

## **BIBLIOGRAPHY**

CAROLINO, MAUREEN JOY O. APRIL 2013. Evaluation of the Official Website of Bolinao, Pangasinan. Benguet State University, La Trinidad, Benguet.

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## **ABSTRACT**

The study was conducted to evaluate the Official Website of Bolinao, Pangasinan, [www.bolinao.gov.ph](http://www.bolinao.gov.ph). Specifically, the study aimed to determine the socio-demographic profile of the respondents; the perceived benefits of the website; evaluation of the college respondents on the website in terms of appearance, content and usability; the evaluation of the Information Technology experts on the website in terms of impression, navigation, site consistency, functionality and quality of code; the problems encountered by the respondents in using the website; and the suggestions of the respondents for the improvement of the website.

There were two groups of respondents in the study. The first group was consisted of 30 college students from Benguet State University and the second group was composed of five IT experts.

The following were the benefits gained from the official website of Bolinao, Pangasinan according to the college respondents: it provides important information about Local Government Unit (LGU); it keeps update about public notices in the municipality; it provides links to other Government websites; it caters background information about Bolinao; and it provides complete information about tourism of the municipality.



In general, the college respondents evaluated the appearance, content and usability as “Good”. The same rating was noted for the IT experts based on impression, functionality, and quality of code. For navigation and site consistency, this was rated as “Fair”. This could be attributed to the inconsistent use of visual elements across sites, the lack of validity of the XHTML, and lack of code structure of the website.

The problems encountered on the evaluation of the website by the college respondents included: small font size of the articles, too much text in the articles, incomplete images of attractions, and the broken “guest book”. For the IT experts, problems encountered enumerated were as follows: inconsistent layout of page, closed homepage due to hacked website, and the broken guest book.

The suggestions solicited from the college respondents for the improvement of the website included addition of more photos and information of the tourist attractions, incorporation of more current information, bigger font size, additional government links, and inclusion of the name of the authors in the articles. The IT experts also suggested the following: removal of the Yahoo news, addition of photos of tourist attractions, maximization of the use of graphics to represent the text, use of Linux-based server, and fixing of the Guest book link.

Through this study, the following are recommended: the municipal office of Bolinao, Pangasinan may consider hiring an IT Expert or Web designer who will improve and maintain the website, the web-designer may use a linux-based server to secure the website, the website may add current information about Bolinao, Pangasinan, regular updating of the site to fully achieve its purpose of giving current information.



## INTRODUCTION

### Rationale

Information nowadays can be easily accessed through the aid of internet. Anyone who has the knowledge of manipulating it can upload photos, videos or any files and it is also use to communicate to other people. The internet also known as the World Wide Web ( WWW) contains different websites that provides vast information for use.

According to Khan *et al.* (2002), a website is a collection of World Wide Web documents, usually consisting of a home page and several related pages. It is a created page found in the internet where in it allows the user to surf and get information by providing links, buy goods faster and help connect with other people.

Moreover, Freedmor.com (2012) said that a website is an electronic brochure and source of information available to the world 24 hours a day. Websites are effective channels in disseminating information. With the aid of internet, information can reach a large number of people in just a minute. In this generation, people are becoming more dependent in seeking information using the internet from websites.

Further, because of its exceptional features, many organizations or people used that opportunity to share their promotions, documents or anything that is informative by creating their own websites.

Our government has mandated each government agency down to provincial offices to create their official e-governance websites by virtue of Republic Act No. 8729



(Mendoza, 2007).It is a website representing each municipality to serve as sources of information about local government transactions.

One of the government agencies that complied with this mandate is the Bolinao, Pangasinan Website. It was created by 4<sup>th</sup> year students from Collegio de Dagupan taking up Bachelor of Science in Information Technology. They created the website as their thesis for the school year 2010-2011. After it's free hosting, the local government of Bolinao, Pangasinan continued using the website and it was then improved and copyrighted in the year 2011. So, it was the last time it was improved.

Furthermore, the website aims to provide information such as the profile of the Municipality which includes articles of events and notices and also for tourism promotion.

According to Lloyd Carolino, the person in-charge of the website, he lacks expertise in managing the website. In addition, according to the researcher's observation, only few people visit the website based on the number of visits posted on the homepage.

Moreover, since e-government websites serve as portal of the office and its purpose is to provide transparency of records of the government and to connect and enhance the relationship with the people. It must be functional in order to implement its purpose for the citizens and to others. Hence, it is important to evaluate the official website of Bolinao, Pangasinan in order to determine the effectiveness of the website in providing accurate, reliable and current information to its users. Also, to determine whether the website is being managed well.



## Statement of the Problem

The study aimed to answer the following questions:

1. What is the socio-demographic profile of the respondents?
2. What are the perceived benefits of the website?
3. What is the evaluation of the college respondents on the website in terms appearance, content, and usability?
4. What is the evaluation of the website by the Information Technology experts in terms of impression, navigation, site consistency, functionality and quality of code?
5. What are the problems encountered by the respondents in using the website? and
6. What are the suggestions of the respondents for the improvement of the website?

## Objectives of the Study

Generally, the study aimed to evaluate the official website of Bolinao, Pangasinan.

Specifically, the study aimed to:

1. identify the respondents' socio-demographic profile;
2. determine the perceived benefits of the website;
3. determine the evaluation of the college respondents on the website in terms of appearance, content, and usability;
4. determine the evaluation of the Information Technology experts on the website in terms of the following criteria: impression, navigation, site consistency, functionality, and quality of code;



5. determine the problems encountered by the respondents in using the website; and,

6. solicit the suggestions of the respondents for the improvement of the website.

#### Importance of the Study

Evaluating the Bolinao government website may help in the improvement and for its redevelopment. The study may also determine its strengths and weaknesses.

In addition, this study may also serve as a reference for students or researchers who will be conducting a similar study in the future. Further, it may also serve as a guide or basis for web developers in creating e-governance website that are effective, accessible, user-friendly and current.

#### Scope and Limitations of the Study

The evaluation of the website by the college students was based on the following criteria: appearance, content, and usability. For the Information Technology experts, it was based on impression, navigation, site consistency, functionality and quality of code.

The study focused in evaluating the official website: [www.bolinao.gov.ph](http://www.bolinao.gov.ph) which was created by the BSIT students of Collegio de Dagupan and later adapted by the Municipality of Bolinao, Pangasinan. The study was evaluated by college students from Benguet State University and IT experts who have the background of developing websites.

The study was conducted on November 2012- January 2013.



## REVIEW OF LITERATURE

### E-governance in the Philippines

UNESCO (2007) defines e-governance as the public sector use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective.

To make this possible, Republic act No. 8729 was created. According to Mendoza (2007), this act mandates that all government organizations must be able to deliver its basic services electronically. Thus, the Philippine government has specifically pushed for E-governance.

Further, the League of Municipalities of the Philippines advocates for egovernance which aims to meet the following primary goals: to improve the quality, cost, accessibility and speed of delivering government information and services; make government more accountable by increasing the opportunity for citizen participation in the governance process and bringing citizens closer to elected officials and public servants; and organize the production and distribution of public information and services in new ways that is, to transform government services to meet citizens' needs in an automated world (League of Municipalities in the Philippines, n.d.).

According to the National Computer Center (NCC) (n.d.) Section 1 under NCC Circular Memorandum no. 2001-01, government agencies are advised to adopt the basic content listed below however the website must contain the minimum content prescribed.



The basic content of the Official Agency website are as follows: Agency Name and Logo, Mandate and Main Functions, Organizational Aims and Objectives (Vision, Mission, Objectives), Write Up About the Agency (historical background) and Organizational Structure and the Responsibilities of Every Unit, List of Key Officials and their Responsibilities, Plans/ Programs/ Projects, Policy pronouncements/ Official Statements/ Rules and Regulations Issued, Products, Services, Reports, Publications and Statistical Information, Agency Contact Details such as postal and email-addresses, telephone and fax numbers and A Link to Philippines Government Portal and Other Government Offices are also included in the list of basic content of the official agency website (NCC, n.d.).

In addition, under its section 4 all agencies are enjoined to register in their domain name under .gov.ph through <https://dns.gov.ph> or through the domain name administrator of their respective mother agency or [https://\(descriptive\\_name\\_or\\_initial\\_of\\_the\\_agency\).gov.ph](https://(descriptive_name_or_initial_of_the_agency).gov.ph)

#### Criteria for Evaluating Websites

One of the recommendations in Mendoza's (2007) study is that the government should set a standard evaluation tool in assessing the different agency websites according to their usability, accessibility, and quality.

Another recommendation from her study is that government agencies should also evaluate their own website for them to see the weakness and incompleteness of the site.





The following are the Key elements of an effective website according to spritzweb.com ( n.d.) these are appearance, content and usability.

*Appearance.* A site must be visually appealing, polished and professional. It creates positive impression that keeps your visitors on your site interested. Also, spritzweb.com stated that there are five guidelines for appearance these are the following:

First is the good use of color, an appropriate color scheme will contain 2 or more primary colors that blend well and create a proper mood or tone for your site. Try and avoid using cool colors because they are not attention-grabbing and they are commonly used such as blues, greens and whites. Instead use reds, yellows and orange they are warm and happy color that adds fresh touch to the site (articlesbase.com 2009). Color has associated meaning and obtains emotional responses. Thus colors must be used properly to obtain the desired emotional response (Microsoft Windows 2011).

Next is the text, it is very important because it makes the webpage look very technical. But the smaller the font size the more content that can be displayed which makes the page full of text and it will seem bland and colorless (Sharma, 2005).

Therefore it should be easily read by using font style that is easy to read. Also, use font size for paragraph text between 10 and 12 pts and use color combinations that contrast within appropriate range (spritzweb.com n.d).

However, according to webguruinfosystems.com (n.d.) there are no best specific best font sizes in website design. They also added that visitors of a website find it uneasy reading small fonts and it is wise to use bigger fonts as they are easily seen and read. Third,



are the meaningful graphics which are important as they support the text not to become boring. However, don't overload any one page with 3 or 4 images.

Fifth is the Quality of photography it is also a simple way to increase the visual appeal. Adding images or graphics on the articles of the site adds credibility on the article and visual aids to break up all of the text (elespacioweb.com n.d.). Conversely, a website containing too much pictures may cause your site to load slowly. It is best to limit the use of photos on your website (designertoday.com n.d.).

Lastly, keep it simple and allow for adequate white space. According to Sklar (2006) , white space guides the reader and defines the areas of your page. Don't overload your site with designs, animations, or other effects just to impress the visitors.

*Content.* According to Management Centre International Limited (n.d.) without valuable and useful information the website may fail to achieve its objectives. Therefore, the information must have a substance; it should be informative and relevant.

Likewise there are two guidelines for the content these are the following: short and organized copy, clearly label topics and break your text up in small paragraphs. Make it clear, concise and captivating so that the readers will not be bored. Another guideline is to update content regularly, for this will reflect on your site if it is managed well.

*Usability.* Refers to the site's easiness to read, navigate and understand. Moreover, Brinck *et al.* (2002), defined usability as the degree to which people or users can perform a set of required task. Some key usability includes: simplicity, fast loading pages, minimal scroll, consistent layout and screen resolution.



Simplicity according to Brinck *et al.* (2002), a simple page ensures that page titles are recognized as page titles, that navigational elements are clearly for navigation and that the information contained within the page is salient to the user. Thus, websites should be simple and well organized.

Fast loading pages, a page should load in 20 seconds or less via dial-up; at more than that you will lose half of your potential visitors. Also, Minimal scrolling is important as it creates links that from the main page to read more about a particular topic. Links may connect you to another page within the website (Internal link) or connect you to another website (External link) or web pages (Liclican, 2008). In addition, broken Links can frustrate users and can also keep search engines from properly indexing your site (Weakly 2004).

Consistency of layout is very important for usability, use a consistent layout and repeat certain elements throughout the site.

Further, Consistency is defined as a standard design that gives emphasis on the importance of uniformity in appearance, placement and behavior within the user interface to make a system easy to learn and remember (Stone *et al.*, 2005)

Another key to usability is the Screen Resolution which an average web surfer uses a resolution of 1024 x 768 pixels. However, you need to make sure that what looks good at this setting will also work nicely for other resolutions. Also, screen resolution for the typical computer monitor continues to increase.



## Web Standards

According to Weakly (2004), a website built based on web standards should be ideally be lean, clean, Cascading Style Sheets or CSS-based, accessible, usable and engine friendly.

In addition, according to him the following are the checklist that can be used as a guide to show the breadth of web standards. These are the quality of code, degree of separation between content and presentation, accessibility for users, accessibility for devices, basic usability and site management.

Quality of code according to Max Design (2006), consists of valid XHTML, valid CSS and appropriately structured and semantically marked up. Valid XHTML code will render faster than code with errors and valid CSS must have no errors or it can messed up the appearance of documents (Weakly 2004).

## Benefits of a Website

There are three kinds of websites according to Creative Business Services (n.d.) these are the bad, good and effective website. But effective website is the one which has more benefits to the users. The following are the list of benefits that an effective website has: it provides an instant visual presentation, can be found through search engines, it is always available 24/7 a week, interactive, can target each visitor, easily updated and it saves printing and mailing costs.



## Problems of a Website

According to Webinar (2012), the following are the elements that could spell disaster for a website:

*Stale content.* Out of date or old content of your site will make the visitor or potential visitor to skip the site.

*Too much content.* The longer the information the quicker your visitor will leave your site. Information must be concise and organize to avoid confusion and boredom especially for narrative forms.

*No photos.* Graphics are effective in attracting visitors of websites. Keep in mind a website without any illustration will make your site boring and dull.

*Looking illegitimate.* Organizing your content, using consistent colors and theme that stays from page to page will make your site credible.

## Definition of Terms

*Impression.* It refers to the usual first impression on the website by the college respondents on the website

*Search engine.* Usually a small box displayed in every page of the site. It is where you can search relevant information about the website.

*Functionality.* It refers on how the website performs

*Navigation.* It refers on how easy to handle or use the website



*College Respondents.* Refers to the first group of respondents in the study who are enrolled in Benguet State University.

*Information Technology experts.* They are the second group of respondents in the study and also called IT Experts. They are composed of IT Instructors, Web designers and IT Support staff. They have the knowledge in developing websites.



## METHODOLOGY

### Locale and Time of the Study

The study was conducted in Benguet State University (BSU), La Trinidad Benguet. BSU is five kilometers away from Baguio City and almost six hours travel from Bolinao, Pangasinan. The University has eight colleges, two Academic Institutes, a Graduate School and an Open University. Also the university has an International Language Center and an ICT Division office.

It was chosen as the locale of the study because it caters to students from different regions which also include students from Bolinao, Pangasinan. Students from different regions who study in BSU can be considered as users of the website and served as the college respondents. In addition, IT experts are found inside and outside the campus.

The study was conducted on December 2012-January 2013.

### Respondents of the Study

There were two groups of respondents in the study. The first group was the college respondents and it was divided into two. First were 15 college students from Benguet State University whose permanent address is in Bolinao, Pangasinan.

The other half includes 15 BSU college students who are not from Bolinao, Pangasinan. Both groups of college respondents were chosen purposively. They were chosen as respondents since they are internet users.



The second group of respondents was composed of five Information Technology (IT) experts. It included two IT Instructors from the College of Arts and Sciences (CAS) and two Web Designers from the ICT Division office they are all employed in Benguet State University. Another is 1 IT Support Staff from Pines City Colleges. They were chosen because of their exposure to the use of the internet and knowledge in developing websites.







Figure 1. Map of Benguet showing the locale of the study  
Subject of the Study

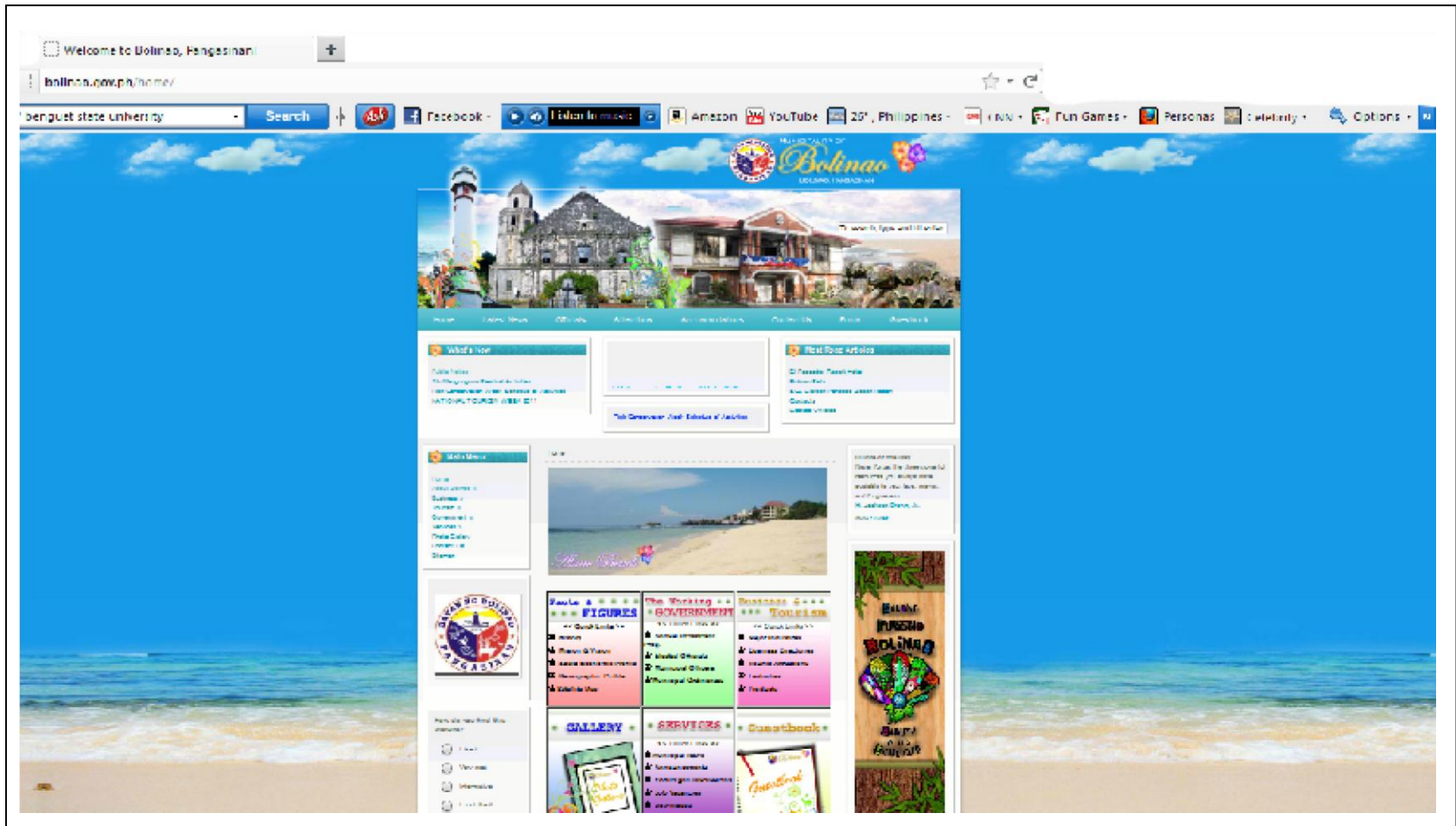
According to Lloyd Carolino, the website was copyrighted in the year 2011 which is indicated on the bottom part of the homepage together with the name of the web developer.

The homepage of the website shows the name, address and logo of the Municipality of Bolinao, Pangasinan. For the internal search engine, pictures of the different tourist spots and historical landmark of the place, and task bar are on the upper part of the homepage. While on the middle part are the current events or activities, welcome note, most read articles, main menu bar, collage pictures of some tourist spots, quote of the day, quick links, and tourism slogan of the Municipality. Also, on the left side of the page is the bigger logo of the Municipality.

Aside from that, the following were found in the half portion of the page: the evaluation box, list of Government links, list of articles, live satellite image, space for advertisements, highlighted map of the Municipality, the good news, calendar of events, log-in form, total number of visitors of the website, yahoo news, links, and logos of different government offices of Pangasinan.

In addition, the website also used graphics such as pictures of the different tourist spots of the Municipality located below its name and address. Pictures presented as collage below the welcome note. While the welcome note flashed were scrolling up and the current date placed below the menu bar. Also, the displayed tourism slogan of the Municipality was brightly colored.





## Data Collection

Two survey questionnaires were used to evaluate the website. Thus, the researcher used two methods in gathering the data. First, the researcher showed the website using a laptop and survey questionnaires were floated to the college respondents while browsing the website. The questionnaire for the college respondents was based on Spritz Web solution. But then it was revised to correspond for the study.

The second method was the interview schedule with the Information Technology experts. The researcher showed the website and let them answer the questionnaire after browsing it. The questionnaire for the Information Technology experts respondents was based on Website Audit Experts and Russ Weakly's Web Standards checklist used by Liclican (2008) in his thesis study. Also, it was modified to correspond for this study.

## Data Gathered

Data gathered include the socio-demographic profile of the respondents, the perceived benefits of the website, evaluation of the college respondents on the website in terms of appearance, content and usability, evaluation of the Information Technology experts on the website in terms of impression, navigation, site consistency, functionality and quality of code, the problems encountered by the respondents in using the website, and the suggestions of the respondents for the improvement of the website.



## Data Analysis

The data gathered were consolidated, tabulated and analyzed using frequency counts, mean and percentage. Results were discussed in narrative form. The mean rates for each criterion were taken and were interpreted using the formula;

$$\text{Mean } (\bar{X}) = \frac{\sum Xf}{\sum f}$$

Legend:

$\mu$  = Mean  $\Sigma$  =

Sum  $f$  =

Frequency

$X$  = Rating scale



## RESULTS AND DISCUSSION

### Socio-demographic Profile of College Respondents

Table 1 shows the socio-demographic profile of the 30 college respondents who evaluated the website.

The youngest age bracket is 17-18 and the oldest is 21-22. Most of the College respondents belonged to age bracket 19-20. While the oldest age bracket got the least number of College respondents.

In addition, majority (70%) of the college respondents were females. In terms of year level, 20% of the students belonged to 1<sup>st</sup> year, 13.33% belonged to 2<sup>nd</sup> year, 36.67% are 3<sup>rd</sup> year and 30% of them belonged to 4<sup>th</sup> year.

Results also show that the college respondents came from the seven Colleges of the University these are the College of Agriculture (CA), College of Arts and Sciences (CAS), College of Engineering and Applied Technology (CEAT), College of Home Economics and Technology (CHET), College of Nursing (CN), College of Teacher Education (CTE) and College of Veterinary Medicine (CVM). Most of the college respondents belonged to the College of Agriculture (CA). Whereas, the least number of students belonged to the College of Nursing (CN) and College of Veterinary Medicine (CVM).

Meanwhile, there were 15 college respondents whose hometown is in Bolinao,



Pangasinan. While the other respondents claimed that three of them are from Baguio City, seven came from Benguet, two from La Union, two from Mt. Province and one respondent from Nueva Vizcaya.

Table 1. Socio-demographic profile of the College respondents

CHARACTERISTICS	FREQUENCY (n=30)	PERCENTAGE (%)
<b>Age</b>		
17-18	11	36.67
19-20	12	40
21-22	4	13.33
*did not indicate their age	3	10
<b>TOTAL</b>	<b>30</b>	<b>100</b>
<b>SEX</b>		
Male	9	30
Female	21	70
<b>TOTAL</b>	<b>30</b>	<b>100</b>
<b>Year Level</b>		
1 <sup>st</sup> Year	6	20
2 <sup>nd</sup> Year	4	13.33
3 <sup>rd</sup> Year	11	36.67
4 <sup>th</sup> Year	9	30
<b>TOTAL</b>	<b>30</b>	<b>100</b>
<b>College</b>		
CA	9	30
CAS	5	16.67
CEAT	3	10
CHET	4	13.33
CN	2	6.67
CTE	5	16.67
CVM	2	6.67
<b>TOTAL</b>	<b>30</b>	<b>100</b>
<b>Province</b>		



Pangasinan	15	50
Baguio	3	10
Benguet	7	23.33
La Union	2	6.67
Mt. Province	2	6.67
Nueva Vizcaya	1	3.33
<b>TOTAL</b>	<b>30</b>	<b>100</b>





### Socio-demographic Profile of the IT Experts Respondents

For the second group of respondents, there were five identified IT Experts. Two of them were IT Instructors employed in College of Arts and Sciences (CAS), Benguet State University. They are John Lacea and Dario Galeon.

Another two IT experts are from the ICT Division office of Benguet State University. They are Julie Anne Dugat, a webmaster and Jumar Yagoan, a web designer. Lastly, Amira Bedejim, an IT support staff from Pines City Colleges.

### Perceived Benefits of the Website

Table 2 shows the mark of the respondents on the perceived benefits of the website. Most (76.67%) of the respondents said that the website provides important information. Whereas, half (50%) of the respondents said that the website keeps updates about the public notices in the Municipality.

This implies that the Bolinao, Pangasinan website supports one of the primary goals of the League of Municipalities in the Philippines which is to organize the production and distribution of public information and services in many ways (League of Municipalities in the Philippines, n.d.).

Moreover, majority (63.33%) of the respondents claimed that the website provide links to Government websites. Identified government links found in the website by the college respondents are namely Official Gazette, Office of the President of the Philippines, Pangasinan Official website and Department of Tourism.



Table 2. Perceived benefits of the Website by the College respondents

Perceived benefits of the website	Frequency (n=30)	Percentage (%)
It provide important information about Local Government Unit (LGU)	23	76.67
It keeps you updated about Public Notices in the Municipality	15	50
It provide links to Government Websites	19	63.33
It caters Background Information about Bolinao	28	93.33
It provides complete information about the tourism promotion of the municipality	20	66.67

\*Multiple responses

Great majority of the respondents (93.33%) claimed that the website caters background information about the agency. Also, majority of them agreed that it provides complete information about the tourism of the Municipality.

The result entails that the website adheres on the basic content prescribed by the National Computer Center (NCC) n.d. Section 1 under NCC Circular Memorandum no. 200-01. These are the following: to have a write up about the agency or municipality about its historical background and to have a link to Philippine Government Portal and other Government offices.

### Evaluation of the Website by the College Respondents

Table 3 presents the result of the evaluation of the college respondents on the website in terms of the following: appearance, content and usability. The following are the equivalent of mean: 1.00 to 1.49 is “Poor”, 1.50 to 2.49 is “Fair”, 2.50 to 3.49 is



“Good” and mean of 3.50 to 4.00 is “Excellent”.

Table 3. Evaluation of the website by the College respondents

Criteria	Rating	Description
<b>Appearance</b>		
Good use of color	3.53	Excellent
Text is easily read	2.46	Fair
It has meaningful graphics	3.27	Good
It has appealing photographs	2.87	Good
It has simple and enough white space	3.27	Good
<b>Total</b>	<b>3.00</b>	<b>Good</b>
<b>Content</b>		
The information posted is relevant	3.17	Good
Enough posted information about Bolinao, Pangasinan	2.4	Fair
Currency of articles in “What’s new” section	2.4	Fair
Indication of contact details on the site	2.97	Good
<b>Total</b>	<b>2.73</b>	<b>Good</b>
<b>Usability</b>		
Organization of page	3.2	Good
Loading of pages	3.1	Good
Page scrolling	3.23	Good
It has consistent layout	3.1	Good
Menu bars can be easily open	3.37	Good
All Government links are working properly when open	3.73	Good



Ease of finding information	3.2	Good
Visibility of links in every web pages	3.37	Good
Total	3.24	Good

Appearance. The result of the evaluation of the respondents on the appearance was rated “Good” with a mean of 3.00. The following are the result of the evaluation based on its appearance:

*Color.* The colors which dominated the website are different shades of blue and white and was rated “Excellent” with a mean of 2.46. Most of the College respondents said that the colors used in the website are well coordinated and it is eye catching. This corroborates with Microsoft Windows (2011), that proper used of colors can obtain the desired emotional responses.

Moreover, this is in contrast with what artcilesbase.com (2009), stated that cool colors like blues, greens and whites are not eye catching.

*Text.* Text was rated “Fair” with a mean of 2.46. Some of the respondents stressed that the font size in the articles and other documents were too small which affects its readability. It corroborates with Web Guru Infosystems (n.d), that visitors of website find it uneasy reading small fonts.

The said remarks on the text were also agreed by the researcher, some of the web pages contains full of text like the articles found in the “What’s new” section and the documents found in the main menu bars such as History and Major industry.



*Graphics.* Graphics are rated “Good” with a mean of 3.27. Some of the respondents claimed that the graphics used were indeed meaningful yet not enough to make the web pages look interesting. Graphics identified by the respondents were the logo of the Municipality, slogan of the tourism and images of the tourist attractions or destinations.

*Photographs.* Photographs was rated “Good” with a mean of 2.87. However, some of the respondents said that pictures of the tourist attractions were incomplete such as the Bolinao falls. This result was negated by the researcher, other location of photos of tourist attractions including the Bolinao falls can be found in the “Gallery” in the main menu bar. They added also that some of the pictures are dull. They said that some pictures are not appealing. Quality of the pictures must be considered as what spritzweb.com (n.d.) says to increase the visual appeal of a website.

*Simple and with enough white spaces.* According to the respondents, the web pages contain simple designs and were observed also to have enough white space. Some added that web pages do not contain any distractive or too much animation and it was rated “Good” with a mean of 3.27. Said results corroborate with spritzweb.com that web pages must be simple and allow adequate white spaces (spritzweb.com n.d). The results also imply that the more white spaces in a website the lesser graphics used.

*Content.* The result of the evaluation of the Content was rated “Good” with a mean of 2.73. Result shows that the information posted are all relevant and it was rated “Good” with a mean of 3.71. Enough posted information about Bolinao, Pangasinan was rated “Fair” by most of the respondent with a mean of 2.4. Also, the currency of articles in “What’s new” section was rated “Fair” with a mean of 2.4 and indication of contact details



of the establishments and attractions were provided and was rated “Good” with a mean of 2.97.

Moreover, some of the respondents observed that the articles in “What’s new” section are old contents which means that it contains information that are not updated..

Old contents according to Webinar (2012) will make your visitor leave the site immediately. The result also implies that the website lacks currency in terms of providing current information to the public.

Usability. It was defined by Brinck *et, al.* (2002), as the degree to which people or users can perform a set of required task. According to the college respondents, the web pages are well organized, it has fast loading pages, it entails minimal scrolling and it has consistent layout therefore the website follows the key usability of Brinck *et, al.* (2002).

Moreover, all links were working properly, finding information were easy, links were visible in every web page and menu bars were accessible or can be easily open except for the Guest book. It was observed by two of the respondents that the Guest book is broken. Possible reasons of broken links according to Amira Bedejim one IT expert, one reason would be the page is under construction or the admin decided to unpublished the content of the page. She also added, that link error this could be coding error which was not properly tested or checked its functionality.



## Evaluation of the Website by IT Experts

The website was also evaluated by the IT experts in terms of impression, navigation, site consistency, functionality and quality of code. Some of them include their remarks and suggestions on each criteria were also included and their other observations.

*Impression.* Table 4 shows the rating of the website by the IT experts in terms of impression. Based on the result of the evaluation of the IT experts the URL is intuitive, it has fast loading of page, there is appropriate brightness/color used, there is common text and text fonts used.

Impression was rated “Good”, however, two of the IT experts John Lacea and Jomar Yagoan recommended removing the Yahoo news section and focus more on the promotion of the tourism by adding more images of the tourist attractions. The website has common font style and size, which makes it easy to identify the heading and subheading in the web pages. On the other hand, the rating of graphics was “Fair” with a mean of 2.6. As a result, Dario Galleon and Amira Bedejim suggested using more graphics to represent the text in the web pages so that it will not look tiring to read.

*Navigation.* Based on the result of the evaluation the accuracy of search engine was rated “Fair”, same with the key functions of the website. However, homepage link is accessible or available in every web page and was rated “Good”. Appearance of homepage link can be a shortcut to the visitors of the website especially when they have already browsed many web pages. Further, the Key functions are the following F1, F2, and F3 and so on and so forth. Each has different functions and according to the result of the rating the key functions of the website are not easy to use.



*Site consistency.* Consistent appearances of links in every web page were provided such as the Government links likewise with the visual element used. However, the web pages or the site's layout is inconsistent as observed by two experts Amira Bedejim and Dario Galleon. Some web pages do not contain the main menu bars on the left side of the page which makes it inconsistent. This makes the user of the website confused and the need to go back in the homepage to be able to browse the other menu tabs.

Further, the result of the website's consistency contradicts Brinck *et. al.* (2002), idea of consistency which is to repeat certain elements throughout the site. This is also in contrast with the evaluation of the college respondents that the pages are well organized. This condition is similar with the study of Liclican (2008), wherein he stated that this situation can be attributed to the differences of knowledge and exposure between the college respondents and IT experts.

*Functionality.* Further, four experts claimed that the website is functional even without the use of "www". While one expert Julie Anne Dugat, says that the functionality of the "www" cannot be test on the website because it was hacked. The presence of broken links was also identified, according to the IT experts. The guest book is broken wherein a dialogue box will appear with a "404 Resource not found" written on it.

*Quality of code.* The experts evaluation on the quality of code was "Good". However, result shows that the XHTML and structure of code was rated "Fair". In addition, Amira Bedejim and John Lacea, both found 37 errors in XHTML while checking index php page. Also, Amira Bedejim found 16 errors in CSS. According to the two experts the errors were found while validating the XHTML and CSS using W3schools.com.





According to Weakly (2004), valid XHTML render faster than code with errors and CSS with errors can messed up the appearance of documents in the site. Therefore the website must be check regularly using W3school.com to determine if the website is free of errors.

*Other observations.* Aside from the comments and suggestions some of the IT experts include their observations they have on the website. First, the website was hacked by Cyber-activist “Anonymous Philippines” wherein the homepage cannot be browsed.

Second, one IT expert John Lacea said that the security of the website is breached and it is being recommended that the web designer of the website must offline and repair the website.

In connection, Amira Bedejim suggested that the website must maximize the server security and to use Linux-based server. Also, according to John Lacea the content and details of officials, attractions and accommodations were observed that they are not comprehensive.

Table 4. Evaluation of the website by the IT experts respondents

Criteria	Rating	Description
<b>Impression</b>		
Intuitive URL	3.6	Good
Loading of page	3.2	Good
Appropriate brightness/ colors used	3.2	Good
Common text and text fonts used	3.0	Good
Enough graphics	2.6	Fair
<b>Total</b>	<b>3.17</b>	<b>Good</b>
<b>Navigation</b>		
Accuracy of search engine	2.8	Fair



Accessibility/availability of Homepage link in every page	3.2	Good
Key functions intuitive and easy to use	2.6	Fair
<b>Total</b>	<b>1.72</b>	<b>Fair</b>
<b>Site Consistency</b>		
Consistent appearance of links	3.0	Good
Consistent use of visual elements across site	2.8	Fair
<b>Total</b>	<b>2.9</b>	<b>Fair</b>
<b>Functionality</b>		
Functionality of the website even without “www”	3.4	Good
Presence of broken links	2.2	Good
Table 4. continued...		
<b>Quality of Code</b>		
Validity of XHTML	2.6	Fair
Validity of CSS used	3.0	Good
Structure of Code	2.6	Fair
<b>TOTAL</b>	<b>2.73</b>	<b>Good</b>

#### Problems Encountered on the Website

*Problems Encountered by the College Respondents.* There were four problems on the website as enumerated by the College respondents on the website these are the following:

*Small font and too much text.* The font texts in the articles were emphasized to be small by the three college respondents. This affects the readability of the articles published in the website. While a page full of text can make the visitors of the site to skip the page. It is advisable to use graphics that will represent the text so that it will not look boring.

These two encountered problems corroborates with Sharma (2005) that the smaller the text the more content that can be displayed which makes the page full of text. In that



case information on the articles or document may be summarized to make it shorter so that the page will not be containing too much text.

*Guest book is broken.* According to two college respondents, the Guest book in the menu bar is broken. This must be fixed because visitors of the site will probably check on this on the menu bar since it is intended for them. The result entails that out of the 30 college respondents only two were able to browse the Guest book.

*Incomplete photos.* Moreover, incomplete photos were observed also by the four respondents in the “Attraction”. Compilation of photos of the tourist attraction can be browsed in the “Attraction” and “Gallery”. The “Gallery” is in the main menu bar and it contains more photos of the tourist attraction than the “Attractions”. This result entails that the “Attraction” menu bar is much visible than the “Gallery” which is located in the main menu bar.

It is therefore important to include photos in the website given that one of its purposes is for tourism promotion. By the use of pictures it can attract the attention of potential visitors of the website.

*Problems Encountered by the IT Experts Respondents.* According to the IT experts the following are the problems they have encountered while browsing the website:

*Inconsistent layout.* Not all web pages contain the main menu bar and according to Dario Galleon, one of the IT experts, it is annoying when you have to go back to the previous page just to browse the other main menu bars.



*Homepage cannot be opened.* According to Julie Anne Dugat one of the IT expert, the Website was hacked and therefore she was not able to browsed its homepage. This entails that in the middle of the evaluation process the website was hacked.

*Broken guest book.* Also, some of the IT experts discovered that the “Guest Book” is broken and it is therefore recommended that it must be fixed immediately.

Based on the result of the evaluation the website lacked proper maintenance, since Lloyd Carolino, the person in-charge of the website lacked background knowledge about managing a website. Uploading photos, videos, and adding documents, articles and notices on the website are the only things that he does in maintaining the website.

#### Suggestion of the Respondents on the Website

*Suggestions of the College Respondents.* The result of the suggestions of the college respondents on the website are as follows.

*Additional photos of attractions.* According to some respondents one of the problems they encountered on the website is the incompleteness of photos in the “Attractions” like the Bolinao falls it has no image yet. This results to the suggestion of additional photos in the attractions by the five college respondents.

*Keep current and more information.* Among the college respondents, four of them said that the website should include current information about the municipality while three of them stated to add more information about the attraction like maps and possible outdoor activities.



*Improved font size and use photos in the articles.* Moreover, three of the college respondents suggested improving font size specifically in the articles. Likewise three of the respondents suggested using pictures in the articles. Using photos in the articles will make it look interesting to read and according to spritzweb (n.d.) adding photos or graphics on the articles of the site adds credibility on it.

*Other suggestions.* The following are the additional suggestions of some of the college respondents. Include the names of the authors in the articles as suggested by two of the respondents, likewise two of them are in favor for additional government links and to update the site regularly.

*Suggestions by the IT experts respondents.* Suggestions of the IT experts were also enumerated below:

*Remove Yahoo news.* This may be removed according to two IT experts since the visitors are more interested about the real purpose of the website which is about Bolinao, Pangasinan.

*Additional photos of attractions.* This was also suggested by the college respondents. Additional photos of attractions were suggested by two IT experts. According to them it will catch attention since the website is also used for tourism promotion. This suggestion is in contrast with Designertoday.com (n.d.) that many images on your website are good however, it may cause your site to load slowly. Slow loading of page can irritate the visitors of the site and will skip browsing the photos or may leave your site immediately.

*Maximize the use of graphics.* One IT expert observed that the other web pages containing documents or articles about Bolinao are full of text. Like in the main menu bars



the “About us” which contains the History, Economic profile, Physical and demographic contain pages full of text. In addition, two of the experts suggested maximizing the use of graphics to represent text such as maps, charts and photos.

*Use a Linux-based server.* According to one IT expert the website may consider using a Linux-based server to reduce the possibility of hacking the website. According to Amira Bedejim, one of the IT experts Linux has strict security and it is a virus free operating system.

*Fixed broken link.* According to Weakley (2004), broken links can frustrate users. Three of the IT experts also found out that the Guest book is broken and they recommend it to be fixed. Since this is intended for the visitors of the site.



## **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### Summary

The study was conducted to evaluate the Official LGU website of Bolinao, Pangasinan. By answering the following objectives: socio-demographic profile of the respondents, the perceived benefits of the website, evaluation of the college respondents on the website in terms of appearance, content and usability, evaluation of the Information Technology experts on the website in terms of impression, navigation, site consistency, functionality and quality of code, the problems encountered by the respondents in using the website, and the suggestions of the respondents for the improvement of the website.

The data gathering was conducted from December 2012- January 2013 in Benguet State University. Results of data were interpreted and analyzed using mean and percentage.

There were 30 college respondents and five IT experts who evaluated the website. They evaluated the website using an evaluation questionnaire distributed to them while browsing the website. Out of the 8 colleges there were 30 college students who came from the seven colleges CA, CAS, CEAT, CHET, CN, CTE and CVM and most of them were females.

Further, the college respondents also agreed that the following are the benefits gained from the website: it provides important information about Local Government Unit (LGU), keeps update about public notices in the municipality and it also provides links to other Government websites. Likewise, the website caters background information about Bolinao and it provides complete information about tourism of the municipality.

The general evaluation of the college respondents based on the appearance, content and usability was rated “Good”. The same rating was noted for the IT experts based on impression, functionality, and quality of code. For navigation and site consistency, this was rated as “Fair”. This could be attributed to the inconsistent use of visual elements across sites, the lack of validity of the XHTML, and lack of code structure of the website.

The problems encountered on the website by the college respondents include, small font size of the articles and too much text in the articles, incomplete images of attractions and the broken “guest book”. For the IT experts, they enumerated problems such as inconsistent layout of page, homepage that cannot be opened because the website was hacked and again the broken guest book.

The suggestions solicited from the college respondents for the improvement of the website include adding more photos and information of the tourist attractions incorporate more current information, bigger font size, additional government links, and include the name of the authors in the articles.

For the IT experts their suggestions include removing the Yahoo news, adding photos of tourist attractions, maximize the use of graphics to represent the text, may use a Linux-based server and fixed the Guest book link.

The suggestions of the respondents may help in updating and the management of the website.

### Conclusions

Based on the findings of the study, the following conclusions were drawn:



1. Improvements and updates in the appearance and content of the website help in achieving excellent evaluation;
2. Despite the problems encountered, the website is still perceived to be beneficial in giving information about the municipality of Bolinao; and,
3. There is a need to hire an IT expert in managing the website for it to be fully effective.

### Recommendations

From the findings and conclusion drawn, the following are being recommended:

1. The municipal office of Bolinao, Pangasinan may consider hiring an IT Expert or Web designer who will improve and maintain the website.
2. The web-designer may use a Linux-based server to secure the website.
3. The website may add current information about Bolinao, Pangasinan since it is one of the purpose of government websites.
4. The website needs to regularly update the information about Bolinao, Pangasinan to fully achieve its purpose of giving current information

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