

From Tech Skills to Life Skills: Google Online Marketing Challenge and Experiential Learning

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ABSTRACT

The Google Online Marketing Challenge (GOMC) is a global, online student competition sponsored by Google. It is a prime example of an experiential learning activity that includes using real money (\$250 sponsored by Google) with a real client. The GOMC has yielded compelling results in student engagement and learning objectives related to the direct digital marketing skills addressed. However, few studies have systematically scrutinized the broader personal and life skills inherent in experience-based learning. The current study explores learning outcomes of the GOMC from a student perspective including both the direct technical skills as well as broader, multidisciplinary life skills that are developed or enhanced. The study takes an inductive approach to examine the life skills endorsed by a pilot group of GOMC participants and subsequently examines these learning outcomes in a preliminary quantitative survey of 15 GOMC participants from an undergraduate Information Systems course. Study findings yielded perceived learning outcomes in the following areas: interpersonal life skills, digital technical skills directly related to course and challenge content, intrapersonal life skills (self-awareness, reflection, and strategic planning), and adaptive applied skills. The students' overall perceptions, challenges experienced, and reported implementation preferences are also discussed.

Keywords: Student competitions, Experiential learning & education, Soft skills, Student perceptions

1. INTRODUCTION

The Google Online Marketing Challenge (GOMC) was launched seven years ago and has allowed for over 80,000 professors and students from almost 100 countries to experience and create online marketing campaigns using Google AdWords and Google+ (Google, 2015a). GOMC runs from the fall to spring semesters. Higher education professors and students from undergraduate or graduate programs, regardless of their major, can register to participate in the Challenge. Student groups consist of three to six students who, after a validation process, upload a pre-campaign report outlining their strategy. Teams then receive a \$250 credit from Google to execute and manage a live online marketing campaign during a three-week period using Google Adwords for a business or a non-profit organization (Google, 2015b). The learning objectives identified by Google (Google, 2015c) for the GOMC include:

- Discuss online marketing and media planning.
- Collaborate effectively in a professional group setting.
- Explain the following concepts: click-through-rate, landing page experience, campaign optimization, and return on investment (ROI).
- Discuss the benefits of targeting advertising to a select audience.

- Illustrate how technical and cultural factors affect the success of an online advertising campaign.
- Explain how to incorporate social media into a company's marketing plan.

The objective of the current study is to explore student perceptions of the expected learning outcomes described above and use an inductive approach to examine any broader personal or life skills that are endorsed by students. The study seeks to examine: What are students' perceptions of the GOMC? What are the perceived learning outcomes resulting from participation in the GOMC? Do the learning outcomes expand beyond the targeted technical skills? What do students like most about the GOMC? What challenges (if any) did the students face? What recommendations do students have for future implementation?

2. LITERATURE REVIEW

For most educators, the GOMC was implemented as a way to give students hands-on experience with search advertising and digital marketing campaigns (Brown and Albright, 2013; Lang and Ceccucci, 2014; Lavin, 2010; Rosso et al., 2009). Generally, findings suggest that the GOMC has been well-received by students, educators, and industry professionals alike with over 87-90% of students endorsing the Challenge as more engaging than other teaching tools (Murphy, Hunter,

and Hudson, 2009), and over 85% of students, 96% of academics, and 89% of industry representatives reporting willingness to recommend the Challenge to their colleagues (Murphy et al., 2009). Educators found the GOMC to be a novel way to engage students and work with businesses, indicating that students were more enthusiastic and that the real world aspect of working with real clients and spending real money was particularly motivating for students, as was the thrill of global competition (Lavin, 2010; Murphy et al., 2009; Rosso et al., 2009; Treiblmaier, Neal and Murphy, 2009). Further, students, educators, and industry professionals agreed that the students were acquiring strong, marketable skills that would give them a competitive edge in current and future employment (Lang and Ceccucci, 2014; Murphy et al., 2009).

The sample groups of the studies vary across undergraduate and graduate levels, disciplines (information systems, marketing, business, library information), and online and “live” teaching formats (Brown and Albright, 2013; Lang and Ceccucci, 2014; Lavin, 2010; Rosso et al., 2009). The primary learning outcomes that the authors examined are the six learning objectives set forth by Google (see Introduction above) and results were supportive of learning in all aforementioned areas, with some authors (Lang and Ceccucci, 2014) finding the strongest learning outcomes to be the ability to explain core concepts in online marketing such as click-through rate, landing page experience, and return on investment.

Other learning outcomes highlighted in the studies included: increased understanding of how Google Adwords works, efficient and effective use of Google Adwords and affiliated tools, practicing and understanding search engine advertising, how to position ads, and selecting effective and relevant keywords to generate more traffic to the company website (Lavin, 2010). Students also gained an increased understanding of how geographic locations impact impressions and how to effectively manage a budget and reinforced basic advertising concepts such as good copywriting (Lavin, 2010; Murphy et al., 2009). Additionally, students gained experience with how technical issues impact organizational issues, and they learned about e-commerce, project management, strategic use of technology, and IS usability (Rosso et al., 2009).

While the results are compelling, they are not surprising in that the GOMC is not only designed to be an exciting competition, but also has been identified as an effective academic exercise in experiential and problem-based learning (Lavin, 2010; Murphy, Hunter, and Hudson, 2009; Treiblmaier, Neal, and Murphy, 2009; Rosso et al., 2009). At its core, experiential learning theory is based on six propositions: learning is best conceived as a process, all learning is re-learning, learning requires the resolution of conflicts, learning is a holistic process of adaptation to the world, learning results from synergetic transactions between the person and the environment, and learning is the process of creating knowledge (Kolb and Kolb, 2005). According to previous studies, GOMC conditions such as having to work with a real business to solve a real problem, the need to develop and run a live advertising campaign, the need to actively implement the tools provided by Google and adapt strategy as they receive ongoing feedback provide a valuable

opportunity for experiential learning (Lavin, 2010; Rosso et al., 2009). Treiblmaier, Neal, and Murphy (2009) assert that the aspects of learning by doing and the requisite critical reflection of the campaign results and learning outcomes exemplify why GOMC is a great opportunity for action learning. Lang and Ceccucci (2014) also assert that the critical reflection component encourages reflective observation, which is critical to the experiential learning model.

It is well established that experiential and other active learning activities tend to result in a higher level of comprehension, help to translate knowledge to skills, and often result in life-long learning (Rosso et al., 2009). Authors agree that GOMC offers this unique learning opportunity with critical advantages that cannot easily be achieved with traditional classroom techniques (Lavin, 2010). However, the value of experiential learning is targeted as increased student interest in specific technical skills and the opportunity to practice them in the real world. While these are valuable and often the primary course objectives, what is mentioned (though rarely highlighted) are the personal and life skills that the students develop during experiential learning. Life skills that emerged as learning outcomes in previous GOMC studies include: self-reflection, self-assessment and correction, increased confidence, trial and error problem solving/learning, strategic planning, and ethics (Brown and Albright, 2013; Murphy et al., 2009; Rosso et al., 2009). Other studies discuss student skills such as leadership, teamwork, and communication as critical factors affecting how well teams performed in the Challenge (Brown and Albright, 2013).

The current study aims to investigate these factors further, not as pre-existing influential factors, but to identify to what extent, if any, these skills are developed during the GOMC. Specifically, the study seeks to use Google’s intended learning outcomes and frameworks from previous studies (Lang and Ceccucci, 2014) to capture student learning outcomes in the technical skills as well as taking an inductive approach to exploring and highlighting any additional learning outcomes or life skills that may be inculcated or developed. Further, it will try to capture other relevant areas for GOMC implementation including student approaches to the Challenge, student implementation preferences, and student suggestions for improvement.

3. METHODOLOGY

3.1 Pilot Group

In June of 2014, a pilot team from the University participated in the GOMC for the first time. The team was composed of four students comprising the Marketing Committee (a University-led and sanctioned extracurricular student group involved in traditional and digital marketing). These four students had just completed their freshman year and participated in the Challenge using the University as a client. The pilot group served to evaluate the effectiveness and applicability of the GOMC for inclusion into the Information Systems course the following year.

The University, a client categorized as a non-profit organization, became eligible for the AdWords Social Impact Award. The team appended an Impact Statement to

the Post-Campaign Report, and was selected as a semi-finalist for the AdWords Social Impact Award.

In addition to the required post-campaign report for Google, the pilot group wrote a critical reflection on their experiences during the GOMC, covering the following areas:

- Learning objectives
- Knowledge and skills gained
- Challenges encountered
- Group work/teamwork
- Client interaction/experience
- Personal growth/development
- General reflection and future recommendations

Qualitative analysis of the critical reflections revealed overwhelmingly positive endorsements of the GOMC experience and highlighted strengths and areas of improvement for future implementation. In regards to general reactions, descriptors such as “exciting,” “amazing,” “unique,” and “challenging” were used. The students were most attracted to the “real-world” feel of the Challenge: “it makes you feel like you are truly working at a marketing agency,” “it explains what we learned in class in a modern, hands-on way,” and “I didn’t expect it to be so real and in-depth.”

As expected, many of the learning objectives and outcomes reported by the pilot group were closely aligned with the specific technical skills outlined by Google and course objectives, namely: learning more about digital and online marketing, Google advertising, how to personalize advertisements, Google AdWords, Google Analytics, and concepts such as click-through-rates, landing page experience, and how these relate to campaign effectiveness. Yet what was notable, and served as an impetus for the current study, was the endorsement of many learning outcomes that seem to transcend disciplinary fields as well as the educational, professional, and personal realms. These skills, extracted from the pilot group’s critical reflections, heretofore referred to as ‘life skills’ are listed in Appendix A with selected student quotes/excerpts.

Some of the challenges reported by the pilot group included difficulties with time and task division, and coordination of schedules, meetings, and commitments. They also reported difficulties gaining access to the client website and analytics, and acquiring necessary client information. Another challenge reported was the lack of prior experience with AdWords. All students unequivocally recommended future participation in the Challenge. Their suggestions for improvement included: starting early, taking the Google AdWords course and other online courses first, working with cooperative and communicative clients, having pre-set tasks and distribution of roles, using task rotation so each member is equally involved and receives the same knowledge and skill set, and investing enough time and effort to create a strong campaign for the client.

Based on the pilot group, the Challenge was integrated into an Information Systems class in Spring 2015. The learning outcomes extracted from the analysis of the pilot group’s critical reflections (see Appendix A) were incorporated into the survey for the exploratory study.

3.2 Sample Group

The Information Systems class is part of the required core curriculum for Junior-level students within the Faculty of Hospitality, Tourism and International Business. The Challenge was introduced as part of the course in the final weeks of the spring semester and ran for twenty-one days. The class of fifteen students participated in the Challenge, divided into three teams with five members each. Of the participants twelve were female (80%) and three were male (20%). Five of the students indicated that they had prior experience with Google AdWords and, as a result, three of them were selected as team captains. The respective clients included two businesses and one non-profit organization. The groups met with their clients and submitted a pre-campaign report. At the end of the three-week implementation period each group submitted a post-campaign report detailing the campaign results.

In order to evaluate student perspectives on learning outcomes, an online survey was administered to all students that participated in the GOMC (n=15). Students completed the online survey within one week of completion of the GOMC.

3.3 Measurement Instrument

The survey was based on the instrument used in a previous study by Lang and Ceccucci (2014) with the inclusion of 10 additional items (items numbered 13-22 in the survey) developed from the findings of the qualitative analysis of the pilot group (see Appendix A). The final survey consisted of 29-items including 27 interval-scaled items and two open response items (see Appendix B).

In addition to assessing students’ perceptions of specific learning outcomes, the survey investigates: the students’ approach toward the GOMC (engagement, enjoyment, enthusiasm, amount of time dedicated) and student implementation preferences (client assigned or self-selected, ideal team size, usefulness of critical reflection).

The first 23-items of the survey use a 5-point Likert scale ranging from (1) Strongly disagree to (5) Strongly agree with a neutral midpoint response of (3) Neither agree nor disagree. Items 24 through 27 target background and descriptive factors, each with their respective interval-scaled response categories. The two final items (28 and 29) were open response items targeting the most liked aspects of the GOMC and suggestions for improvement.

4. RESULTS

The sample consisted of 15 students: twelve females and three males. Five students indicated they had prior experience with Google AdWords. Less than half of the students (40%) reported spending between one to five hours working on the Challenge outside of class. Previous findings (Lang and Ceccucci, 2014) also indicated that the majority of students (82.8% in their case) spent one to five hours per week on the Challenge with only 17.2% reporting spending an additional 5-10 hours per week. The time-spent distribution of responses for the current study is depicted in Figure 1.

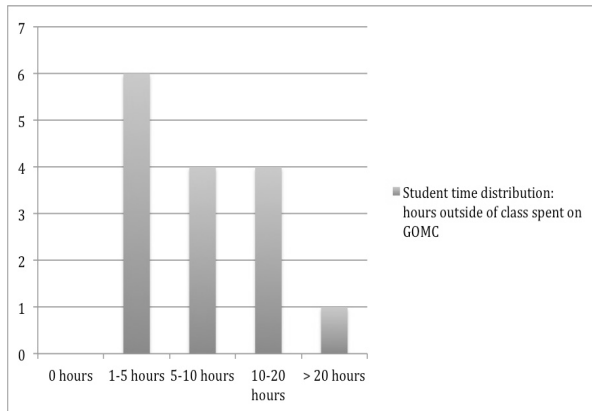


Figure 1: Time spent on GOMC outside of class hours

4.1 Students' Approaches to the GOMC

The survey captured students' level of enthusiasm to participate in the GOMC, their level of engagement with the Challenge as compared to other teaching tools, and whether they enjoyed participating in the Challenge. The results are depicted in Figure 2.

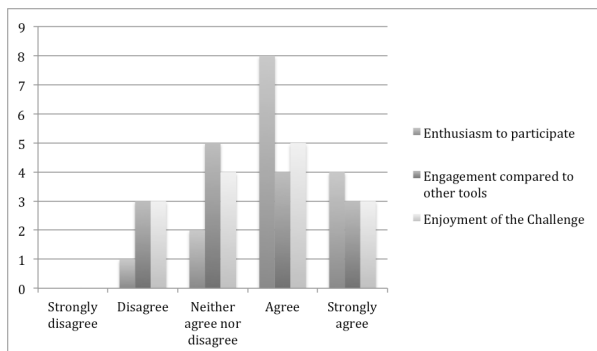


Figure 2: Student approaches towards the GOMC

Students indicated being very enthusiastic to engage in the Challenge (80% agreement) with only 6.7% disagreement (13.3% were neutral). In comparing the GOMC with other teaching tools such as case studies or simulations, 46.7% of students found the GOMC to be more engaging, with 30% neutral responses (suggesting an equal level of engagement) and only 20% suggesting that they are more engaged in alternative teaching tools. Finally, slightly over half of the class (53.3%) reportedly enjoyed participating in the Challenge with 26.7% of the class endorsing neutral responses and 20% responding that they did not enjoy the Challenge. Given that 80% of the class was initially enthusiastic, it raises the question as to what factors may have contributed to the approximately 30% of the class that were initially enthusiastic but ultimately neutral or in disagreement when it comes to comparison with other teaching tools and level of enjoyment. Later analysis of student implementation preferences and particularly of the open-ended responses may lend insight to what may have occurred and inform adaptations or improvements for future groups.

4.2 Perceived Learning Outcomes

The primary focus of the current study was student learning outcomes, including knowledge, skills, and attitudes. As discussed above, the studies looking at the GOMC thus far have primarily focused on the direct technical abilities gleaned whereas the current study expanded the scope to include broader abilities or "life skills." The findings for learning outcomes are presented in Appendix C along with their proposed conceptual groupings as "technical skills" or "life skills."

4.3 Principal Component Analysis

In order to empirically validate the conceptual organization of the learning outcomes into their respective "technical skills" and "life skills" categories, a principal component analysis with varimax rotation was performed on the sixteen variables comprising the perceived learning outcomes with the parameters of eigenvalues equal to or greater than 1 and an absolute value of .5 or greater.

The results of the analysis initially extracted five components; however, the fifth component consisted of only two items, one of which was previously included in the second component, resulting in the fifth component being excluded from the conceptualization of learning outcomes. Thus, findings yielded four final components: interpersonal life skills, digital technical skills, intrapersonal life skills, and adaptive applied skills. The first three components were conceptually consistent with the technical skills and life skills divisions but represented subdivision of life skills into interpersonal and intrapersonal life skills. The fourth extracted component consists of three variables, two from the original life skills category (ability to be flexible and adaptable on-the-job and written communication skills) and one from the technical skills category (ability to explain the concepts of click-through rate, landing page experience, campaign optimization, and return on investment).

While this component is inconsistent with the initial conceptualization, the grouping of variables makes sense within the context of the responses from the pilot study suggesting that effective understanding and use of concepts such as click-through rate for campaign optimization require flexibility and ongoing adjustments. Further, written communication skills are an integral component in effectively explaining the concepts and their dynamic nature, particularly in the context of the post-campaign report. All four components evidence good internal consistency with Cronbach's alpha scores of .7 or higher. The results of the principal component analysis are presented in Appendix D.

The mean scores for each of these components are depicted in Figure 3 along with the overall mean of the 15 validated items comprising the components. All scores were at a 3.7 level or higher, suggesting a tendency towards agreement on all scores, since scores of three are considered neutral. Two of the means fall solidly in the Agree range and represent the highest component means: digital technical skills and intrapersonal life skills suggesting the most growth in these areas. While the technical skills is no surprise, as the Challenge is aimed at these outcomes, the intrapersonal life skills scores support the assertion that experiential learning facilitates other personal growth skills that transcend disciplines such as self-awareness and self-efficacy. The

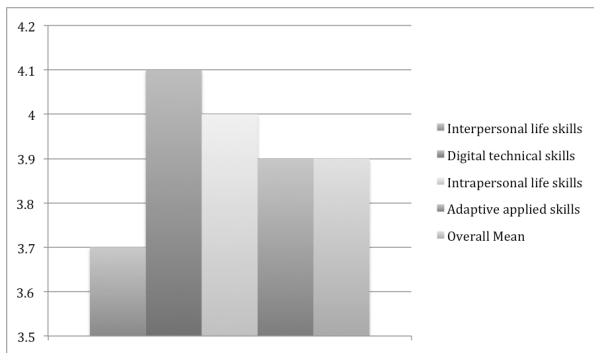


Figure 3: Component mean scores

interpersonal life component is noticeably lower than the other components and lower (though not significantly) than the overall mean across components (3.9), suggesting that while there appears to be learning in this area, it is not reported to be as strong as in other areas. Given the team-based nature of the Challenge, this result is somewhat surprising and will be discussed further later.

Results for the individual learning outcomes will be reviewed below according to their respective groupings.

4.4 Interpersonal Life Skills

The results for learning outcomes within this component are encouraging with half of the class or more agreeing with improvement in all five areas and disagreement evidenced by a single respondent in only one skill (leadership). Further, organizational skills were endorsed at an 80% level of agreement. The results are depicted in Figure 4.

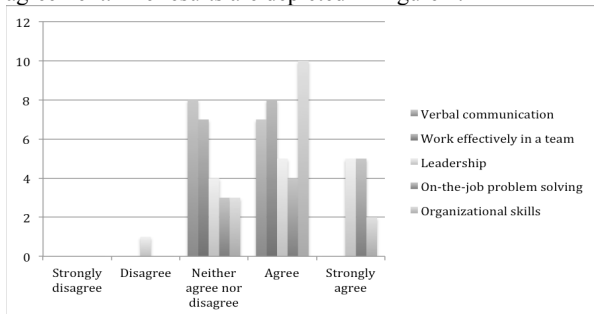


Figure 4: Score distribution – Interpersonal Life Skills

4.5 Digital Technical Skills

The results for digital technical skills were promising with three out of the four learning outcomes receiving endorsements of over 86% agreement and only one (ability to illustrate how technical and cultural factors affect the success of an online advertising campaign) receiving a slightly lower level of agreement at 73.3%. The remaining responses fell within the neutral response category with only one individual indicating disagreement in one area (ability to explain how to incorporate social media into a company's marketing plan). The results for digital technical skills are depicted in Figure 5.

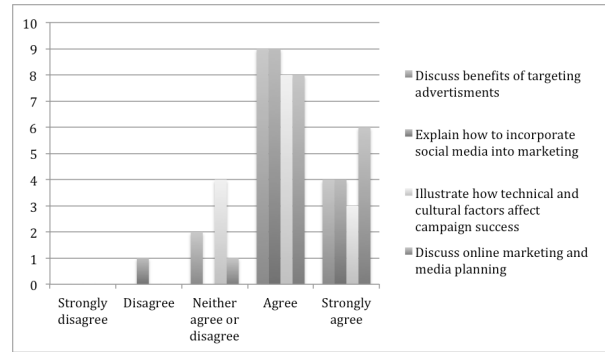


Figure 5: Score distribution – Digital Technical Skills

4.6 Intrapersonal Life Skills

Learning outcomes within intrapersonal life skills involving self-awareness and reflection, self-efficacy, and strategic planning were also encouraging with over 80% of the class agreeing with improvement in all three areas and disagreement evidenced by a single respondent in one skill (strategic planning). Further, one of the skills (level of confidence in abilities) received an agreement rate of 93.3%, suggesting considerable improvement in student feelings of self-efficacy. The distribution of responses is depicted in Figure 6.

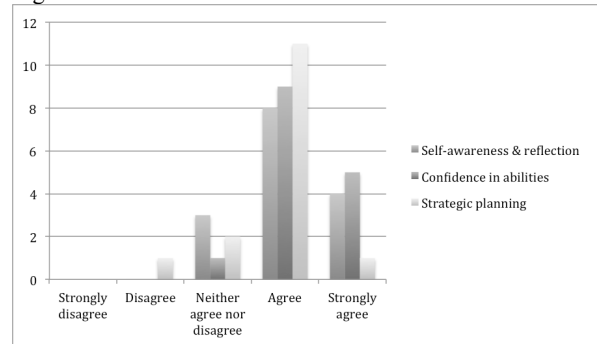


Figure 6: Score distribution – Intrapersonal Life

4.7 Adaptive Applied Skills

The results for this component indicate agreement levels of 60%, 86.6%, and 76.6% for each of the respective learning outcomes: ability to be flexible and adaptable on-the-job, ability to explain the concepts of click-through rate, landing page experience, campaign optimization, and return on investment (ROI), and written communication skills. The remainder of the responses fell within the neutral category. The distribution of responses is presented in Figure 7.

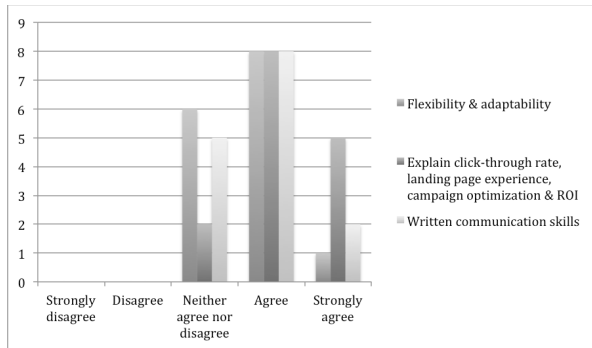


Figure 7: Score distribution – Adaptive Applied Skills

4.8 Student Implementation Preferences

The survey included three items designed to capture student preferences regarding implementation of the Challenge: whether clients should be assigned, whether the post-campaign report is perceived to be a useful component to the learning experience, and what the ideal team size is. Results from three items are presented in Figures 8 and 9.

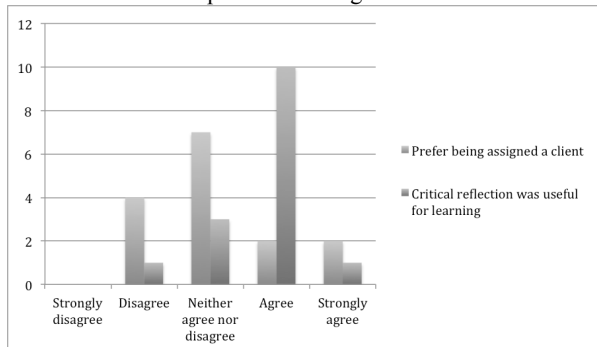


Figure 8: Score distribution – Student implementation preferences

Approximately half of the students (46.7%) reported no preference in client assignment or selection. The remainder of the class was evenly split between those that agree (or strongly agree) with preferring to have the client be assigned (26.6) and those that disagree (26.7%) and would prefer to select their own clients. There is no compelling evidence for either self-selection or assignment of clients and decisions regarding this factor should be made on a contextual basis and consider factors such as availability of clients and student familiarity with the area and local businesses. Student perceptions regarding the learning component of the post-campaign report suggest that 73.4% of students agree that it was useful for their learning. Of the remaining students, 20% endorsed neutral responses and 6.7% disagreed. The results regarding ideal team size follow in Figure 9.

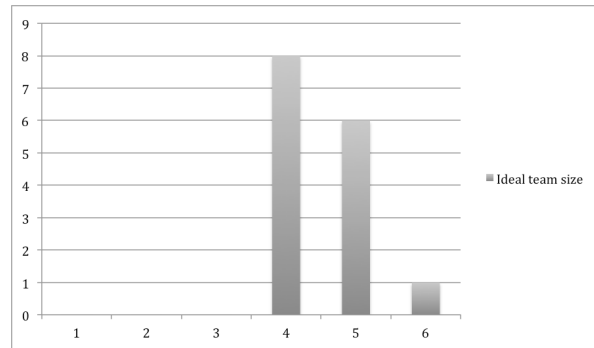


Figure 9: Team size preferences

The majority of the students suggested that groups of four (53.3%) or five (40%) are preferable for GOMC.

4.9 Students Speak Out: What They Liked and What to Fix

The open-ended survey questions inquired about what the students liked most about the GOMC and how their experience could have been improved. Analysis of the responses revealed six main factors that students liked most about participating in the GOMC. The factors are listed as follows with the percentage indication of the frequency of inclusion in open-ended responses (1) GOMC was a new/novel experience, different from other assignments (60%); (2) participation in GOMC was useful for their resume/curriculum vitae, business/job, future (53%); (3) GOMC provided real-time feedback and students were able to see the benefits for clients (33.3%); (4) working directly with companies (6.7%); (5) competitive nature of the Challenge (6.7%); and (6) thinking of keywords and search criteria clients might use (6.7%).

Students' suggestions on improving the GOMC experience clustered around four main areas: (1) additional time spent on the Challenge (either in preparation, during the Challenge, or execution during a time without the interference of other courses and assignments) (33.3%); (2) additional prior knowledge of tasks of the Challenge, including background on Google marketing techniques such as AdWords (whether through instruction, completion of online modules prior to the Challenge, or dedicating an entire course to online marketing) (26.7%); (3) teamwork factors (increased efficiency, clearer work distribution guidelines, better cooperation of members, more dedication, and ultimately the ability to choose their own groups to prevent "free riders"); and (4) more guidance in the preparation of paperwork (6.7%).

The Challenges faced by the students in this study were similar to those expressed by students in prior research who also reported difficulty managing the time demands of the Challenge with other responsibilities (Brown and Albright, 2013; Rosso et al., 2009), difficulty with the learning curve at the beginning involving large amounts of material to immediately learn and implement (Brown and Albright, 2013) and teamwork factors including team members not putting forth optimal or equal effort (Lavin, 2010).

5. CONCLUSIONS

The GOMC is a well-structured experiential learning activity that can be integrated into the class setting with relevant external metrics and report requirements that facilitate the assessment and evaluation process. In addition to facilitating experience-based learning and immersion into a business setting with real money and outcomes, it also encourages and demands constant reflection, evaluation, and adjustment to campaign strategies. As a result, the GOMC provides strong student outcomes in regards to their subjective experiences in the Challenge and acquisition of critical applied skills in digital marketing as well as additional skills that are multi-disciplinary and widely applicable.

The current study found four core areas of learning outcomes resulting from participation in the GOMC: (1) Interpersonal life skills (verbal communication, teamwork, leadership, problem-solving, and organization), (2) Digital technical skills (targeting advertisements, integrating social media into marketing, analyzing the impact of technical and cultural factors, and discussing online marketing and media planning), (3) Intrapersonal life skills (self-awareness and reflection, self-efficacy and confidence, and strategic planning), and (4) Adaptive applied skills (flexibility and adaptability, ability to explain concepts related to campaign optimization, and written communication skills).

While learning was evident across all of these domains, eight of the learning outcomes were endorsed by over 80% of the students (see Appendix C) with two receiving agreement from 93.3% of participants (ability to discuss online marketing and media planning and increased level of confidence in abilities). While the former may be achievable in a traditional classroom setting, the latter would be much harder to facilitate in the absence of an experiential learning environment.

Moreover, it is important to emphasize that both the technical and life skills identified in the current study correspond with student learning outcomes that have been deemed critical for employment and sustainability. The Partnership for 21st Century Skills highlighted five skill areas that will “withstand the test of time, fluctuations in the economy and the marketplace and dynamic employment demands” (2008, p. 10). The following five areas form their framework of critical student outcomes for 21st Century Learning: (1) core subjects; (2) 21st Century themes (including global awareness, civic literacy, etc.); (3) learning and innovation (creativity and innovation skills, critical thinking and problem solving skills, communication and collaboration skills); (4) information, media and technology skills (information literacy, media literacy, information and communications technology literacy); and (5) life and career skills (flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, leadership and responsibility).

Further, according to the National Association of Colleges and Employers (NACE) (2014) 2014 Job Outlook Survey, the candidate skills/qualities that are most desired (in order of importance) are: ability to work in a team structure; ability to make decisions and solve problems; ability to plan, organize, and prioritize work; ability to verbally communicate; ability to obtain and process information;

ability to analyze quantitative data; technical knowledge related to the job; proficiency with computer software programs; ability to create and edit written reports; and ability to sell or influence others. These findings once again highlight the importance of life skills at an equal if not greater level than direct technical skills, and encourage the use of activities such as GOMC to foster such holistic learning and the need for additional research that captures a broader range of learning outcomes.

The primary challenges faced by students in the GOMC included excessive time demands, particularly in light of competing demands by other courses and/or work. Based on student feedback in the current study and previous literature (Brown and Albright; 2013; Lang and Ceccucci, 2014; Rosso et al., 2009), it is recommended that courses integrate didactic material and lessons on Google AdWords (available free from Google as well as other sources) and other techniques prior to launching campaigns. Also, based on the findings of the current study, students recommended the ability to select their own groups to increase group cohesiveness and effectiveness and decrease ‘free-riding’ or inequitable distribution of workload. There were also recommendations for rotating tasks between group members to ensure equitable work distribution and facilitate equal learning across members. Groups of four or five students were reported to be ideal, consistent with previous findings (Lang and Ceccucci, 2014). No preferences were found in regards to client assignment or self-selection and it is suggested to facilitate student preferences in this area, allowing support for international or exchange students in acquiring an appropriate client.

It is important to note that the current study was an exploratory study with a small pilot group and limited sample and results should therefore be interpreted with caution. It is recommended that these be considered potential trends for further exploration in larger samples and across educational departments and settings. Given the multi-disciplinary nature of the skills that emerged in the life skills category it is anticipated that these results will likely be replicable in other contexts. Experience-based learning continues to prove to be a compelling educational tool but it is important to measure both the direct, discipline-based learning outcomes (in this case the “technical skills”) as well as broader, personal and life skills which continue to be highlighted as increasingly important in both educational and occupational settings. After all, Universities are in the business of educating and developing individuals, not just teaching course material.

6. ACKNOWLEDGEMENTS

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AUTHOR BIOGRAPHIES

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Appendix A: Pilot Study Learning Outcomes

Pilot Study 2014	
<i>Extracted Learning Outcomes</i>	<i>Selected Student Excerpts</i>
The ability to work more effectively in a team	<ul style="list-style-type: none"> • Learn from working in a group/with others; • Working more efficiently together; • Being more successful in group format
Leadership skills	<ul style="list-style-type: none"> • Taking a lead; • Maintaining accountability; • Ensuring success; • Motivating self and others,
Written communication	<ul style="list-style-type: none"> • Writing skills; • Report writing;
On-the-job problem-solving ability	<ul style="list-style-type: none"> • Trial and error; • Continuous learning and adjustments;
Verbal communication	<ul style="list-style-type: none"> • Communicating and negotiating with group members and clients;
Ability to be flexible and adaptable on-the-job	<ul style="list-style-type: none"> • Handling stress and pressure, • Taking on various tasks and roles as necessary; • Being patient and don't rush the process;
Organizational skills	<ul style="list-style-type: none"> • Prioritizing; • Time management; • Structured task division; • Organization, meeting coordination and workload division; • Time, task division, schedules, commitments
Strategic planning abilities	<ul style="list-style-type: none"> • How to strategize and come up with new ideas to increase campaign success
Self-awareness and reflection	<ul style="list-style-type: none"> • Self-reflection and insights, • I discovered more about myself
Self efficacy or confidence in own abilities	<ul style="list-style-type: none"> • Feelings of success, pride, and accomplishment
Ability to collaborate in a professional setting	<ul style="list-style-type: none"> • Learn to deal with personnel from different departments; • More professional in work environment

Appendix B: Survey Questions

1	Our client was helpful and accessible when needed.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
2	Our client was interested in our work and the challenge.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
3	Compared to other teaching tools (such as simulations or case studies), I was more deeply engaged with the Challenge.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
4	I enjoyed participating in the Challenge.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
5	I was enthusiastic about participating in the Challenge.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
6	I would prefer being assigned a client to work with rather than finding a client on own.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
7	Participating in the Challenge improved my ability to collaborate effectively in a professional group setting.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
8	Participating in the Challenge improved my ability to discuss online marketing and media planning.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
9	Participating in the Challenge improved my ability to discuss the benefits of targeting advertising to a select audience.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
10	Participating in the Challenge improved my ability to explain how to incorporate social media into a company's marketing plan.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
11	Participating in the Challenge improved my ability to explain the following concepts: click-through-rate, landing page experience, campaign optimization, and return on investment (ROI).	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
12	Participating in the Challenge improved my ability to illustrate how technical and cultural factors affect the success of an online advertising campaign.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
13	Participating in the Challenge improved my ability to work effectively in a team.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
14	Participating in the Challenge improved my leadership skills.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
15	Participating in the Challenge improved my written communication skills.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
16	Participating in the Challenge improved my on-the-job problem solving ability.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
17	Participating in the Challenge improved my verbal communication skills.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
18	Participating in the Challenge improved my ability to be flexible and adaptable on-the-job.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
19	Participating in the Challenge improved my organizational skills.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
20	Participating in the Challenge improved my strategic planning abilities.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
21	Participating in the Challenge increased my level of self-awareness and reflection.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
22	Participating in the Challenge increased my level of confidence in my ability to complete tasks and reach goals.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
23	The critical reflection which is part of the post-campaign report (i.e. the "Learning Component") was useful for my learning.	1= Strongly disagree; 2= Disagree; 3= Neither agree nor disagree; 4= Agree; 5= Strongly Agree
24	I had used Google AdWords before starting this class.	1 = True; 2= False
25	I spent about _____ hours per week working on the Challenge outside of class (for example doing related research checking performance, updating the account, etc.)	1= 0; 2= 1-5; 3= 5-10; 4= 10-20; 5= More than 20
26	What would be the ideal team size for the Challenge?	1=1; 2=2; 3=3; 4=4; 5=5; 6=6; 7=7; 8= More than 7
27	My gender is:	1= Male; 2= Female
28	What did you like most about participating in the Challenge?	Open-ended
29	How could your experience in the Challenge have been improved?	Open-ended

Appendix C: Student Learning Outcomes

	Participating in the Challenge improved my:	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	% of agreement	Mean	Standard deviation
Tech Skills	Ability to discuss online marketing and media planning.	0%	0%	6.7%	53.3%	40%	93.3%	4.33;	.62
	Ability to discuss the benefits of targeting advertising to a select audience.	0%	0%	13.3%	60%	26.7%	86.7%	4.13	.64
	Ability to explain how to incorporate social media into a company's marketing plan.	0%	6.7%	0%	60%	26.7%	86.7%	4.14	.77
	Ability to explain concepts: clickthrough rate, landing page experience, campaign optimization, and return on investment (ROI).	0%	0%	13.3%	53.3%	33.3%	86.6%	4.20	.68
	Ability to illustrate how technical and cultural factors affect the success of an online advertising campaign.	0%	0%	26.7%	53.3%	20%	73.3%	3.93	.70
Life Skills	Ability to work effectively in a team.	0%	0%	46.7%	53.3%	0%	53.3%	3.53	.52
	Leadership skills.	0%	6.7%	26.7%	33.3%	33.3%	66.6%	3.93	.96
	Written communication skills.	0%	0%	33.3%	53.3%	13.3%	76.6%	3.80	.68
	On-the-job problem solving ability.	0%	0%	40%	53.3%	6.7%	60%	3.67	.62
	Verbal communication skills.	0%	0%	53.3%	46.7%	0%	46.7%	3.47	.52
	Ability to be flexible and adaptable on-the-job.	0%	0%	40%	53.3%	6.7%	60%	3.67	.62
	Organizational skills.	0%	0%	20%	66.7%	13.3%	80%	3.93	.59
	Strategic planning abilities.	0%	6.7%	13.3%	73.3%	6.7%	80%	3.80	.68
	Level of self-awareness and reflection.	0%	0%	20%	53.3%	26.7%	80%	4.07	.70
	Level of confidence in my ability to complete tasks and goals.	0%	0%	6.7%	60%	33.3%	93.3%	4.27	.59
Ability to collaborate effectively in a professional group setting.	0%	0%	26.7%	60%	13.3%	73.3%	3.87	.64	

Appendix D: Principal component analysis and Cronbach's alpha

	Component				
	Interpersonal Life Skills	Digital Technical Skills	Intrapersonal Life Skills	Adaptive Applied Skills	Excluded
Verbal communication skills	.957				
Ability to work effectively in a team	.957				
Leadership skills	.802				
On-the-job problem solving ability	.714				
Organizational skills	.612				
Ability to discuss the benefits of targeting ads to a select audience		.909			
Ability to explain how to incorporate social media into a marketing plan		.900			
Ability to illustrate how technical and cultural factors affect the success of an online advertising campaign.		.829			
Level of self-awareness and reflection			.914		
Level of confidence in my ability to complete tasks and goals			.892		
Strategic planning abilities			.716		
Ability to be flexible and adaptable on-the-job.				.903	
Ability to explain the following concepts: clickthrough rate, landing page experience, campaign optimization, and return on investment (ROI).				.808	
Written communication				.671	
Ability to collaborate effectively in a professional group setting.					.870
Ability to discuss online marketing and media planning.		.507			.560
Cronbach's α	.866	.850	.843	.771	



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