions also signal that more group interaction may have helped them strengthen the interpersonal communication and teamwork skills that require more interaction between members. The interpersonal communication and teamwork skills that students did feel that they improved tended to be the ones that could be completed asynchronously or independently. For example, the only two

interpersonal skills that two-thirds or more of the students indicated that they improved were clarifying their understanding by asking questions and communicating via written messages. Many student groups established group text or chat threads on independent applications, and these platforms seemed to be the primary way that they interacted with one another outside of assignments submitted within their LMS group tools. The other five interpersonal skills that received fewer selections (34% or less) would require more synchronous interaction: accommodating personalities, active listening, emotional regulation, resolving conflict, and communicating via audio-visual channels. While responses were slightly more promising regarding improved teamwork skills, the team skills that students felt they improved most were also typically individual skills: providing effective contributions (78%), providing constructive feedback and support (75%), and taking initiative (66%). While teamwork skills that require more member interaction, such as providing demonstrations or collaboratively completing tasks, were selected by less than 50% of the respondents.

Again, students' self-selected improved skills and their short-answer responses provide insight into why students' felt that they strengthened more information literacy skills than interpersonal communication and teamwork skills. The design of the research workgroup project was developed to provide students the ability to work independently in a way that would be helpful to their group members. The required group interaction was minimal and primarily completed through independent contributions to the shared source pools, a few group discussion boards, and one peer review activity. Other peer review interactions were incentivized through extra credit, but no teams submitted proof of such interactions. The project phases were designed this way to address established student concerns about unfair grading and difficulty coordinating work times (Chapman et al., 2010; Fittipaldi, 2020; Marks & O'Connor, 2013). The unintended consequence of the design was that students did feel the project helped strengthen their interpersonal or teamwork skills, a perception reinforced in their multiple-selection and short-answer responses.

Recommendations, Limitations, and Future Research

The research workgroup project design is effective for improving students' information literacy skills and related critical thinking skills. The project design also effectively mitigates students' concerns with both research and group projects. However, the students' survey responses suggest that this project's design is not as effective for improving interpersonal and team communication skills in its current form. To target these employer-desired skills, the project design should involve more structure and interaction requirements, not merely extra credit incentives, to motivate students to practice those skills. Before implementing this project in a course, two general recommendations should be considered: focus the project's targeted skills and/or add more structured, required group member interaction. The simplest recommendation is to re-evaluate the project's target skills. As previously described, employer-desired skills, like critical thinking, often refer to a collection of related skills. This project aims to strengthen information literacy, interpersonal communication, and teamwork skills in a course that focuses on professional communication skills. Reducing the project's targeted skills could establish more reasonable expectations for students' skill development. For example, this project could be designed to focus only on information literacy and communication.

If the project does target interpersonal communication and teamwork skills, more structure and interaction requirements should be incorporated. A professor might require a team contract, scheduled updates, and interactions with the professor and with the team to promote team cohesion as opposed to a group of individual actors (Fittipaldi, 2020; Hansen, 2016; Lee et al., 2016; Wesner et al., 2018). More interaction could also be incorporated into the supporting and major assignments. For example, peer review of source annotations, drafts, and more could be required throughout the project phases. Or, the report could be reimagined as a collaborative report in which each student's contribution is still graded independently. Adding more structured and required interactions would raise the stakes on member contribution to shared efforts while still minimally impacting an individual student's project or final grades. It would be important to remember that adding more required interaction and collaborative assignments will reduce the extent to which the research workgroup design mitigates students' concerns about unfair grading, time constraints, and social loafing members in group projects (Brandyberry & Bakke, 2006; Lee et al., 2016; Marks & O'Connor, 2013).

While the students' survey results offer useful considerations for the development of group projects that strengthen employer-desired skills, there are some limitations. While the project design is significantly informed by the skills that employers indicate are desirable, it is also strongly informed by research regarding students' self-reported preferences about group projects (e.g., Fittipaldi, 2020). The survey discussed herein follows this precedent by asking students to self-report their skill development and reactions to the project design. The privileging of student preference is based on this author's beliefs and experiences that lower student resistance leads to more engaged students who in turn learn more. As scholars have noted, though, students' self-reporting of learning and preferences does not necessarily reveal their actual level of learning as might be measured by objective instruments (Thom, 2020). A further limitation is the small size of the reported sample, two sections of students with 33 students (52%) responding to the survey. Thus, generalization of these results is not advisable.

Nevertheless, surveys of employers and advocacy groups led by business professionals will undoubtedly continue to advocate for business education curricula that develops students' career readiness skills. Organizations like the Partnership for 21st Century Skills (2008) and the National Association of Colleges and Employers (2019) argue that complex skills like critical thinking, communication, teamwork, and more are necessary for business professionals to succeed in a quickly changing, global economy. Future research should, thus, continue to investigate how such skills may be strengthened through course projects, with potential focus on testing the projects more students and using more objective learning outcome measurements.

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Appendix A – Research Workgroup Overview (Student Assignment Sheet)

Research Work Group Project Overview

Purpose & Overview

One way that we demonstrate our competence is by including relevant, credible, and accurate information about a topic. In this project, you will add to your Professional, Clear, and Concise communication competencies by developing your skills in being Evidence-Driven.

In order to be Evidence-Driven, you need to be able to

1. use a variety of evidence types from quality sources and
2. incorporate, connect, and cite your evidence into your communication.

In this project, you will work in a “work group” to conduct research on a business communication topic. Together, your group will build a “pool” of credible sources related to your group’s topic, and you will support each other as you compose individual evidence-driven reports.

Imagined Scenario

For this scenario, you will imagine that your group’s supervisor asked your group to research a topic that the supervisor heard is a concern for companies who hire new graduates. Your supervisor wants to better understand the different aspects and implications of the topic. Therefore, your supervisor asked your group to research the topic and, individually, write reports summarizing different aspects of the topic that managers should understand—especially if those managers supervise entry-level employees.

Learning Objectives

After completing this project, you should be able to do the following tasks from the Course Objectives:

- Identify ethical, legal, cultural, & global issues affecting business communication
- Identify relevant, credible information to provide an overview of a business-related topic and support recommendations
- Apply analytical and problem-solving skills appropriate in business communication
- Demonstrate interpersonal and team communication skills to support others in their work goals
- Compose effective business messages that
 - communicate complex information in a manner that is professional, clear, and concise
 - ethically integrate multiple sources of credible information to support communication goals

Related Work

You will work in your “work group” through Units 5 and 6. Many of the weekly activities will support your group’s research efforts.

Together, you will...

- create a “pool” or collection of credible sources related to your group’s broad research topic.
- provide peer review and other feedback to your “work group” members.

Individually, you will...

- contribute to your group’s Research Group Source Summaries collection.
- write an Executive Brief on a sub-topic of your group’s broad research topic.
- complete a peer-evaluation survey about your Work Group members’ contributions, interpersonal communication, and team communication.
- create a multimodal message to share key point from your research with a selected target audience.

Appendix B – Survey Instrument

Basic Participant Information

1. Please indicate your age range.
 - a. 18-24
 - b. 25-30
 - c. 31-35
 - d. 36-40
 - e. 41-45
 - f. 46-50
 - g. 51+
 - h. Prefer not to answer
2. Please indicate your identified gender.
 - a. Male
 - b. Female
 - c. Nonbinary Gender
 - d. Prefer not to answer
3. Please indicate whether you are previously or currently employed as a “full time” employee (traditionally 40 hrs/week).
 - a. Yes
 - b. No
 - c. Prefer not to answer

General Experience with and Preferences Regarding Group Projects

Answer the following questions based on your experiences with and preferences toward group or team projects in other college or university courses that you have taken.

4. How many group projects have you completed in college or university courses?
 - a. 1-2
 - b. 3-4
 - c. 5-6
 - d. More than 6 projects

5. How many group projects have you completed in an online or predominantly online (hybrid) course?
 - a. 1-2
 - b. 3-4
 - c. 5-6
 - d. More than 6 projects

6. Which of the following are advantages of working on team projects in a course? Check all that apply.
 - a. Network with or meet other students
 - b. Learn new ideas or approaches from other students
 - c. Divide the workload
 - d. Strengthen or practice teamwork skills
 - e. Strengthen or practice interpersonal communication skills

7. Which of the following are disadvantages of working on team projects in a course? Check all that apply.
 - a. Different work habits among team members
 - b. Unfair distribution of the work
 - c. Communication issues
 - d. Personality conflicts
 - e. Ineffective leadership
 - f. Time or geographic constraints impeding teamwork

8. How do you prefer to be graded on group projects?
 - a. Individual grade(s)
 - b. Team grade(s) [all members receive the same grade]
 - c. Peer evaluation
 - d. Combination of instructor and peer evaluation

Research Workgroup Project

Answer the following questions based on your experience in your research workgroup in BUAD 3335. As a reminder, in your research work-group, you worked on three main assignments:

- Collaboratively build a collection of sources about your group's broad topic (Source Summaries)
- Independently wrote a short formal report about a sub-topic within your group's broad topic (Executive Brief)
- Independently created a multimodal message providing recommendations based on your research (Communication Advice Message)

In your research workgroup, you also communicated with and supported your group members throughout the last three course units.

9. How would you compare the research work-group design (collaborative work but independent assignments) to other group projects you have completed in college or university courses?
 - a. Better than most other group projects
 - b. About the same as most other group projects
 - c. Worse than most other group projects
 - d. I have not completed other group projects
10. Which of the following interpersonal communication skills were you able to practice in your research work-group? [Check all that apply.]
 - a. Resolve conflict or miscommunication
 - b. Clarify understanding / ask questions
 - c. Communicate via written messages (email, text message, etc.)
 - d. Communicate via audio or audio-visual channels (telephone, Zoom, etc.)
 - e. Actively listen
 - f. Accommodate others' personalities or work styles
 - g. Emotional regulation and self-management
11. Which of the following teamwork skills did you improve through the research work group projects? [Check all that apply.]
 - a. Take initiative
 - b. Provide constructive feedback and support
 - c. Collaboratively complete tasks or solve problems
 - d. Coordinate work and reminders
 - e. Provide demonstrations or instructions to improve others' understanding
 - f. Provide relevant, effective contributions
 - g. Motivate and energize others to contribute

12. Which of the following research skills did you improve through the research work group projects? [Check all that apply.]
- Finding credible sources that related to a topic
 - Evaluating sources to determine their credibility and relevance
 - Identifying themes and connections across multiple credible sources
 - Using information from credible sources to explain and support my own message
 - Visualizing information from credible sources to explain and support my own message
 - Supporting my own claims and recommendations using multiple sources
13. If the research workgroup projects were being changed, what is one aspect that should be kept? [Short answer]
14. If the research workgroup projects were being changed, what is one aspect that should be adjusted? [Short answer]