

# Utility of a dermatology interest group blog: the impact of medical student interest groups and Web 2.0 tools as educational resources

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**Abstract:** The open access University of Texas Dermatology Interest Group blog was established in 2004 for the purposes of increasing communication and collaboration between medical students and dermatology faculty, residents, and alumni, as well as to promote educational opportunities and the missions for which the interest group was created. This blog is unique because of its longevity and continuous postings directed toward the educational and professional needs of medical students and residents. A blog user survey was performed to assess viewers' thoughts, purpose of viewing, demographic profile, subscriber status, usage of the blog and other Web 2.0 tools (forums, Facebook, blogs, Twitter, podcasts), and perceived usefulness. Sixty-one anonymous online surveys were completed during a 1-month period. Statistical analyses of the responses demonstrated that the utilization of web-based tools and the blog were valuable resources for students, especially for blog subscribers, those more involved in an interest group, and those reading the blog for a longer period of time. The usefulness and impact of this method of communication and dissemination of information in medical education may encourage other student groups, faculty advisors, and educators to implement similar educational tools at their institutions.

**Keywords:** education, medical student, dermatology, blog

## Introduction

The establishment of medical school interest groups continue to contribute to the emergence of medical student leadership roles and professional relationships with faculty, residents, and alumni. Interest groups provide students with additional educational opportunities owing to the creation of unique professional interactions in a noncurricular setting.<sup>1</sup> They have also been shown to play an essential role in expanding opportunities for student projects, research, and service, since interest groups promote communications and knowledge about these activities.<sup>2</sup>

The electronic medium for the Dermatology Interest Group (DIG) at the University of Texas Medical Branch (UTMB) is the blog [digutmb.blogspot.com](http://digutmb.blogspot.com). It was created with the aim of increasing communication and collaboration between students, faculty, residents, and alumni, to promote educational opportunities and to foster the missions for which DIG was created. The UTMB DIG has been described in detail in several published reports.<sup>3,4</sup> The same dermatology faculty has advised it since formation, while its executive student officers typically serve 1–3 years. To further understand the impact of this dermatology blog, an online survey was created to evaluate the educational impact on users of the blog, a Web 2.0 tool created for medical students, dermatology residents, and faculty viewers.

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Blogs, originating from the term “web-logs,” have become a popular way to communicate due to their dynamic nature that allows continuous updating and broadcasting of information as blog posts. Uploaded posts serve as announcements arranged in reverse chronological order and may include web links and images.<sup>5</sup> The application of web-based tools, now generally referred to as “Web 2.0” (wiki, blogs, podcasts, Twitter, forums, etc), has significantly influenced the progress of medical education, particularly dermatology, because of the visual nature of the specialty.<sup>6–8</sup>

Medical education resources through web-based tools have been shown to influence professional and character development. Medical web-logs promote reflection and support students’ professional growth when faculty are involved because this media encourages discussions, collaboration, and mentoring with faculty and residents. This activity serves as a source of positive role modeling and has been shown to help promote empathy.<sup>9,10</sup>

[digutmb.blogspot.com](http://digutmb.blogspot.com) is unique because its content is directed toward medical students and residents, particularly focusing on their educational and professional needs.<sup>4</sup> In December 2012, an online search using Google as the search-engine found that several other DIG blogs exist. At the time of that review, it was not possible to identify any other open access medical school DIG blogs with new posted content within the last 6 months.<sup>4</sup>

A preliminary assessment of [digutmb.blogspot.com](http://digutmb.blogspot.com) was published in 2006, analyzing its early impact after 9 months of activity.<sup>3</sup> Since its publication 8 years ago, there has been a significant increase in blog activity, number of viewers, expansion in viewer audience, and changes in blog content. In 2013, the two authors of this article analyzed the use of the blog by gathering statistical information from the tracking tools provided by the blog host website, [www.blogger.com](http://www.blogger.com) and [sitemeter.com](http://sitemeter.com).<sup>4</sup> This approach facilitated a descriptive analysis of the number of subscribers, blog views, audience location, and content trends that have occurred in the past 10 years since the creation of the blog in 2004. The number of blog views and audience members with relationship to the number of posts and post content over time was also evaluated, demonstrating that the blog was being used by a variety of audiences.<sup>4</sup>

Starting with only 16 subscribers, the blog grew to 171 subscribers.<sup>4</sup> There was an increase in the number of post entries compared to earlier years.<sup>4</sup> The study also identified a trend in increasing post subject categories pertaining to dermatology resources/news/articles, residency applications, and resident-related information.<sup>4</sup> The number of page

views increased during dermatology residency application, interview, and ranking periods.<sup>4</sup> An international viewer population was also evaluated using the Blogger.com tracking tool.<sup>4</sup> The average duration of blog viewing time was recorded to be 1 minute and 57 seconds suggesting that there may be the utilization of additional blog information (archival material and/or sidebar features) during visits.<sup>4</sup>

[digutmb.blogspot.com](http://digutmb.blogspot.com) has been recognized and cited in various published articles and books as an example of a dermatology medical education blog.<sup>5,9,11–20</sup> A more detailed evaluation of the blog was needed to assess our blog viewers’ thoughts, purpose of viewing, viewer population (eg, UTMB student, non-UTMB student, resident), subscriber status, perceived usefulness of the blog and interest groups, and Web 2.0 usage. The survey was designed to assess which components of online interest groups and Web 2.0 blogs were perceived as most useful for medical education. Questions addressed included whether there were differences in perception of impact and usefulness across demographic groups (eg, gender, student/faculty, international viewers, and first/second year medical students versus third/fourth year medical students). In addition, we were interested in learning if the blog affected student–faculty relationships, opportunities for research, volunteering, and residency applications. Lastly, we evaluated if the blog provided relevant dermatology resources, news, and articles, and if so, which were the most useful.

## Materials and methods

This study was an Institutional Review Board-approved comparative design research survey that utilized an online survey designed to capture relevant demographic variables (eg, sex, year in medical school, subscriber versus nonsubscriber [subscribers are blog users who requested inclusion on the blog email list that enables them to receive emails of new blog content and who have not requested removal from the email mailing list], UTMB versus non-UTMB, and US versus international users), usage information (blog access frequency, duration of blog usage), usage goals (reasons for involvement in student interest groups), and evaluations of blog usefulness (proportional rankings on usefulness categories, UTMB DIG usefulness, and effectiveness of Web 2.0 in medical education). The survey consisted of 12 questions and was available to users for 1 month (Figure S1). A reminder to complete the survey was added as an addendum at the end of blog posts during the entire month. A reminder to complete the survey was also posted 1 week and again 1 day before the survey ended. The survey immediately presented itself as a

pop-up when the blog was accessed and no longer appeared after the viewer completed the survey. Access to the survey was also possible through a link for subscribers who receive posts by email. The survey questionnaire was generated from [www.rationalsurvey.com/](http://www.rationalsurvey.com/).

## Plan of analyses

Descriptive statistics were reported on demographic variables such as sex, dermatology status, year in medical school, subscriber versus nonsubscriber, UTMB versus non-UTMB, and US versus international users, as well as overall responses to survey items. All analyses were performed using SAS software for Windows, version 9.3. Inferential statistics utilized chi-square analyses to assess differences in distributions across demographic variables and responses involving nominal variables. Parametric comparative analyses (eg, *t*-tests, analyses of covariance) examined the differences in responses across demographic variables on interval variables, while nonparametric comparative analyses were used for all ordinal variables. All variables were assessed for normality, homogeneity, and skewness as appropriate.

## Results

### Descriptive statistics

Sixty-one surveys were completed during the month long survey. Fifty-one (83.6%) of the participants taking the survey were subscribed members of the blog (those who receive new posts via email). Nineteen (31.1%) of the survey participants were members or officers of a DIG (either at UTMB or another program). The demographic profile of the survey participants included 17 (27.9%) first year medical students, 15 (24.6%) second year medical students, nine (14.8%) third year medical students, 12 (19.7%) fourth year medical students, three (4.9%) dermatology residents, and three (4.9%) dermatology faculty. No survey participants were nondermatology faculty or residents. There was one participant who was a former resident and faculty member and another participant who was a medical intern. Forty-six (75.4%) survey participants were female. Two (3.3%) participants accessed the blog from a country other than the US.

Forty (65.6%) of the 61 survey participants reported reading posts or accessing the blog website several times a week, followed by seven (11.5%) at least once a day and seven (11.5%) once a month. In addition, 16 (26.2%) reported that they read blog posts for 6 months to 1 year, followed by 14 (23.0%) for 1 to 2 years, 12 (19.7%) for less than 6 months, nine (14.8%) for 3 to 4 years, five (8.2%) for

2 to 3 years, and five (8.2%) for more than 4 years. Based on the participants' opinion about blog post subject content, dermatology application-related subject material was found to be the most useful for the DIG@UTMB blog readers, followed by DIG member-related items, information on dermatology resources/news/articles, UTMB dermatology departmental information, UTMB/Galveston-related posts, resident-related information, and alumni-related content. Thirty-seven (60.7%) of the 61 survey participants found the blog extremely useful. Forty-four (72.1%) of 61 survey participants indicated that the most useful aspect about being involved with student interest groups was that it increased their exposure to a medical specialty, followed by 41 (67.2%) that noted involvement in interest groups encouraged their interest in a medical specialty, and 36 (59.0%) that reported it encouraged involvement in related community service projects. Only 16 (26.2%) indicated it helped find research opportunities in a medical specialty, and 12 (19.7%) found that interest groups helped find mentors.

Thirty-five (57.4%) participants responded that they found Web 2.0 resources very effective for medical education and 22 (36.1%) thought that it could have potential. Additionally, 40 (65.6%) participants reported use of one or more of the Web. 2.0 tools several times a week for educational purposes, followed by eight (13.1%) who used it least once a day.

### Inferential statistics

Bivariate analyses of responders using chi-square and Fisher's exact tests were utilized to assess differences in distributions across demographic variables and responses involving nominal variables. Based on the output of each unique responder, questions 2 and 4 were statistically significant ( $P=0.05$ ), indicating that more females were officers or members of a DIG than men. Differences in survey responses based on other demographics were not statistically significant. Nonparametric Wilcoxon Mann-Whitney tests were also used to assess any differences between scaled response questions (questions 7, 8, 9, 11, and 12) versus sex and subscriber status. All of the statistical results for the questions compared with subscriber status were significantly different ( $P=0.05$ ), which demonstrated that subscribers and nonsubscribers answered differently. For the scaled questions, it was shown that significantly more subscribers than nonsubscribers thought the blog was extremely useful, accessed the blog more often, had been reading the blog for a longer time period, reported the role of Web 2.0 tools to be very effective, and utilized Web 2.0

tools more often. Similarly, a comparison between a subset of the responders was also performed. Results indicated that significantly more third and fourth year medical student responders thought the blog was extremely useful, read the blog for a longer time period, and reported the role of Web 2.0 tools to be very effective compared to first and second year medical students.

## Discussion

This survey demonstrates that a positive association exists between subscribed blog readers, involvement in a DIG, frequency of use of the blog and other Web 2.0 tools, and increased reported blog usefulness. Specific results identified female predominance of blog subscribers, DIG membership, and DIG officers. This finding may be related to the increasing proportion of female dermatology residents in dermatology.<sup>21</sup> Another survey result was the increased usefulness, frequency, and time period of blog access, reported effectiveness, and utilization of the Web 2.0 tools reported by third and fourth year medical students compared to those more junior. Increased time spent reading the blog is most likely due to greater focus on a dermatology career as graduation from medical school nears and career decisions loom. Survey results also found that a majority of the participants indicated that the most useful aspect about being involved with student interest groups was that it increased their exposure and interest and encouraged involvement in a medical specialty and related community service projects. Fewer found that the blog functioned to identify research projects and mentors. Although medical student involvement in interest groups may create opportunities for some medical students to engage in research projects, it does not appear to be universal. Earlier individual academic advisement and counseling for interested students may be needed to further increase medical student involvement in dermatology research. Survey results support the educational utility of the [digutmb.blogspot.com](http://digutmb.blogspot.com) for readers, perhaps best understood through application of uses and gratification theory.<sup>22</sup> However, since survey response was limited and the sample size was small, further educational research on this topic is suggested before any generalizable conclusions are made.

## Conclusion

Web-based dermatology resources are currently being utilized and are likely to continue to impact dermatology education in the future. [digutmb.blogspot.com](http://digutmb.blogspot.com) is an open access blog that appears to provide valuable career resources for medical

students, particularly for those in the final 2 years of the traditional US 4-year curriculum. Compared with previous research about this blog, which observed historical growth trends, this survey assessed our blog viewers' thoughts, purpose of viewing, demographic profile, subscriber status, and perceived usefulness of the blog, interest groups, and Web 2.0 usage. The findings of this preliminary study support the usefulness and impact of this medium for communication and dissemination of information in dermatology education. Adoption of this tool should be considered by other student groups, faculty advisors, and educators who may be interested in implementing similar educational technologies at their institutions.

## Disclosure

The authors report no conflicts of interest in this work.

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## Supplementary material

- Q1. What is your subscription status in regards to the DIG@UTMB Blog?
1. Subscribed member (receive new posts via email)
  2. Nonsubscribed member
- Q2. Are you a member or officer of a Dermatology Interest Group (UTMB or other)?
1. Yes
  2. No
- Q3. How do you identify yourself?
1. First year medical student
  2. Second year medical student
  3. Third year medical student
  4. Fourth year medical student
  5. Dermatology resident
  6. Nondermatology resident
  7. Dermatology faculty
  8. Nondermatology faculty
  9. Other (please specify) \_\_\_\_\_
- Q4. What is your gender?
1. Male
  2. Female
- Q5. Are you accessing the blog from a country other than the United States?
1. Yes
  2. No
- Q6. What post subject content(s) do you find most useful?  
(You may choose more than one answer if applicable)
1. Dermatology resources/news/articles
  2. Application related
  3. Resident related
  4. Dermatology Interest Group/member related
  5. Alumni related
  6. UTMB Dermatology Department related
  7. UTMB/Galveston related
  - Other (please specify) \_\_\_\_\_
- Q7. How useful do you find the DIG@UTMB Blog? (eg, has helped initiate collaborations with faculty members, given insight to residency applications and interviews, has pertinent dermatology news).
1. Extremely useful
  2. Moderately useful
  3. Somewhat useful
  4. Minimally useful
  5. Not very useful

Figure S1 (Continued)

- Q8. How often do you read posts (including subscribed email postings)/access the DIG@UTMB blog website?
1. At least once a day
  2. Several times a week
  3. Once a month
  4. Once every few months
  5. Less than a few times a year
  6. Never
- Q9. How long have you been reading DIG@UTMB blog posts?
1. Less than 6 months
  2. Between 6 months to 1 year
  3. Between 1 to 2 years
  4. Between 2 to 3 years
  5. Between 3 to 4 years
  6. More than 4 years
- Q10. What do you find most useful about being involved with student interest groups?
1. It has encouraged my interest in a medical specialty
  2. It has increased my exposure to a medical specialty
  3. It has helped me find mentors within a medical specialty
  4. It has helped me find research opportunities in a medical specialty
  5. It has encouraged me to get involved in related service projects in the community
- Q11. What is your opinion on the role of Web 2.0 (eg, blogs, Twitter, podcasts, Facebook) in medical education?
1. Very effective
  2. It could have potential
  3. Not very useful
  4. No opinion
- Q12. How often do you use Web 2.0 tools for educational purposes? (eg, Facebook, podcasts, blogs, Twitter)
1. At least once a day
  2. Several times a week
  3. Once a month
  4. Once every few months
  5. Less than a few times a year
  6. Never

Figure S1 [digutmb.blogspot.com](http://digutmb.blogspot.com) survey.

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