Stemosphere

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**Stemosphere** was brought to life before I entered the Latham Science Engagement Initiative, a class where students create, direct, and implement their own science outreach projects. This website that hosts scientific articles and videos was actually the vision of George Murray, the original founder of **Stemosphere**. When I asked George about his experience in creating a blog from scratch, he said, “In one sentence, more than I anticipated. Creating a functional website really has the potential to pull you into the minutiae of digital presentation. Blogging teaches you time management and prioritization, but there’s more to it than that. In more ways than one, creating a blog is like creating an organization.” I have found this sentiment to ring true in more ways than one. Please listen to the audio clip to hear an article from Stemosphere that is written and voiced by myself.

When the group of fellows was offered the opportunity to become the editor-in-chief of the blog, it was very clear that I would not have to fight off the contenders. Because I chose a project that is already somewhat formed, it seemed to others that I was taking the easy way out because I did not have to lay the ground work. While I watched my peers struggle to get their projects off the ground, I was able to produce content from the first day. Yet, I felt it was expected that I exceed expectations in order to compensate for not creating my own project. In truth, I chose to manage Stemosphere because I love to write and I always found the amount of scientific material written by students to be sorely lacking.

As college students, we have an incredibly unique voice that stems from the open-mindedness and tenacity that is characteristic of our demographic. We are advocates; we care so much about other people, global issues, and this earth we live on. We constantly crave new information in a world where everything you want to know can be accessed at your fingertips. Part of my mission was to decode this information in a way that is accessible and digestible for college students with little to no science background. I wanted to write articles about topics that college students cared about. I did not want my writings to become like man scientific pieces: intimidating, boring, or condescending. I wanted to expand the amount of scientific writings of college students by broadcasting our unique voice. **Stemosphere** is science written by college students for college students. View some screenshots of the blog below.
PROJECTS OF 2017

Below are descriptions of the various projects associated with the Luther College Engagement Initiative. Luther College faculty, staff, and students directed 35% of these projects.

S.T.E.A.M. CAREER NIGHTS
Jorge Moreno

Figure 2. Stemosphere’s projects page.

THE TRUTH ABOUT SUGAR ADDICTION

The global issue of obesity has become one of the greatest threats to human health and has risen to epidemic proportions. More than 38% of Americans suffer from obesity and the many health problems that tend to accompany this condition. It can cause information which causes those who are overweight 6.5% higher risk for Type 2 diabetes, cardiovascular disease, joint pain, and mood disorders, such as depression.

When looking for an explanation for the exploding reach of obesity, the concept of “food addiction” has gained popularity among the general public as well as in the professional sphere. With the widespread availability of cheap and delicious, high-calorie snacks, it is reasonable to assume that overeating stems from an addictive behavior in particular traits. You may have heard before that the consumption of sugar often leads to not only the overeating behavior but also increases in the sugar craving. In this case, our behavior could seem similar to that of an addict when we are addicted to sugar. This is not to say that we should think about ourselves as addicts in such a situation, but it is important to be aware of these tendencies.

Figure 3. Example article titled "The Truth about Sugar Addiction".
However, this thought emerges mainly from simplistic studies that were done with rodents. Since then, researchers from the University of Utrecht in the Netherlands set out to prove whether sugar foods addictive property and leads to weight gain. They set out to investigate the addictive properties of various food groups. Low-Fructose foods such as rice, cola, or vegetables, High-Fructose foods such as cola, chewing, or pastries, High-Fructose foods such as fish, meat, or streetfood, and Sugar foods such as sugar sweets, soda, or candy.

They polled 1,016 college students of all backgrounds, ages, and genders. Researchers measured the seriousness of their food addiction behavior in relation to each category: their height, weight, and Body Mass Index, and their depressive symptoms.

95% of the college students were experiencing at least one symptom of food addiction and the most common symptom or experience was “the persistent desire to quit or an unsuccessful attempt to quit” eating specific types of foods.

They discovered that 95% of the college students were experiencing at least one symptom of food addiction, the most common symptom or experience was “the persistent desire to quit or an unsuccessful attempt to quit” eating specific types of foods. In addition, about 12% of the students actually felt the experience of food addiction and were experiencing multiple symptoms that were affecting their relationship with food. The students reported that their food addiction symptoms were linked to eating highly addictive and high-calorie foods and less than 5% of symptoms were associated with pure sugar foods. Those who participated in the study that were overweight often had food addiction symptoms that consisted of high-fructose and avoid foods, not sugar foods.

In summary, partly sugars foods are not causing an addiction to food and therefore are not leading to bingeing behaviors and obesity.

Figure 4. Example of a block quote from "The Truth about Sugar Addiction".

Cassandra Holmes is a junior majoring in Biology on a five-year track. She conducts research in Gene Dancar’s lab at the University of Iowa using cell-based reagents to investigate candidate genes for autism. In addition to her research, she is also a biology ambassador giving talks to prospective students. As the Biology ambassador of Iowa University, she hopes to bring science into the lives of as many people as possible.

NEW POSTS EVERY WEEK

Follow me on Facebook for Notifications.

Figure 5. Example of the research paper button, social media sharing, and an ‘about the author’ section from “The Truth about Sugar Addiction”.
Since the fall semester, all Latham fellows have been posting science pieces to a private blog and those became the pieces that I posted publicly. I coordinated with fellows to receive their permissions to use the pieces, took them to editing at the University of Iowa Writing Center, posted the articles to the blog,
and promoted them on Stemosphere’s social media accounts. Below, you can see snapshots of what our social media sites looked like.

![Stemosphere’s Twitter page.](image)

![Stemosphere’s Facebook page.](image)
As George commented, many skills are required in managing a blog. I have spent hours researching new studies that have come out, writing articles, editing the fellows’ pieces and my own, posting to the blog, and promoting the blog. Just putting up a single post took hours of my time as I attempted to orient myself to Cornerstone, the website’s editing software. I was overwhelmed with the various tools and elements that can be used and I was tasked with making every post look uniform and professional. After writing, editing, and posting was complete, I also promoted the blog in order to attract viewers to the website.

I partnered with various organizations on campus including Honors, the Iowa Center for Research by Undergraduates (ICRU), Iowa Biosciences Academy (IBA), the Biology Department, College of Liberal Arts and Sciences (CLAS), and UIowa Research. These partners have helped me immensely over the course of the project by retweeting my tweets on Twitter and reposting my posts on Facebook. The College of Liberal Arts and Sciences also wrote a stunning article that talked about Stemosphere’s main goals and promoted our student work: https://clas.uiowa.edu/news/student-run-stemosphere-blog-makes-science-news-accessible. Even further, ICRU posted a small blurb about Stemosphere in their weekly newsletter. Without the help of these helpful and supportive people, I would not have been able to grow the viewership and audience as I have. They are invaluable to the blogging and promoting process; they have helped to build a professional network upon which the future of Stemosphere can rely. Establishing these relationships required in person meetings, countless emails, and constant follow up with these partners. Without the help of Melinda Licht from ICRU, Steve Kehoe from the Biology Department and IBA, Richard Lewis from UIowa Research, Nic Arp and Hallee Haygood from CLAS, and the staff from Honors, none of the success I
have achieved would have been possible. I would also be remiss if I did not mention the incredible Latham fellows that generously cooperated with me and allowed me to publish their work on Stemosphere. They are Timothy Fuqua (twice), Elise Kerns, Mason LaMarche, Alyson Glynn, and Kelsey Willardson.

Stemosphere has increased its viewership quite a bit over the spring months. Below I have inserted an infographic that shows statistics about the numbers of viewers and sessions, contributors, and where our viewers came from throughout the Spring months.

![Stemosphere Analytics](image)

*Stemosphere* has also had considerable growth in followers on social media and I have inserted graphs that show how the *Stemosphere* community has grown in each of our social media pages.
Figure 13. Twitter follower growth from the months of December to April.

Figure 14. Instagram follower growth from the months of December to April.
Figure 15. Facebook follower growth from the months of December to April.

I believe that Stemosphere has an incredibly bright future. It is my hope that a new Latham fellow will pick up the blog as their project in the spring of 2018. They might fall in to the same paradox as I had found myself, yet they will undoubtedly add their own unique voice to the blog and build upon the foundation that George and I have built. There are still many improvements that could be made to Stemosphere and many ways for a new fellow to create their own vision for the blog. We still need a logo to represent the blog, our presence on social media could be significantly stronger, and Stemosphere could benefit from being brought closer to the public eye by expanding its reach outside of the University of Iowa. I hope that Stemosphere will eventually be recognized as a professional blog by the University as posts are continuously added and additional partnerships are forged.

There are an infinite number of lessons I have learned and skills that I have developed and honed. I have learned small lessons such as; promotion always will do better when a picture is attached to it, instead of a tweet with only dry text. I learned that it is much more of a hassle to use a beautiful and perfect copyrighted picture from google than to use a less flashy, just as descriptive free image. Yet, the biggest lesson that I learned from this project is that the audience will only care about your article’s topic if you care about the topic. Occasionally, I needed to wait longer to find a study that piqued my interest and sparked a flurry of quick writing rather than settling for an “ok” topic just to begin the writing process and move on. When I have been exuberant and interested by a topic, it has been apparent in my writing and the response is always enthusiastic. This speaks to the bigger trope, which is to follow the path that ignites your fire and passion. I chased this feeling when I decided to manage the blog and I have found new partnerships, strengthened relationships, unique skills, and the familiar thrill of doing what I love: writing and science.