



INTERNATIONAL
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Content development
for a Biotechnology, Bioethics and
Biosafety platform

Zafeiroula Katsara

SCHOOL OF ECONOMICS, BUSINESS ADMINISTRATION & LEGAL STUDIES

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Thessaloniki – Greece

Student Name:

Zafeiroula Katsara

SID:

4402180002

Supervisor:

Prof. Savvas Genitsaris

I hereby declare that the work submitted is mine and that where I have made use of another's work; I have attributed the source(s) according to the Regulations set in the Student's Handbook.

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Abstract

This dissertation was written as part of the MSc in Bioeconomy: Biotechnology & Law at the International Hellenic University.

The aim of the study is to further investigate the attempt and effort of three institutional synergies to create a platform “Biocontact” that promotes invitational issues of Bioeconomy, Bioethics, Biotechnology & Biosafety. This invitational project sets as a highest priority the promotion of scientific knowledge. This dissertation presents analytically the site and attempts to represent also the benefits and the cost needs to be received for the Biocontact site to be preserved as well as the quality standards that needs to be followed.

I would like to express my deepest acknowledgments to Dr. Savvas Genitaris, Professor at International Hellenic University for guiding this dissertation step by step and Mr. Evaggelos Grigoropoulos from the Information & Telecommunications Department of International Hellenic University for his kind contribution.

Keywords: *Science Blogging, Research Blogging, Biotechnology Platform, Bioethics, Biosafety*

Zafeiroula Katsara
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Preface

The basis for this Dissertation was originally stemmed from my passion about the Field of Biology. My personal experience derived by contributing myself at one small part to the content development of Biocontact site, stood as an asset to my personal and academic writing development. The personal involvement with the content set-up made me appreciate and evaluate the personal time a website demands to dedicate as well as the need for building quality content to be published. The questions arose and I attempted to answer in this dissertation were how the content can be evaluated towards its credibility and whether benefits overcome the costs by keeping alive this platform.

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Introduction

This thesis was based and prompts by studying the innovative project conducted in cooperation among the International Hellenic University, University of Lieden, Netherlands and Perseus Company in Belgium. The project was to initialize the site by the name “Biocontact”, a website that aims to connect students and professionals who are being occupied with the field of bioethics, biotechnology and biosafety via an online platform in order to be informed accordingly on those subjects, express their concerns and ideas. Those concerns were due to be addressed and advised in real time by the experts and professionals of the partners along with the academic staff of the applicant university institution. This paper aims to make an entry about the steps and process followed in order to develop the site, with orientation on content development on the specific scientific fields.

The main audience was expected to be students, professionals and audience in general with curiosity and questions regarding modern relevant issues. The impact of the platform to the young audience, students on regular field or irrelevant direction of studies, was foreseen to familiarize that group of readers with those topics. The range of the audience was expected to be throughout the globe and the subjects that are being covered are intended to concern worldwide issues. This expectancy has been justified by the variety of the subjects, since the themes concerned the latest evolution of scientific subjects and worldwide news on the relevant fields. The wide range of the audience that is being addresses to, is innovative in European level, since it provides the opportunity to connect dynamically the participants and the interested parts and to expand the knowledge and their communications skills. In order to

measure the traffic and to analyze for statistical purposes the data required, such as age of visitor and country of access for instance, analytic plugins were used to monitor those evidences. In the second part of the paper, it will be presented initial, limited amount of data collected in a short period of time due to the short-term the site release, in order to estimate the range of visit and traffic to the website when new content is added.

In addition to the scientific fields of Biotechnology, Bioethics and Biosafety, the project includes as well general issues on Bioeconomy and Biosafety management as well as the important section of job opportunities among other dynamic categories. It intent that way to cover a multidimensional knowledge on those modern issues, promote new dialogue, enhance the cooperation between the initiatives and the regulatory instruments at the local and international level. This in turn may enhance the development of innovation-supportive policies, which will lead to share, resource and scale up biotechnological innovation.

Chapter 1: Platform Development

In this Chapter, there is an attempt to present analytically Biocontact structure of the platform in terms of orientation and content.

1.1 Platform Structure Development

Biocontact platform was built on the website creation tool Wordpress, version 5.3. Wordpress is online open source Open Management Content software, which is characterized by the ease of its end user and developer, the diverse options it provides and the opportunities of extensibilities. The selection of this platform by the developer was mainly based on the characteristics referred.

The back-end environment is consisted by the dashboard bar and a space next to it that develops the data entry of the end user in a detailed structure of each category presented in the dashboard. Some categories included in the dashboard are visible also at the front-end of the website. Concisely, dashboard is consisted by the group categories

- Posts: the developer is capable of adding a post, categorizing the content, label it accordingly and generally manages the content publication.
- Events: the developer can add, modify, tag, group, organize, remove and import an event.
- Portfolio: where the theme of the website is included and allows the management of data and information orientation at the front-end website.
- Media: it includes all the pages uploaded on the website

- Pages: this category allows the developer to manage all the separate pages created at the front end (from the main menu on the website to its subcategories).
- Comments: since “Biocontact” is an interactive and dynamic platform that takes into credit the readers opinion, this category allows the developer to monitor the comments in order to follow the basic rules of fair practise.
- UX Blocks: presents all the block icons created on the website
- Contact: where the developer creates the contact forms but also to manage the messages received and ensure the security against spam.

Therefore, the front-end structure of the website is divided between seven pages: Homepage, About, Partners, News, Events, Recourses and Contact form.

In homepage the visitor can make a distinction between the main subjects of the content of the platform, by visualizing them with three labeled slides; Biotechnology, Bioethics and Biosafety. Below those slides, four other sections are being presented on the homepage, which are being considered the vital parts of the dynamic of the site. Those are the blog section, educational programs on relative subjects, employment opportunities and latest news of those scientific fields.

“About” section has its subordinate categories “The Program”, where basic information are being presented about the Masters Program of Bioeconomy, Biotechnology & Law, since the idea of the platform arose through its academic philosophy and the subcategory “The people” where some of the team that contributed to the site are being presented.

In category partners, visitor is given the opportunity to obtain information about all the collaborative organizations for this project. Its subcategories are IHU (The International Hellenic University), Perseus BVBA, LUMC (Leiden University Medical Center) & IKY which is the acronym of State Scholarship Foundation in Greek language. The

toolbar selection of “News” and “Events” are two of the columns with regular information and news flow, with frequent updates. Provides “Biocontact” the dynamic of keeping updated its readers on Biotechnology news and also it has available in calendar orientation the events and conferences worldwide that relates to the field of Biotechnology, Bioethics and Biosafety, but also to the relevant fields of Biology and Health sector.

At resources, the visitor is able to find the relevant sites, by which most of the times there was an information mining to be presented in the column “News”. They are able also to find “Reviews” section, where there are presented critics on Biotechnology, Bioethics and Biosecurity matters.

Finally, the visitor can find as last option in the toolbar the contact form. On the bottom of the website, it is clearly stated the purpose of the existence of the website, a repertoire of the column “partners” and quick links, which are consisted by the selection of “The Programme”, “Sitemap”, “Terms of Use” and “Privacy Policy”.

The project came online on July 2019. By that time, the platform was fully developed and maintained its form and category selection without any large-scale modifications up to date. The development of Biocontact platform is divided in two parts: the platform development and structure and the content development process.

1.2 Content Structure Development

The categories of the site which are information flow intense and need constantly to be updated are the news section, employment, blog, events and reviews. The orientation and purpose of the administrator in order to maintain the site vital is to contribute equally the information flow between the aforementioned. The news and data entry are precisely defined, and they are directed to the scientific fields of Biotechnology, Bioethics and Biosecurity.

- **Biotechnology Oriented Content:** The main subjects that should be analysed in blog should concern the modern biotechnology applications while in the news should be filled in with the latest evolution in modern biotechnology. The employment section contains the latest job opportunities to the relevant field worldwide while the events section the upcoming conferences with the topic of biotechnology worldwide. In reviews is presented book or movie reviews or commentaries on interesting subjects on the field.
- **Biosecurity Oriented Content:** The main subjects that should be analyzed in blog should concern the Biosafety issues and Biosecurity techniques while in the news should be filled in with the latest evolution in Biosafety. The employment section contains the newest job opportunities to the relevant field worldwide while the events section the upcoming conferences with the topic of Biosecurity worldwide.
- **Bioethics Oriented Content:** The main subjects that should be analyzed in blog should concern bioethics issues that arises from the applications of modern biotechnology while in the news should be filled in with related to the relevant subject feedback. The employment section contains the latest job opportunities to the field of bioethics worldwide while the event section the upcoming conferences with the topic of bioethics worldwide. In reviews section

is presented book or movie reviews or commentaries on interesting subjects on the field.

The articles uploaded in the blog could be organized in categories, however, other than biotechnology, bioethics and biosafety but also their theme refers to bioeconomy, biology, entrepreneurship and education. The chart below shows the percentage of articles that are currently published in the website blog per category.

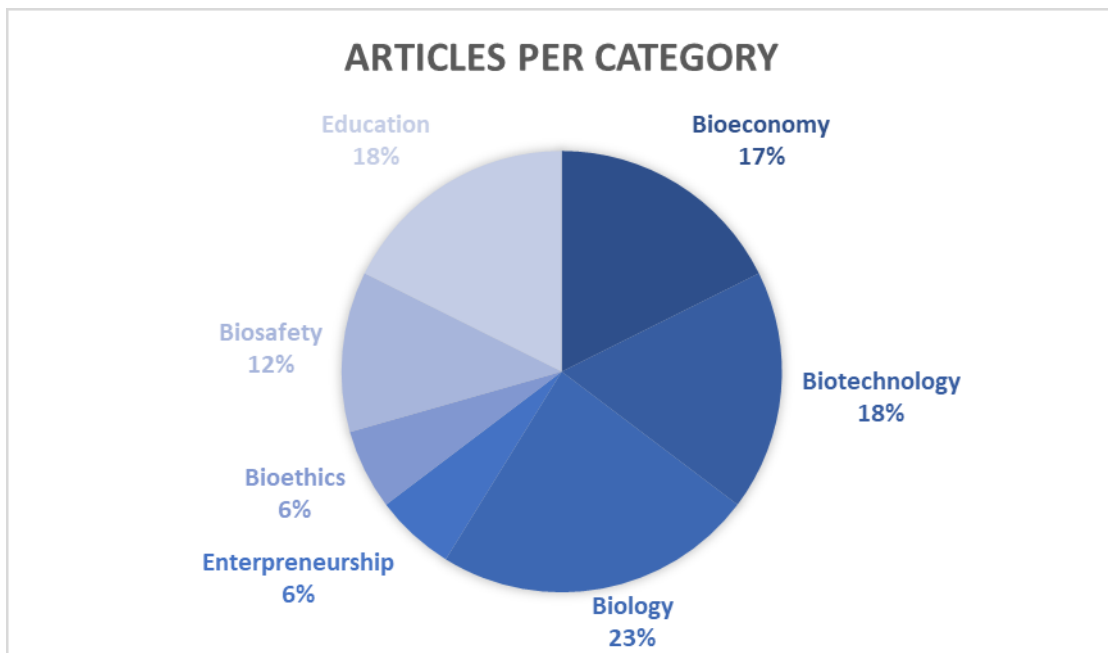


Figure 1 Biocontact blog articles per Scientific Sector

The topic of articles depends on the free choice of the writers and they are not driven to any specific direction. May the subject have been open; however, they should consider issues related to the nature of the website. Most of them are published papers and studies, commentaries or scientific articles. It is shown that writers of the blog tend to get involved with subjects such as Biology, Biotechnology and Bioeconomy

and Education. Fewer articles are referred to Bioethics, Biosafety & Innovation on the relevant fields.

By the analysis of the employment opportunities that have been uploaded on Biocontact site, we might have been taking a small sample of the open job opportunities of the last 7 months of job opportunity research, mostly via job opportunity online platforms and universities. The following chart separates per nature of job the listings on this category.

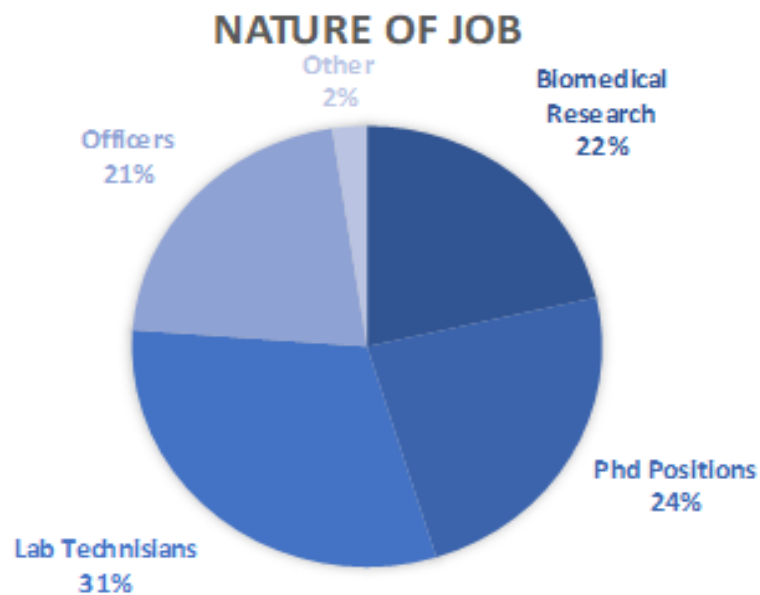


Figure 2 Nature of Job per job opportunities that have been re-posted on Biocontact site

Over a 7-month horizon, most listings referred to job opportunities that seek to occupy scientific staff as lab technicians, 31%. In the next most numbered job opportunity repost referred to Doctorate positions 24 %, Biomedical researchers 22% and Officers of relevant fields 21%. Other category concerned one post on Freelance Writer job title.

It is of high importance also to realize the fields that are more likely to open positions and the high demand employment positions. Out of the total re-posts that concerned job opportunities 40% of them concerned the sector of Biology, 22 % the sector of Biotechnology and 15 % the sector of Bioinformatics. The following chart presents all the job listings per scientific field.

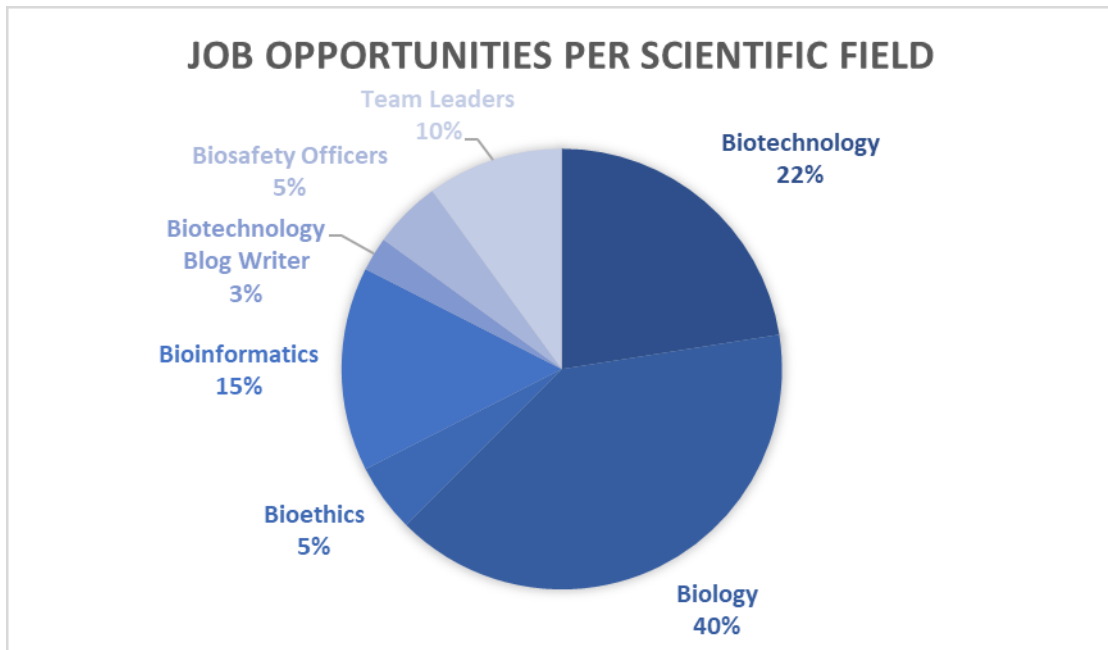


Figure 3 Biocontact employment opportunities re-post per sector

According to the IEEE study on Life Sciences (2014) Biology job demand in the US is the 4th most dynamic and sought-after sector in regards of the total employment postings that concerned life sciences. When it comes, however, to General Biology, Bioinformatics is the most fast-growing sector with a high number of job opportunities in the US, according to the same study.

To conclude, the subjects that Biocontact platform involves are not strictly defined by Biotechnology- Bioethics- Biosecurity, but there is an effort to cover a wide range of medical, biological and generally life sciences topics, even though the content is clearly defined. This phenomenon occurs since the writers of the blog articles are originated

by different scientific backgrounds, and thus this diversity of opinions makes the content not static but covers a wide range of topics and promotes employment opportunities in various scientific sectors.

1.3 Website Content Research Methods

Biocontact is mostly a thematic type website since its content is strictly defined by its scientific validation. However, there is also provided a personal style, by providing the opportunity of visitor comments and providing a rate of the articles by its readers. There is also the opportunity of interaction of the visitors with partners and professionals and in the review section the writers are given the opportunity of freely expressing their critic on a scientific matter on the relevant topics and accept feedback by the readers. In this subcategory, there is only a focus on the thematic nature of the website and more specifically the research methods that are being used.

Regarding the blog section, if we assume that blogs have genres, according to Miller and Sheperds (2004) work, Biocontact website content could be considered providing filtered and directory services with also opportunity of providing commentaries, as a second branch of their genre categorization. That means that some Biocontact articles tent to interpret and filter loads of information for its readers, in an continuous effort of providing the key information on a subject without losing the basic meaning and rephrasing it in a more amiable vocabulary to the visitor, regardless of professional or not.

The information provided in the blog articles were retracted mostly via scientific websites and reliable online scientific libraries. Some of the articles written were based on scientifically reliable articles found by a search mostly on Scopus abstract database

and Google Scholar. Articles with highest peer reviews and newest chronologically have been given priority on article writing. Also, in the blog section articles from highly recognized research journals, such as Nature were being reposted.

However, it is remarkable to notice that in the blogs section, students and professionals of the academic institute and community were promoting their own scientific knowledge by posting their research on Biocontact site.

The following chart show the number of publications in the blog per author (1).

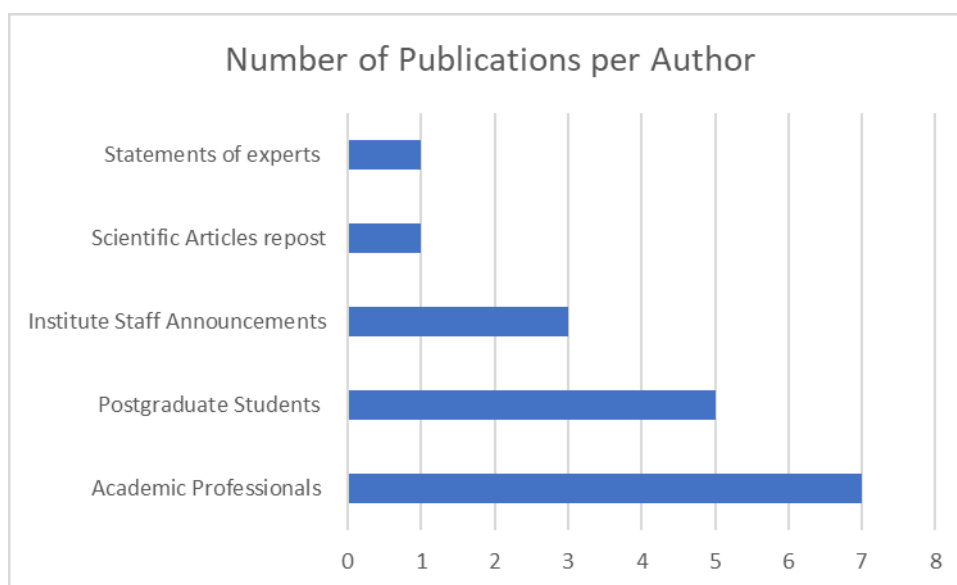


Figure 4 Number of publications in the blog section per author

As shown, most blog articles are written by academic professionals. In order to avoid any ambiguities, the academic professionals contributed to article writing are academic staff at the International Hellenic University at the moment, since the site is only a few months aired online. Academic staff blog publications constitute the 41 % of the total posts in blog section. Also, students concern the postgraduate students of the international Hellenic university and their contribution to the articles consists of the 29% of total blog postings. The rest of the publications are institute announcements provided by academic staff 17% without educational value, scientific re-posts from journals 6% and short statements of experts, independent from the host institute6%.

As far as the postgraduate students' articles concerned, all scientific statements or analysis, if any, should be obtained by reliable sources, such as journals and peer reviewed articles and they should include references. The strict form of the articles in the blog exempts those in which the topic concerned opinion or commentary.

The articles re-posted in the news section, were obtained mostly by specific and reliable websites that are defined in the section "Relevant sites", such as the Labiotech website, and also by well recognized online journals, such as Nature and Science daily among other sites.

Employment section was filled in with re-posts of job opportunities in the field of bioethics, Biotechnology, Biology, Biosecurity and linked-to-those aforementioned field jobs by a random search on the internet with orientation at the most well-known employment sites.

Chapter 2: Science Blogging & Quality Control Methods

Promoting scientific knowledge for an academic institution outside of the university is a challenging situation. The most important way is to follow the evolution of technology and adopt new ways of promoting science. The most accessible to the wide audience tool is the World Wide Web. Promoting ideas and scientific evolution through a website arises opportunities and emerges caution for the blog writer or the administrator who is responsible for broadcasting feedback and scientific news, especially when it has to do with health and biology related subjects.

By extension, it is considered of highest importance that the administrator and the blog context writer disseminate feedback provided by proven and reliable sources. The operator role however does not end in the point of documented information provided; quality context control of the site is of high importance in order to function properly and have a meaning of existence.

In the next chapter, we attempt to present science blogging and it has been pointed out the importance of quality control check of the content and language corrections and the possible methods could be used for ensuring and establishing it.

2.1 Definition of Science Blogging

According to Lapointe and Drouin (2007: 7) a science blog is a tool which gives the opportunity to scientists to address directly to the public, allows readers to have an access what scientists have to say, provides an opportunity for experts from different academic backgrounds and scientific fields to exchange knowledge and enables wide-ranging dialogue between real people and field experts.

Science blogs in terms of content structure could be oriented according to a specific scientific field, thus the context would be specific to topics, and some they could also refer to general scientific content. Most blogs, in any case, explore and intent to explain the scientific process rather than just repost the findings; the bloggers find meaning in improving the relationship between ‘science and society’, science communication, and problems of academic life.

As Daniel D. Brown (2009) on his blog Biochemical Soul explained that science bloggers cover the wide range of scientific occupations, from people with a strong interest in science to teachers, graduate students, post doctorate students, and an increasing number of science investigators. Science blogs could also be created and run by scientists, science teachers, PhD students and science enthusiasts but also a growing number of science blogs are created by journalists.

Science blogs also differ from each other by their target audience. A number of researchers and scientists by the use of their blogs, they intent to attract a wider public, while others they have as a target groups of readers their colleagues. There is a number of examples that are characteristic to the evolution of science blogging and its contribution to the development and change to the traditional academic community. In 2005 Reed Cartwright, who was a post doctor ate fellow, and the blogger at DeRerum Natura disagreed with the conclusions of a paper in Nature. Luca Comai, who was a researcher at the University of Washington, was also going to publish a letter to the editor about his opponent opinion to that specific article conclusion. Both blogger and

researcher made their case in a jointly authored paper in *Plant Cell*. (Batts et al., 2008: 1837)

2.2 Quality Control of Content

Since Biocontact is a platform that promoted scientific knowledge, evaluation of the content publishes is crucial for the credibility and the reliability of the website towards its readers. Before any publication made, administrators carefully evaluate the news feed and the articles received before publishing. Wordpress master account access has not been provided to any other contributors of the content developing of the website for safety reasons. Administrators are the responsible academic staffs, who have the authority of reviewing the material received. Posts requests received by academic staff or professionals have been evaluated towards the integrity of their research and their compliance to the good practices of science.

According to the study of Hasan and Abuelrub (2011) there are four criteria, grouped in categories that should be evaluated in order to measure the quality of a website; one of them is the content quality. It is high of importance that there are ways to identify the reliability of content website since it is the Vidal part of the platform (scientific information intense content). There follows a reference below regarding the most (important indicators and control check elements for a content quality evaluation of a platform.

- The content should be up-to-date in a timely manner (Barnes, S., Vidgen, R. 2001)
- The information provided should be relevant (S. Barnes and R. Vidgen, 2002)
- The content should be provided in different languages (A. Abanumy, A. Al-Badi and P. Mayhew, 2005)
- The information provided should vary in presentation (Kokkinaki et al., 2005)
- Accuracy of information by substance and presentation (correct vocabulary and grammar) (Fogg et al., 2001)
- Information presented are objective (Granath, 2005)
- The authority and transparency of information provided (Fitzpatrick, R. 2000)

The news uploaded on website and the employment section is being updated in a timely manner, since updates might be available on an average rate of seven days. Articles before being published in Biocontact platform are being grammatically checked and administrators proceed in the appropriate corrections in order to become correct and suitable for being online. Administrators also judge the objectivity of articles and opinions and also evaluate the meaning of the information the writer would like to broadcast. However, the Biocontact site is not multilingual yet, even though the platform's direction is universal.

Chapter 3: Benefit & Cost Analysis of Science Blogging

Keeping alive a science blog, like Biocontact, requires a vast amount of available time, to produce quality material, to control the standards and interact with the audience. However, it does not require much of a time in order to operate publish the material when selected. Also, the knowledge it has accessible to public promotes science and raises public interest. Thus, it is worth to examine the benefit and costs for keeping alive a website with scientific content. To the below table, they are presented briefly the benefits and costs of science blogging on personal, scientific, academic and society level.

Benefits of Science Blogging	Cost of Science Blogging
<ul style="list-style-type: none">• Improves writing skills• Gives the opportunity to graduates to get involved with science Blogging• Archive for the author• Constant personal development and update• Promotes Collaboration• Easier interaction• Support of citation with hyperlinks• Opinion expression• Review process	<ul style="list-style-type: none">• Constant pressure for having entries• Time needed for quality content• Unofficial or unprofessional• Difficult to evaluate the work done• Fear of inaccurate scientific point of view• “Catchy” context rather than intellectually complex material

Figure 5 Benefit and Cost Analysis of Science Blogging, Laksamee Putnam (2011)

Science blogging provided the opportunity to young scientists to get involved with scientific writing and introduce themselves into the methodology of research and support by the correct way of citation their results and articles. Thus, their communication skills are not only being improved but they are compelled to perfect them for their articles or commentaries to become online.

Science blogging also keep an archive of the previous publications. This opportunity that is given to the blog writer provides the advantage of going but to previous articles and follow up with the evolution of previous publications and makes a self-criticism. It is worth also to mention that readers are given the opportunity to criticize or express their opinion through comment section. There is a contact open pathway between the academics, students and administrators of the blog with the readers and general public.

Writers are requested to be constantly updated with scientific evolution of the field. In order to produce quality material, they also connect their knowledge with other scientists. This way collaborative knowledge promotes science and provides quality content.

Scientific content through science blogging could be easily supported through citation with hyperlinks in order to ensure transparency. When it comes to opinion expression, as referred previously, readers could comment below in the relevant section below each publication.

On the other hand, there is a constant pressure on writing or finding quality content to be uploaded due to the fast news flow and the needs for keeping alive a science blog.

In order to ensure quality in publications, personal time of the back end is needed in order for the blog to operate according to the standards. Blogs also have the general opinion of being unprofessional or unofficial; there is still a wide conversation about the eligibility of blogs exist on web and their capability of promoting scientific knowledge. This consensus view exists, and it is difficult to be reversed. Since public finds it sometimes hard to evaluate the content they read on blogs and appreciate their scientific eligibility, there is a constant fear of being inaccurate informed or being exposed to unscientific point of view. Lastly, sites in order to obtain publicity, their writers prefer to get involved with much discussed issues and matters rather than issues that require more scientific research and promote real science.

To conclude, according to Laksamee Putnam (2011), science blogs are a low-cost way to publish information and have a globally available content, while they are an alternative way for people to explore and learn about the latest trends and research. However, science blogs are overshadowed by several other blogs that promote misleading information. Science bloggers throughout collaboration create a community in order to establish high-quality writing and qualified experts, making it clear that blogging is more than a casual writing process. Blogging in the end improves science outreach by allowing authors of any academic level to interact directly with their peers and the public in general. According to Laksamee Putnam (2011), “increasing communication channels through tools such as blogs builds a knowledge base that allows world-wide collaboration and active participation by the scientists, and ensures continual, immediate criticism of science research by both readers and writers.”

Chapter 4: Science Blog Marketing & Social Media

Science blog like Biocontact is an information intense, scientific blog and an innovative attempt in a European level to initiate a website and become well-known not only to the academic community but also to the public in general. The material it has to offer is eligible and up to date with a primary purpose the transfer of academic information on Biotechnology, Bioethics and Biosafety and promotes science.

Maybe the biggest challenge the administrators of Biocontact site must face is to build audience traffic. It is also worth saying that traffic metric is not the best measurement for estimating the success of the site rather than the quality of the visitors, however, is an easy indicator of which material is more attractive to the audience and realize which of the marketing strategies that are applicable those that provide solid results.

Biocontact soon after its publication online, after having been filled in with the appropriate content online in each category, has also presence in social media. An indicative reference on the social media is the presence of the site on Facebook and Twitter at the moment, where the main articles and the highlights of the freshly uploaded content are being promoted.

Facebook is an important leverage of audience with great potential of growing the reputation of the Biocontact website when used properly. A way to establish a Facebook strategy is to create by each day of the week topic themes in order to write specifically on issues. This will contribute to help readers to expect a day to read their preferred topic and the best way to promote this order is through Facebook page. This pattern could be delivered to readers as topic calendar on Facebook page.

Facebook could also be used as a valuable search engine. Search engine optimization is a challenging issue, since the keywords the back-end user selects to present should be spot on and targeted. Keywords could be inserted in the URL section, in the page name the small character of 250 words, information box. They could also be presented in tabs to the handy structure of them. Of course, the section below photos, events or status updates are content rich fields as well and they could be used accordingly.

Cross-promoting content on Facebook among audience is also ways of spreading the feedback shared on Facebook page and attract more visitors. By accomplishing this, there is also the opportunity to investigate cognitive and emotional content through linguistic analysis algorithms, such as Regressive Imaginary Dictionary (RID) and Linguistic Inquiry and Word Count (LIWC).

The popular social network, Twitter, provides full exposure to the wide audience and due to the tweet structure, it is easier to target topics with keywords used. It has also the immediacy in regards of interaction with the audience and re-tweet promotes cross promoting the content. A good practice is to use the hash tags and web links as tweets with web links are most likely to be spread and be re-tweeted (Sub et al, 2010).

Readers, however, could be found also through other sources. Visitors may also be originated by clicking on links found in other blogs or through search engines and not only through social media themselves. Another type of visitor is a new reader. Maybe this is the most difficult category to impress, as the new readers expect to read the material that will raise their interest to go on visiting. Finally, driven-by visitors are another category, however those could be found to the maturity level of the growth of the site. In order to attract visitors, it is very important to realize that most of the

search is being through search engines and the title of the articles should have specific titles.

It is not only the attraction of audience that is important to be established, it is also the commitment of the readers to the site that needs to be succeeded. The way commitment could be achieved is by creating notifications through feeds. By providing the icon in any part of the website to subscribe in RSS feed, the visitor will have the opportunity to get notified with the new topics uploaded and click to the ones he is interested in reading. Loyalty of the visitor could be established through comment correspondence in a timely manner.

Another important strategy on promoting the site is to publish an article with the institute infrastructure, action or research that is happening. Biocontact site has a smart way advertising itself by publishing articles on the upcoming research papers, new infrastructure of the institute. This way it raises the profile of the back-end work and provides credibility to the website. It is also vital to point out that Biocontact does not use any other pop up ad or has any other type of external advertisement other than the necessary and beneficial for its reputation.

Conclusions & Recommendations

Biocontact is an innovative attempt to promote science and more specifically to propagate the evolutionary fields of Biotechnology, Bioethics and Biosafety. This platform is a low-cost way to promote those scientific fields and the information are available to the wide audience. The topics publish however cover the wider field of Biology and relative ones to it, which covers a wide range of modern issues under discussion. The website has an accessible structure and the content is well oriented and categorized properly. The information is being published and the articles posted are based upon peer reviewed studies and research or are being re-posted by well-recognized journals. Blogging improves science and benefits overcome the costs of the maintenance of the site.

Minor changes is necessary however to be done in order to be completed. The employment search section and the criteria do not work well, a dysfunction that could easily be solved. It is obvious that Biocontact demands new feedback at a short amount of time. Practices that could improve the time of uploading are to insert RSS feed in the news section, so the administrator could choose which news to be uploaded by the targeted websites and to involve more postgraduate students in the process to concentrate quality material. In order to increase traffic, the university could interview the main contributors-scientists that work at the background in order to increase the website's credibility. The content also should be presented in different languages to attract more audience. Facebook section could be filled in with more keywords for the wide public to be easily tracked. Opinion of the audience could also be expressed by creating polls. This is also a way of concentrating visits in Biocontact website. Finally, number of visits of the site should be monitored with plugins in order to decide which strategy is the best to increase the traffic.

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