The Google Online Marketing Challenge: Classroom Learning with Real Clients, Real Money, and Real Advertising Campaigns | JIAD

Case Study

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Abstract

The advent of keyword advertising has had a tremendous effect on online advertising, Internet marketing, search engines, and Web sites that earn advertising revenue. Pay-per-click advertising therefore provides a critical topic for educators who hope to prepare students for professional careers in advertising and related areas. The Google Online Marketing Challenge offers an innovative way to achieve this goal in a unique hands-on context. With more than 8,000 participating students from 47 countries, the 2008 Challenge is, as far as the authors know, the largest in-class academic competition ever undertaken. The Challenge is also unique in its linkages among students, businesses, and the classroom. This article briefly reviews online marketing and Google's advertising platform.

Keywords: Sponsored search, online marketing, online advertising.

In July 2008, Google announced the global winners of its inaugural Google Online Marketing Challenge: five undergraduate students from the University of Western Australia (www.google.com/onlinechallenge/). The five students each won an Apple MacBook Pro and a week-long, five-star holiday, along with their professor, in San Francisco. During their San Francisco trip, they will spend

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a day at Google's global headquarters, the Googleplex.

More than 8,000 students (1,620 teams) from 47 countries across six continents participated in the 2008 Challenge. In addition to the global winner, three regional (the Americas, Europe-Middle East-Africa, and Asia-Pacific) winners and six regional finalists emerged from these 1,620 teams. The regional winners each won an Apple MacBook Pro and, along with their professors, overnight trips to their area Google headquarters, whether in San Francisco, London, or Sydney. The six regional finalists also won a trip to Google.

How did these ten winning teams rise to the top? And just as important, how does the Challenge's real-world setting benefit academics and businesses, as well as student learning about keyword advertising?

Current projections predict that Internet advertising will grow 15-20% through 2011, and keyword advertising-also known as search, contextual, or pay-per-click (PPC) advertising-will be the dominant form (IDG 2008). As a global student contest focusing on online marketing, the Google Online Marketing Challenge gives students real-world, hands-on keyword advertising experience while they participate in thrilling international competition. Adopting a soup-to-nuts approach, the Challenge includes a student text, student guides, a professor guide, US$200 for student teams, evaluation materials, and prizes for outstanding teams. As part of the Challenge, student teams recruit a small to medium-sized enterprise (SME) and manage its online marketing campaign. The Challenge therefore goes beyond keyword advertising and gives students real-life experiences as online marketing consultants.

This case study shares insights from three academics and two Googlers who developed and ran the Challenge. Two of the academics won the Challenge. This study begins with an overview of keyword advertising, followed by a description of the Google Online Marketing Challenge, an educational initiative focused on keyword advertising, online marketing, teamwork, and business consulting. Subsequently, this research explains how the 2008 Challenge helped students achieve learning objectives and concludes with suggestions for classroom implementation and tips for both enjoying and succeeding in the 2009 Challenge.

Keyword Advertising

In a prescient article, Rust and Varki (1996) argued that interactive media, particularly the Internet, would change the traditional paradigm of mass media advertising to heterogeneous audiences. Among their forecasts, they claimed interactive media would allow individual consumers to access pertinent information easily, nonsequentially, and on demand. Interactive advertising would be targeted, by invitation, and accountable. Keyword advertising exemplifies this very prediction, because the advertisements a user sees in PPC contexts are targeted on the basis of specific keywords.

The user accepts the invitation to see the advertiser's Web site by clicking on the ad, and every click is accountable.

New media tends to emulate earlier media, and just as early television broadcasts resembled radio broadcasts (Fidler 1997), early Web site advertising resembled traditional mass media advertising. Online advertising charged according to impressions, that is, how many people could possibly see an advertising banner on a Web page. This model stemmed from the mass media concept of cost per thousand (CPM), and rates ranged from $10 to $100 per thousand impressions (Murphy and Forrest 1996). Yet CPM ignores whether the Web site visitor saw, or clicked, the ad banner. Another model, charging a flat fee for ads on a Web site or section of the site, suffers the same CPM limitations. Finally, three other models account for visitor actions to compensate the Web site that hosts the ads: per sale, per lead, or per click (Dickinger and Zorn 2008).

In its most common implementation, keyword advertising adopts a PPC basis. One of the earliest companies to use a PPC model was the search engine GoTo.com in 1998 (*The Economist* 2006; Fain and Pedersen 2005). In addition to PPC, GoTo.com aligned the advertisements with keywords in the search. Users searching for Web sites related to shoes, for example, would see advertisements related to shoes alongside the search engine results. This sponsored search aligned the advertisement's context with the keywords in the search engine query.

The company refined its model over the next five years and became Overture in 2003 (Fain and Pedersen 2005). In 2002, Google launched a comparable model, AdWords. Yahoo acquired Overture in 2003, and Microsoft's similar adCenter began in 2005 (*The Economist* 2006; Fain and Pedersen 2005). Common features of keyword advertising are as follows:

Advertiser-provided content, that is, a set of advertiser hyperlinks annotated with keyword tags, titles, and descriptions.

Advertiser-provided bids that value traffic according to specified concepts or keywords.

Combined *manual and automated review process* to ensure that advertiser content is relevant to the target keyword.

Matching advertiser content to user queries received by a search engine.

Displaying advertiser content in some rank order in some placement alongside other algorithmic (i.e., non-sponsored or organic) search engine content.

Gathering data, metering clicks, and charging advertisers on the basis of consumer clicks on the displayed content (Fain and Pedersen 2005, p. 12).

Several overviews and histories of keyword advertising are available as well (e.g., Fain and Pedersen 2005; Jansen and Mullen 2008).

Google Adwords and Adsense

Keyword advertising, the fastest growing advertising medium, is essential for many businesses. It provides the revenue base for major search engines such as Google and Yahoo, as well as many content-based Web sites. In 2007, Google earned $16.4 billion, and more than 90% of this revenue came from keyword advertising (Google 2007). Keyword advertising is critical as a revenue stream for the major search engines and appears to be their major business model for the foreseeable future.

AdWords (adwords.google.com/) and AdSense (www.google.com/adsense/) provide Google's keyword advertising platforms. AdWords, Google's text-based system for advertising on search engine result pages for both Google and partner sites such as AOL and Ask.com, enables advertisers to create ads for display alongside the keywords related to user queries. This model helps advertisers control costs and provides near total accountability in their advertising budget. AdSense is similar, except that the ads appear on Google's Content Network of millions of Web sites in more than 100 countries and 20 languages. For example, *The New York Times* earns revenue by placing "Ads by Google" on its Web pages.

Usually displayed in the right-hand column of Google search results, traditional sponsored ads have four lines of copy and no images. The headline contains a maximum of 25 characters, whereas the next two lines and the final line (i.e., the Web site address) each contain a maximum of 35 characters. Table 1 shows two sample AdWords ads for the *Journal of Interactive Advertising*. The copy is identical, except for the second half of the second line, which attempts to appeal to scholars (left) or consumers interested in a free look (right).

Table 1: Sample AdWords

Interactive Advertising Top academic journal; great articles Check out the latest issue www.jiad.org	Interactive Advertising Top academic journal; free access Check out the latest issue www.jiad.org

AdWords and AdSense also offer a wide range of advertising options. Advertisers can craft their ads to target certain keywords, similar to Boolean queries such as exact, near, or multiple terms. They also can develop multiple ads for the same keywords, running A – B testing as in Table 1, to determine the best advertisements. Other targeting options include geographical areas, time of day, and language. In addition to these options, AdWords has a sophisticated reporting system for monitoring results. By analyzing the results, advertisers can revise their ads, keywords, and targeting.

The cost per click (CPC) depends on the marketplace. Multiple advertisers that want their ads displayed alongside certain keywords bid on the CPC through an online auction. All else being equal,

the highest bidder gets the top position, the second highest bidder gets the second position, and so forth. However, Google also factors in the relevance of the ad to the selected keywords and the number of clicks that an ad receives. If an ad generates few clicks, it will move down in the ad place listing, even if it posts a high bid. Keyword advertising by Yahoo and Microsoft Live Search works in a similar fashion.

The dominance of keyword advertising makes it seem logical that educators should discuss this topic with their students. Yet the dynamic nature of online advertising and the inherent lag in updating textbooks also makes discussing keyword advertising in the classroom a challenging task. An online search reveals few university course offerings in keyword advertising. However, as a recent offering in the keyword advertising area, the Google Online Marketing Challenge could interest academics who teach interactive advertising or related topics.

The Google Online Marketing Challenge

Incorporating the inaugural Google Online Marketing Challenge into a classroom setting consists of six major phases:

Form teams: The teams must contain four to six students, but there are no other Google criteria; professors determine how to form the teams.

SME recruitment: The teams or professors recruit a SME that employs fewer than 100 employees. The SME must have a Web site and cannot currently use AdWords. Beyond these criteria, the SME may be any type of organization, from business to nonprofit to political.

AdWords and vouchers: Each team works with the SME to set up an AdWords account and structure an online marketing campaign. Google provides each team with US$200 for the campaign.

Precampaign strategy: Each team submits a two-page, precampaign report that outlines the proposed marketing approach for its client SME.

Campaign: During the three-week competition window, the teams optimize and refine their campaigns on the basis of the campaign results and in line with their campaign strategy.

Postcampaign evaluation: Each team submits a ten-page, postcampaign report discussing the evolution of its campaign and the learning experience.

Google evaluated all teams' performance according to the effectiveness of their campaign. A global academic panel then judged the two written reports from the top 15 teams.

Google provided a student text (Google 2008b), student guides, a professor guide (Google 2008a), and a $200 AdWords voucher. Because there was no entry fee for the Challenge, a financial hurdle for participation did not exist. More than a dozen professors from several disciplines and various

countries helped develop the Challenge concept and support materials.

The learning objectives for the Challenge were as follows (Google 2008a, p. 7):

Given the opportunity, choose to discuss online marketing and media planning.

Using examples, share the learning experience of group work and business consulting.

Using examples, explain the following terms: banner advertisement, click-through rate, conversion, landing page, optimization techniques, return on investment (ROI), and text advertisements.

Using examples, contrast mass advertising and context-sensitive advertising.

Using examples, contrast the advantages and disadvantages of three online advertising payment models: pay-per-click, cost per thousand impressions (CPM), and affiliate.

Using examples, illustrate technical and cultural factors affecting the success of online advertising campaigns.

Using examples, illustrate the difficulties of developing a web-based marketing campaign that will stand out among the billions of web pages available.

Many professors augmented these learning goals with their own, course-specific objectives.

2008 Challenge Results

The evaluation process for the 2008 Google Online Marketing Challenge was multifaceted. Across 47 countries, 1,620 student teams completed all the requirements. Using a proprietary algorithm, Google narrowed the field to 150 teams (9% of the 1,620 teams). Google employees then manually reviewed the campaigns, trimming the 150 to 15 (.2% of 1,620). The algorithm and manual review focused on five key areas of the AdWords campaigns: account structure, optimization techniques, account activity and reporting, relevance, and performance and budget.

Although the algorithm used for the initial evaluation is proprietary, the Google AdWords Center (http://www.google.com/adwords/learningcenter/) offers techniques to address each area of effective campaigns. Teams needed to structure their campaigns into coherent themes and optimize the ads for the selected keywords. The students also had to structure the ads and ensure that the linked Web pages were relevant to the user's queries. The overall campaign should generate traffic to the SME's Web site, which the students monitored with AdWords reports. Finally, the teams had to maximize account performance by analyzing the reports and using their limited budget.

An Academic Panel (www.google.com/onlinechallenge/panel.html) evaluated the fifteen finalist teams solely on the basis of their campaign reports and selected six regional finalists, three regional winners, and one global winner (.1% of the 1,620). The winning teams displayed remarkable

performance, particularly given the three levels of evaluation.

The student responses to the Challenge also were impressive. One student noted, regarding his team and their preparation,

> Both newcomers and Google AdWords veterans comprised our team of five. A key factor of our success was bringing each member to the same page regarding knowledge about pay-per-click marketing. Months before the campaign started, we made it required reading to study the official Google learning center and relevant posts on prominent industry blogs

In terms of achieving learning objectives, another team stated in its postcampaign report:

> The team had real exposure to market information, which allowed us to make decisions on segmentation, targeting and positioning and integrated communications. The campaign gave us information that allowed us to make further pricing and targeting recommendations to the client. The real application of these general marketing principles allowed the team to learn considerably from the experience and understand the dynamics of real market behavior.

Challenge Tips

Each professor implemented the Challenge in his or her own manner. The post-Challenge survey of professors showed that 50% included the Challenge as a mandatory course exercise that accounted for an average of 30% of the students' grade. Furthermore, 85% of professors reported that, relative to other simulations or course projects, students were more engaged with the Challenge. A similar percentage of SMEs agreed that participating in the Challenge was a wise business decision. Although the exercise centered on AdWords, more than half the professors perceived online marketing as the general focus of the Challenge.

The survey responses from participating students, professors, SMEs, and those who managed the Challenge suggest several implications for classroom implementation. These recommendations should help professors, students, and SMEs succeed and enjoy the 2009 Challenge.

Students. First, online marketing instructional materials appear mandatory. Many students had some understanding of this domain but needed additional expertise to participate effectively in the Challenge. As the professor survey revealed, the Challenge goes beyond AdWords and keyword advertising. Second, most students lack hands-on experience with AdWords or similar platforms; therefore, exercises for selecting keywords, constructing ads, and setting bids should be part of the pre-Challenge campaign preparation. Third, as the campaigns develop, excellent learning opportunities emerge from both successes and failures. Teams can alter their strategies in response of performance reports. Fourth, a postcampaign evaluation and critique is a valuable teaching event, because all teams review both their own campaigns and the results of other teams.

Some general guidelines for students implementing effective PPC campaigns are as follows:

Structure the campaign into AdGroups, with each group focused on a particular product line or theme.

Design relevant and specific ad text for AdGroup. In the ads, use call-to-action phrases, such as "buy now."

Do not duplicate keywords across AdGroups.

When selecting keywords, use negative keywords (i.e., those for which the ad should not appear) to improve the click-through rate and target consumers. For example, *free* as a negative keyword reduces queries for free products.

Create multiple variations of ads to test which one attains the best click-through rate. Continually improve ads through A – B testing. Utilize the Report Center to monitor ad performance and discover which keywords drive traffic.

SMEs. As is the case for any real-world classroom project, locating an appropriate and engaged SME can be a challenge. The right SME is critical to successful outcomes in the Challenge. As a couple of the participating SMEs noted,

> Sharp minds, energetic marketers, and a free AdWords budget combined to make this program a real opportunity to experiment with on-line marketing at Google. I would strongly recommend participating in the Challenge.

> What a great boost. It's great when smart MBA students throw themselves into your website's marketing. In a very short time, they can find ways-through the Google Challenge-to drive traffic to your site.

In addition to personal contacts, local chambers of commerce and small business councils provide sources of potential clients. Good clients commit to spending time with the student teams, coming into the classroom, sharing feedback about the proposed campaign, monitoring campaign results, and following student suggestions to improve their Web sites. Many teams quickly found their clients' Web sites provided textbook examples of what not to do. In many cases, the clients followed teams' suggestions to improve their sites; some SMEs went further and installed Google Analytics (www.google.com/analytics) to analyze overall Web site traffic as well as traffic gained from AdWords clicks. Finally, a key learning outcome related to the consulting experience; teams must understand that they advise, not mandate, what SMEs should do.

Professors. The Challenge provides a great teaching and learning tool by giving students the opportunity to engage with real clients. To benefit from this teaching and learning tool however, the students must be familiar with keyword advertising, which represents the professors' contributions.

The following five suggestions should help improve student and professor experiences in 2009.

First, professors should gain experience with using AdWords. If they are interested, Google will provide a US$50 AdWords voucher to registered academics on request. In addition, several solid reference texts appear on the AdWords platform. Professors should become familiar with the associated Challenge material, including the textbook, student guides, and academic guide.

Second, the Challenge motivated students to learn about advertising and marketing theories, particularly relevant online theories. Competing professors therefore should provide students with a list of complementary advertising or marketing texts. Students from different backgrounds can develop common knowledge by reading similar textbooks before they start their AdWords Campaign.

Third, though 15 teams made the final cut, only 10 won a trip to Google offices. The sole distinguishing factor was the quality of the written reports. Professors must reinforce to students that the Challenge contains an academic report writing feature, as well as an applied perspective related to campaign statistics.

Fourth, the Challenge can be fun and lead to jobs after graduation. Professors therefore could emphasize that regardless of how students fare in the 2009 competition, they should enjoy the Challenge and attempt to learn as much as possible. An unexpected outcome of the 2008 Challenge was an unofficial social network (www.gomcha.com) that developed for students and professors in the Challenge. Those participating in the future should consider joining this network to connect with others involved in the Challenge.

Several professors in the 2008 Challenge also noted that the experience gave their students a competitive edge when applying for jobs. As one academic commented, students' introductory AdWords knowledge set them apart from other job applicants, "so much so that they either were offered a job because of this experience or they moved to the next round in the interview process because of their knowledge."

Fifth and finally, other than hard work, no magic bullet or secret formula exists for achieving the learning objectives or winning the Challenge. Students can and will seek assistance from AdWords specialists or AdWords texts. However, the winning teams read the Challenge materials, follow the Challenge guidelines, focus on five key areas of an AdWords campaign (account structure, optimization techniques, account activity and reporting, relevance, and performance and budget), and craft polished written reports that follow the report guidelines.

Conclusion

The 2008 Google Online Marketing Challenge was a success in terms of enrollment, industry collaboration, real-world experiences, and community engagement. It helped address a key area of

marketing and advertising and continues to serve as a vehicle for teaching these critical topics in the classroom. As a result and based on participants' survey responses, Google is gearing up for an improved and even bigger 2009 Google Online Marketing Challenge. Registrations open in October.

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